Janis-Ziegler House

STE. GENEVIEVE NATIONAL HISTORICAL PARK
STE. GENEVIEVE, MO

Historic Structure Report

PMIS 311239
OCTOBER 2024



Janis-Ziegler House from the southeast. (Source: RRJ)

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Prepared for:

National Park Service Interior Regions 3, 4, 5
Omaha, Nebraska

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Janis-Ziegler House
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Ste. Genevieve National Historical Park
Ste. Genevieve, MO

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Resource Information

The Resource is located at 244 St Marys Road in Ste. Genevieve, Missouri. The Janis-Ziegler House was built in c. 1790 and is a one story vertical log building over a stone masonry basement. The house is located on the west side of St Marys Road, just south and west of Gabouri Creek, overlooking the north end of the Common Field to the east.

Name:	Janis-Ziegler House
Location:	Ste. Genevieve National Historical Park 244 St Marys Road, Ste. Genevieve, MO 63670 Suburban parcel approximately one quarter mile south of the Ste. Genevieve Welcome Center
Date of Construction and Major Alterations:	c. 1790, original construction Undetermined (possibly after 1804), possible alteration to roof framing Undetermined (possibly after 1804), enclosure of north gallery Undetermined (before c. 1890), north fireplace removed and attic stairs changed 1999 - 2000, restoration to reconstruct north fireplace and attic stairs
National Register Status:	Located within the boundary of the Ste. Genevieve National Historic District (contributing resource no. 84) and the Ste. Genevieve National Historic Landmark District (contributing resource no. 6); not individually listed on the National Register for Historic Places but eligible for individual listing under Criteria A (national level), C (national level), and D (local level).
Current Use:	Historic house museum
Overall Dimensions:	73’-7” by 39’-11” and 25’-6” at roof ridge
Net Areas:	Basement (Unoccupied) 1,304 square feet First Floor 1,624 square feet Attic (Unoccupied) 2,943 square feet

Project Purpose and Need

The Janis-Ziegler House is located at 244 St Marys Road in the City of Ste. Genevieve, Missouri, which was founded c. 1750 on the west bank of the Mississippi River, about 64 miles south of St. Louis. Settled by French Canadians, Ste. Genevieve possesses the largest extant collection of French colonial vertical log houses in North America and is also significant due to the early settlement organization of the community with shared common agricultural fields.

The vertical log house was built c. 1790 by Nicolas Janis, probably with the assistance of enslaved labor, and is among only a few surviving French-Canadian vernacular dwellings of their period in the United States. It served as the home and business of the Janis family. Outbuildings would have supported the business and family and provided quarters for those individuals enslaved by the family. The home is listed on the National Register of Historic Places as a contributing structure to the Ste. Genevieve Historic District and Ste. Genevieve National Historical Landmark District.

The goal of the Janis-Ziegler House project, as defined by the NPS, is to develop critical planning and predesign documents preparatory to the eventual ultimate treatment of the house and its reuse.

Park Planning

Ste. Genevieve NHP was authorized by the Consolidated Appropriations Act of 2018 on March 23, 2018. The act incorporates by reference Section 7134 of Senate Bill 1460, which authorizes the establishment of Ste. Genevieve NHP as a unit of the National Park System "to preserve, protect, and interpret for the benefit of present and future generations the themes of French settlement, vernacular architecture, and community form and farming on the frontier associated with Ste. Genevieve."

This document is part of Ste. Genevieve NHP planning portfolio. A park planning portfolio is the collection of planning documents that guides decision making and satisfies law and policy. Ste. Genevieve NHP's planning portfolio creates a logical, trackable guide for park management actions. Along with the Ste. Genevieve Special Resource Survey (2016) and the Foundation Document (2020), this HSR addresses resource preservation for the Janis-Ziegler House.

The HSR was prepared in advance of a Long-Range Interpretive Plan, Cultural Landscape Report, and other documents for the park's planning portfolio not yet developed. At present, the anticipated future use for the Janis-Ziegler House for flexible interpretive functions is based on past and current uses and guidance from park staff.

Methodology

The purpose of the HSR is to provide a compilation of the findings of research, investigation, analysis, and evaluation of the historic structure. The report serves as a basis for decision-making and direction for preservation of the building. The report also serves as a record of existing conditions and as a basis for planning future preservation and maintenance.

The HSR for the Janis-Ziegler House addresses key issues specific to this structure, including a thorough level of research and physical investigation to determine construction chronology of the house, investigation of existing physical conditions, evaluation of the surrounding landscape, and evaluation of the existing systems to identify needed upgrades.

History Methodology

Archival research was performed to identify documentation of the history and construction of the building. The purpose of this research and review of documents was to gather information about the original construction and past repair and modifications of the building for use in assessing existing conditions and developing treatment recommendations.

These tasks included:

- Review of research and documentation performed by others on the context and background of the founding and growth of Ste. Genevieve, changes in social history over time, and architectural practices that influenced the Janis-Ziegler House.
- Research and review of archival documentation to develop the historical background of the Janis-Ziegler House.
- Research and review of archival documentation to assist in determining the chronology of the evolution

of the architecture and landscape.

- Consultation with local historians and community stakeholders knowledgeable about Ste. Genevieve and the Janis-Ziegler House.

Review, transcription, and translation of the earliest Ste. Genevieve historical documents which are in French; research for this report relied heavily on translated excerpts, summaries, and indexes previously prepared by others. These documents are primarily located in the following collections, but other collections not noted below may also have significant holdings:

- Ste. Genevieve County Court (original documents)
- State Historical Society of Missouri, Ste. Genevieve Archives, 1756-1930 (microfilm)
- University of Missouri, Western Historical Manuscripts Collection
- Missouri Historical Society/ Missouri History Museum and Library

Resources Consulted

As part of the research into developing the historical background and context, the HSR also consulted and/or researched collections at the following:

- Mercantile Library at St. Louis University-Ernst Connelly Collection
- Ste. Genevieve Archive in the Missouri State Historical Society
- Ste. Genevieve County Courthouse
- Felix Vallé House State Historic Site
- National Park Service (NPS) site files
- Charles E. Peterson papers, in the collection of Ste. Genevieve NHP.
- Various Family Records and collections

Condition Assessment Methodology

From August 20-25, 2023, representatives from the HSR team were on site to perform an investigation into the existing conditions and construction of the Janis-Ziegler House.

- Visual inspection and condition assessment of the site, context, and landscape features.
- Visual inspection and condition assessment of the architectural features and building materials.
- Visual inspection and condition assessment of the enclosure and structural systems.
- Non-destructive evaluation of wood framing members.
- Visual inspection and condition assessment of the mechanical, electrical, and plumbing systems.
- Sampling and identification of wood species for structural members.
- Identification and assessment of integrity of significant character-defining features and elements.

The condition assessment and physical investigation were limited to areas and features that were readily visible; no finishes were removed to expose concealed conditions. Isolated sampling and testing of wood building components to identify constituent materials and/or determine dates of construction were performed as part of the HSR scope.

Building Use

The building is currently operated as a visitor attraction.

Project Team

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John Rosemurgy | Historical Architect and Contracting Officer's Representative

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Related Studies and Drawings

- 1933/1939 HABS photographs and measured drawings
- 1959, 1970 Ste. Genevieve, National Survey of Historic Sites and Buildings
- 1985/1986 HABS photographs
- Undated/c. 1986 Tree Ring Dating of French Colonial Vertical Log Houses in St. Genevieve, MO
- 2001 Ste. Genevieve Historic District, National Register of Historic Places Registration Form
- 2016 Ste. Genevieve Special Resource Study
- 2016 – 2018 Documents related to the proposed National Historical Park
- 2019 Ste. Genevieve Boundary Adjustment Public Law No. 116
- 2021 Archeological Overview and Assessment of Ste. Genevieve National Historical Park
- 2023 Ste. Genevieve NHP Foundation Document
- 2025 Cultural Landscape Report (in progress)

Glossary

Terms referencing French vernacular construction are adapted in part from the glossary provided by Jack Richard Luer and Jesse W. Frances in Vanishing French Heritage: A Complete Study of the Vertical Log Homes of the Illinois Country.

Arpent (French) A French measurement of land area, roughly equivalent to 0.84 of an English acre; also, a unit of measure of distance (approximately 192 English feet).

Bousillage (French) A mixture composed of mud or clay with straw, or hair, for infill between posts in the construction of vertical log buildings.

Caveau (French) A crawl space or cellar.

Collar Tie The horizontal member of a Norman truss, located at the approximate midpoint of the diagonal top chord members.

Colombage (French) Half-timbered construction.

Coyau(x) (French (pl.)) A short timber used to extend the rafter, creating a slightly flared appearance, which assists with shedding water away from the building walls.

En filade (French) An interior layout that is a single room wide with successive rooms being interconnected, often with aligned doorways.

Galerie (French) Gallery or veranda; a porch extending the full length of either one, two or four sides of a building.

Grenier (French) Attic; the loft of a house.

Habitant(s) (French) French settlers, especially those of French-Canadian descent, used to denote a person engaged in agriculture.

King Post The central vertical member of the Norman truss which connects the diagonal top chord members to the collar tie.

Nogging Brick masonry infill between wood framing members.

Norman Truss A French vernacular variation on the “king post truss,” characterized by a steep pitch, through purlins, and the elevated position of the collar beam.

Rafter A diagonal roof framing member: “primary rafters” are those of the main roof structure, and “secondary

rafters" are those of the galerie roof structures.

Parterre (French) A geometrically organized and symmetrical formal garden characterized by enclosed planting beds which are separated by walkways, typically of gravel or other naturalistic paving materials.

Pierrotage (French) Infill of stone and clay daub or lime mortar; packed between the posts of a heavy timber frame.

Poteau(x) (French (pl.)) Timber post or vertical log member.

Poteaux-en-terre (French) "Posts in the ground"; a construction type where the vertical logs are set into the ground.

Poteaux-sur-sole (French) "Posts on a sill"; a construction type where the vertical logs sit on a horizontal sill plate, and the foundation is typically constructed of stone masonry.

Puncheon A rough log timber flattened on the top side, sometimes used for flooring or seating.

Purlin A longitudinal, horizontal member of the roof framing that provides midspan support for the rafters; "through-purlins" pass over the top of the truss diagonal top chords.

Ridge Beam A longitudinal, horizontal member at the apex of the roof framing which supports the top ends of the rafters.

Top Chord The diagonal members of the Norman truss that form the distinctive "A-frame" shape, with the crossbar formed by the collar tie.

Top Plate A horizontal wood member that bears on the tops of the vertical log walls.

Trenail A tapered wood pin used in traditional heavy timber construction.

Date Conventions

The dates as presented in this HSR are drawn from the information available at the time of writing. In a few cases, the dates are supported by direct historical documentation, but in the majority of cases, the dates proposed are the project team's best determination based on factors such as physical evidence, circumstantial documentation, research by others, professional experience, or those dates adopted by general consensus. Further research, investigation, and analysis may refine or refute the dates proposed herein.

No Notation Direct attribution of the date or date range given is supported by historical documentation or physical evidence; ex: 1804 or 1919 –1923.

Circa (c.) Attribution to within one or two years of the date or date range given is supported by historical documentation or physical evidence, but the precise dates are not known; ex. c. 1790 or c. 1800 – c. 1820.

Dash (–) Indicates that the range given is inclusive of the years between the start and end dates, such as an ongoing event or period of ownership, ex: 1923–1963.

Slash (/) Indicates that two or more specific dates are referenced without being inclusive of the years between; ex: c.1940/c.1952 or 1940/1988.

Decade Span Indicates a ten-year span, but the date or date range given are approximate and may be refuted by further study; ex: 1920s or 1960s – 1970s.

Part 1: Developmental History

Introduction

INTRODUCTORY COMMENTS

Native American Habitation and Land Use

The following narrative spans a broad historical context that documents the interaction of peoples across thousands of years of time and place. Missouri's archeological record is vast and diverse, with studies that reflect over 13,000 years of human adaptations to the landscape and environment. This introduction is meant to provide a broad context of the people who occupied and developed this area prior to the arrival of European explorers, fur traders, and miners and has attempted to incorporate the best scholarship available at the time of its preparation.

Harmful Language

Terminology relating to and recognition the of indigenous peoples that were removed from the region to make way for European and American settlers and enslaved individuals is important in the recordation and documentation of the House. This document is generated from both primary and secondary sources and is meant to contribute to the understanding of the enslaved community in Ste. Genevieve, as well as the formerly enslaved individuals and free people of African descent who lived there and contributed to its history. These individuals are identified in the historic record and referenced with deference to language appropriate for developing this context. Historic documents often contain language and terminology that is widely considered offensive and racially discriminatory in the United States today. Where used in this report, these terms represent direct quotations from historic sources, with full acknowledgment of their harmful history of use.

Resources from community-sourced guidance, meant to be shared with those documenting slavery in the United States and the Americas, have been applied here. One helpful resource from the Culpeper Branch of the NAACP presents useful considerations in documenting slavery. As aptly noted in their guidance: "...all words we know to talk about enslaved people of African descent in these Americas prove insufficient, both for the brutality against them, and for their remarkable overcoming."[1]

Historical Background and Context

SETTLEMENT AND LAND USE PRE-1700

Southeast Missouri

Ste. Genevieve is in the central or middle Mississippi Valley, a region that was first settled during the Paleo-Indian period and was continuously occupied through the Woodland Period and into the Mississippian Period.[2]

By the Woodland Period (1000 BCE – 1000 CE), ornately decorated pottery styles were found, and permanent village sites became more common. Tools and weapons were refined, and the bow-and-arrow was introduced, while agricultural practices and plant cultivation continued to grow.

During the Mississippian Period (800 – 1600 BCE), complex social, political, and economic structures were developed, and Cahokia on the east side of the Mississippi River near modern-day St. Louis became one of the greatest cultural centers in North America.[3]

The Mississippians are recognized for their earthwork structures where pottery, projectile points, and

1 P. Gabrielle Foreman, et al. "Writing about Slavery/Teaching About Slavery: This Might Help" community sourced document, 26 July 2023, at http://www.naacpculpeper.org/resources/writing-about-slavery-this-might-help.

2 Paleo-Indian references the period associated with the oldest sites and artifacts. These sites and artifacts date between 11,000-8,000BCE and some Archaic period sites and artifacts dating between 8,000 and 1,000 BCE.

3 "Archaeology in Missouri." *Missouri Archeological Society*. Accessed at https://missouriarchaeologicalsociety.org/archaeology-in-missouri/.



Figure 1. Illustration of the dress of a member of the Kaskaskia nation, from a 1796 map illustration by Georges Collot. (Source: Bibliothèque nationale de France, https://gallica.bnf.fr/ark:/2148/btv1b55013299j#)

agricultural practices were evident. Existing mounds associated with this period are present near Ste. Genevieve. The Common Field Archeological Site (23SG100) is listed in the National Register of Historic Places and is located within the Common Field area south of town near where Cotton Woods Road intersects with U.S. Route 61.

The largest Mississippian urban center was established at Cahokia, Illinois, near St. Louis, where people lived in large, planned, permanent towns with ceremonial centers. Cahokia is named after the Cahokia Nation, now recognized as part of the Peoria Nation. At the height of its populace, the urban center grew to 20,000 people. They were part of an extensive cultural and religious tradition throughout most of the Midwest. Villages were located along both sides of the Mississippi River with features like farmsteads, sacred rock art, ceremonial centers, and transportation systems. Long distance trade and travel routes were established throughout the area and were influenced by natural features, adapting to changing terrain and following the waterways. The population at the Cahokia site declined significantly by the early 1400s. The descendants of the Mississippians are most likely the historically known Dhegian Sioux speaking tribes of the mid-continent area. When and how the Mississippians became the Osage, Omaha, Ponca, Quapaw, and Kaw nations is a topic of lively scholarly debate.[4]

With the decline of Cahokia, people moved away from the region. Some moved west and south while others stayed in the central Missouri area and used the elaborate trail network that connected the broader region. Tribes were established on both sides of the Mississippi River and included the Cahokia, Kaskaskia, Michigamea, Peoria, and Tamaroa, with other Algonquian speakers moving into the area from the east. These lands, rich in natural resources, also attracted Europeans expanding west in the seventeenth century. Tribes that interacted with these early Europeans included the Osage, Peoria, Illinois, Shawnee, and Delaware nations. European diseases, along with power struggles over rights to the land and enslavement, devastated the Native American people in this area and across the country.[5]

The historic period represented in Missouri's archeological sites, included river settlements, like those near Ste. Genevieve, St. Louis, and St. Charles. Tribes that lived in or passed through Missouri included the Osage, Otoe-Missouria, Iowa, Delaware, Shawnee, Kickapoo, Sac-Fox, Potawatomi, Peoria, and Cherokee nations.

EARLY EUROPEAN EXPLORATION AND SETTLEMENT

American colonial history often emphasizes the colonies on the East Coast, but the first Europeans to colonize the Mississippi Valley were French fur-trappers and Catholic priests. This line of colonization ran from Canada to modern-day Louisiana, largely along the Mississippi River. Historian Robert Michael Morrissey noted that scholars of the Illinois Country have "revealed a history characterized by

4 "Before the French." Ste. Genevieve National Historical Park Foundation Document, 2023.

5 Ibid.

diversity and dynamism." Morrissey creates a context around the main French-Native settlements of Cahokia and Kaskaskia, both communities with centuries of pre-contact history. This area, called *le pays des Illinois* or the Illinois Country, was remote from both Canada and New Orleans, with little governmental oversight. By necessity, the communities grew into a network of Native and French villages.[6]

Intermarriage, intercultural connections, and racial identity are part of the early history of Illinois Country. While there were frequent marriages and close ties between the French settlers and the local Indigenous tribes, this was not an area where diverse cultures and races interacted without bias or tension. Community, cultural, and racial identities were "drawn in complex and often idiosyncratic ways, often by local people themselves as much as by imperial authorities."[7]

During this time, the population of the Illinois Country was diverse and multinational, with members of the 12 nations of the Illinewek (the Illinois Confederacy) in the area, as well as other nations including the Potawatomi, Sauk, Fox, Kickapoo, Osage, and others seeking asylum from warring factions in the East.[8] In Missouri near the confluence of the Missouri and Grand Rivers about 250 miles north and west of Ste. Genevieve, the Indigenous groups that lived in the area also included the Otoe-Missouria and Ioway.

Earliest accounts of French Europeans in the Illinois Country are from the explorations of fur trader Louis Joliet and Jesuit missionary Father Jacques Marquette in 1673. Traversing the Mississippi River and utilizing trails established by Native Americans, they sought a route to connect the Great Lakes to the Gulf of Mexico, largely by water. Their expedition turned back near the mouth of the Arkansas River but traveled far enough south to confirm that the through water route they sought did exist.

European exploration, occupancy, and eventual colonization of the Illinois County had long-ranging impacts on both the ecology and people of the region, decimating fur-bearing animal populations, appropriating significant lands for agriculture, introducing new diseases, and displacing Native American communities.[9]



Figure 2. 1721 Map of French Louisiana, from Bibliothèque Nationale de France. (Source: Bibliothèque nationale de France, https://gallica.bnf.fr/ark:/12148/btv1b530092504)

La Louisiane

Equipped with Joliet and Marquette's information, Robert Cavelier de La Salle, a seventeenth century French explorer, charted a route from Fort Frontenac in Ontaria, Canada, across the Great Lakes to the Illinois River, then down the Mississippi River to the Gulf of Mexico during his 1682 expedition conducted on behalf of the French government.

La Salle named the lands *la Louisane* (Louisiana, after the French king Louis XIV) and claimed them "by virtue

6 Robert Michael Morrissey. "Le Pays des Illinois Finds its Context: The Early History of Illinois in a Continental Perspective." *Journal of the Illinois State Historical Society* (1998-), Vol. 111, No. 1-2, *Illinois History-A Bicentennial Appraisal* (Spring/Summer 2017), pp 9-30. Accessed at https://www.jstor.org/stable/10.5406/jillistathistsoc.111.1-2.0009

7 Ibid. 19.

8 "Before Euro-American Settlement." United States Forest Service. Summary of excavations and research of Mark Schurr & Dr. Madeline McLeester at the Midewin National Tallgrass Prairie and article: Madelein McLeester & Mark R. Schurr. "Uncovering Huber Lifeways: An Overview of Findings from Four Years of Excavations at the Huber Phase Middle Grant Creek Site (11WI2739) in Northern Illinois," *Mid-continental Journal of Archaeology*, 45:2, 102-129. Accessed at https://www.fs.usda.gov/detail/midewin/learning/history-culture/?cid=stelprdb5155177

9 Louise Phelps Kellogg, (ed.). *Early Narratives of the Northwest, 1634-1699.* (New York: Charles Scribner's Sons, 1917). 223-230. From the journals of The Mississippi Voyage of Jolliet and Marquette, 1673. Accessed at www.americanjourneys.org/aj-051/



Figure 3. The first map illustrating the village of Ste. Genevieve, 1755.(Source: *Partie occidentale de la Nouvelle France ou Canada*, Library of Congress, https://www.loc.gov/resource/g3400.ar077400/)

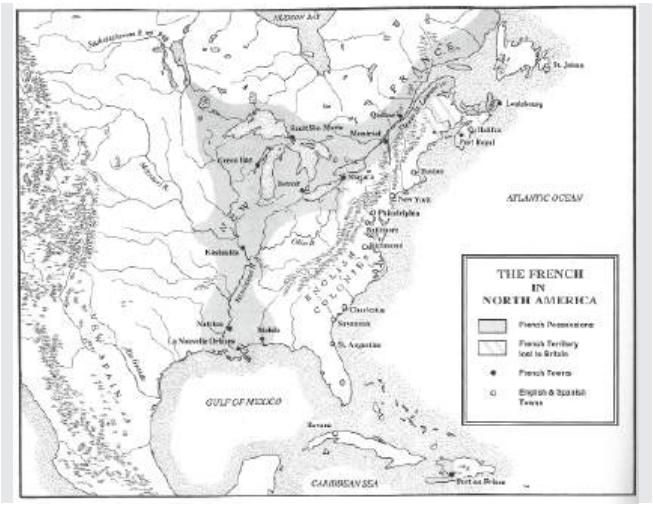


Figure 4. Map showing the location of French territory during the 18th century. (Source: Luer and Francis, Vanishing French Heritage, 12)

of His Majesty's commission" for France.[10] LaSalle established military forts along his route, including Fort St. Louis at Starved Rock, Illinois, and Fort Crevecoeur near Peoria, Illinois. Following LaSalle's explorations, a European townsite and Catholic mission was established at Cahokia in 1699 and another at Kaskaskia in 1703 by French Canadians who sought to benefit from the fertile natural resources that had supported Native Americans for thousands of years before.[11]

The French occupancy of Upper Louisiana was part of broader pattern of European exploration and colonization worldwide. France, Spain, and Great Britain fought multiple wars in the 17th and 18th centuries over power and control of their colonial territories. The British victory in the Seven Years' War (also called the French and Indian War) ultimately culminated in the total loss of French territory in continental North America to both Great Britain and Spain in 1763.

Shifting governance of the Illinois Country in the 1760s brought Ste. Genevieve under Spanish control and lead to an influx of settlers into the formerly French-controlled lands. Per the 1772 Spanish census, Ste. Genevieve seems to have prospered during this time, with significant population growth to 691 residents, including enslaved persons.[12]

EARLY EUROPEAN SETTLEMENT OF STE. GENEVIEVE

Antecedents of Ste. Genevieve began across the Mississippi River in the Illinois Country, where French and French-descended settlers migrated to a mission established at Cahokia on the east bank of the river as early as 1699. The mission at Kaskaskia was founded four years later in 1703, and following that, small-scale and subsistence economies such as mining lead and salt making began on the west side of the Mississippi River.

French land grants west of the Mississippi River occurred in the last half of the 1740s, spurring more permanent migration across the river. Settlers from Kaskaskia and Fort de Chartres established the first Ste. Genevieve townsite along the west bank of the Mississippi River, about three miles southeast of its present location.[13]

10 "The Explorers: Rene-Robert Cavelier de La Salle 1670-1687." Virtual Museum of New France, Canadian Museum of History accessed at https://www.historymuseum.ca/virtual-museum-of-new-france/the-explorers/rene-robert-cavelier-de-la-salle-1670-1687/

11 "The Creation of Ste Genevieve and a Unique Culture," Ste. Genevieve National Historical Park Foundation Document, 2023.

12 Ekberg, *Colonial Ste. Genevieve*, 43; and *Padron y Lista de los Milicianos y Habitantes de… Santa Genoveva…* (Spanish Territorial Census), 1772. Accessed at https://www.sos.mo.gov/default.aspx?PageID=9621.

13 Robert Michael Morrissey. "Le Pays des Illinois Finds its Context: The Early History of Illinois in a Continental Perspective." *Journal of the Illinois State Historical Society* (1998-), Vol. 111, No. 1-2, *Illinois History-A Bicentennial Appraisal* (Spring/Summer 2017). The NPS Foundation Document for Ste. Genevieve National Historical Park identifies the term "Creole" as being of Spanish descent and referencing those individuals of French, Spanish, Black, or mixed-race that were born in North America.

By about 1758, the region supported about 2,000 inhabitants associated with European settlements, as compared to the whole of the territory of Louisiana, whose population was estimated at 7,000. Most settlements were largely agrarian, in which small clusters of families, typically from French Canada, settled to take advantage of the rich and fertile soil of the Mississippi River Valley. Forts and outposts were populated with transient traders, soldiers, missionaries, and Native Americans.[14]

The earliest reference in the extant historic record to identify Ste. Genevieve is in a land survey conducted by notary and surveyor, Jean Baptiste Bertlot *dit* Barrois in 1751. Antoine Heneaux commissioned Barrois to survey his land on the west side of the Mississippi River, and Barrois's 1751 description documented his property and described Heneaux as residing in Ste Genevieve.[15] In 1752, a census of the Illinois Country was completed, and Ste. Genevieve was listed as one of the communities with 23 residents.[16] Finally in 1755, Jacques-Nicolas Bellin, a French hydrographer and member of the *Académie de Marine* and the Royal Society of London, published a map of la Louisane that identified the town of Ste. Genevieve and other settlements along the Mississippi River.[17]

The town of Ste. Genevieve was named after one of the three patron saints of Paris, France. Born "Genovefa" (in the Frankish spelling) around 422 in Nanterre, France, and officially canonized as a saint in the twelfth century, Saint Genevieve and was known for her generosity to the poor. Saint Genevieve's symbolic attributes include a lit candle, which she is often depicted as holding in church iconography.. She was a recognized leader among Parisian women during the tumultuous threat of invasion by Attila the Hun's armies in the mid-fourth century.[18] Many of the earliest settlers of Ste. Genevieve were devout Catholics and looked to the church for naming the community.[19]

The first townsite was in the lowlands and routinely suffered from flooding. Although an important waterway for trade and a major source of support for the community, the river had been a significant threat to the settlement for years.

A major river flood in 1785 caused serious damage to the original townsite. The year became known as "*l'année des grandes eaux* (the year of the big waters)," and contemporary reports document that:

> *"the waters have risen so greatly from their source that they have entirely submerged the village of Santa Genoveva. All its inhabitants having been obliged to retire with great haste to the mountains…they abandoned their houses which were inundated and their furniture and other possessions which they had in them. Although the waters have now fallen, those inhabitants remain along the said coast without yet knowing the place where they can settle."* [20]

A report by Zenon Trudeau, the lieutenant governor of Upper Louisiana from 1792 – 1799, stated that the residents were "warned by so many reiterated occasions, they determined at length to seek a position where they might place the houses under shelter."

Consideration to remove Ste. Genevieve to higher and safer ground was underway, and eventually a new

14 National Park Service, "French Exploration and Settlement: The National Survey of Historic Sites and Buildings," revised 1960, 24.; Louis Houck. *A History of Missouri*. (Chicago, IL: R.R. Donnelley and Sons Company, 1908), 245-250.

15 Carl J. Ekberg. *Colonial Ste. Genevieve: An Adventure on the Mississippi Frontier.* (Carbondale, Illinois: Southern Illinois University Press, 1996) 22.

16 *Recencement General du pays de Illinois de 1752*, Huntington Museum, Loudon Section, Vaudreuil subsection, call No. L0426. Partial transcription available via the Missouri Secretary of State Archives website at https://s1.sos.mo.gov/records/archives/census/pages/territorial. Note that the online transcription contains an error compared to the original document, which also includes family names and other information not included in the transcription. For a full English transcription see Berardinis, Robert de. "The 1752 French Census of Illinois." Illinois State Genealogical Society Quarterly (Winter 2000).

17 Charles E. Peterson. "Early Ste. Genevieve and Its Architecture." (Columbia, MO: *The Missouri Historical Review*, volume XXXV, No. 2. January 1941) 208; Ekberg. C*olonial Ste. Genevieve,* xxi and 22; and Jacques Nicolas Bellin, *Carte de la Louisiane et des pays voisins*..., 1755, Library of Congress (G3300 1755 .B4), http://hdl.loc.gov/loc.gmd/g3300.ar001800.

18 McNamara, Jo Ann (ed.), et al. *Sainted Women of the Dark Ages*. (Gordon, England: Duke University Press, 1992). 17-37.

19 Houck, *History of Missouri*, 277.

20 Report of Governor Estevan Miro to Conde de Galvez. (Seville, AGI-papers from the island of Cuba, No.209) July 10, 1785. Ernst Connelly Collection, Mercantile Library, Box 2, History of Ste Genevieve File.

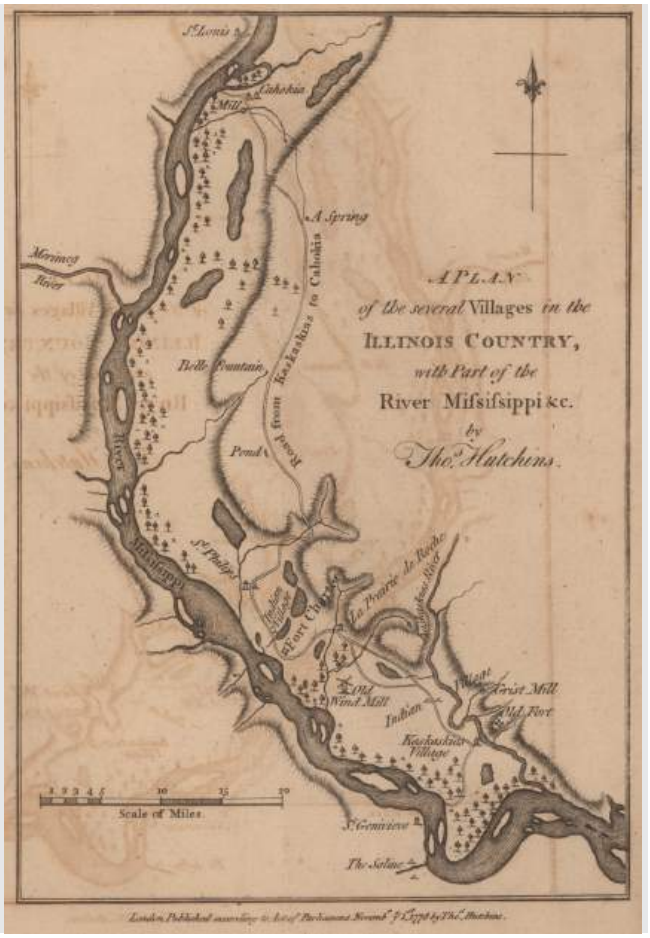


Figure 5. 1785 map of villages along the Mississippi River in Illinois Country, including Ste. Genevieve. (Source: JCB Library of Early American Images, jcb.lunaimaging.com)

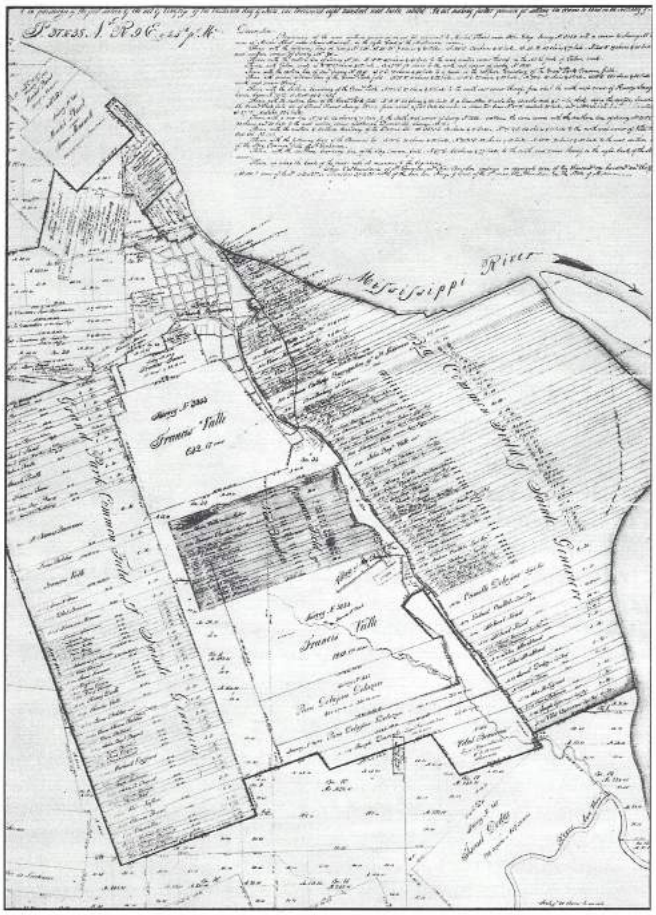


Figure 6. Drawing of land ownership within Ste. Genevieve including the long narrow strips associated with the Big Field (Source: Luer and Francis, Vanishing French Heritage, 26, from Ste. Genevieve Museum)

townsite evolved on higher ground to the north, near the North and South Gabouri Creeks. It is here at the new townsite, present-day downtown Ste. Genevieve, where several of the surviving vertical log structures were constructed by the prominent families that migrated across the river.[21]

The new townsite was formed in a grid configuration, similar to town planning for colonial-era St. Louis, Prairie du Rocher, and many other Illinois Country settlements. Some structures may have been disassembled and transported, moved whole, or salvaged for construction materials for the new townsite as residents slowly migrated to the new location, a process that took a number of years.

By 1787, residents in the new town petitioned to have their lots in the Common Field subdivided. Eleven residents were included on the petition, indicating New Town had at least this many residents in 1787; conflicting figures are provided in other contemporary sources that may shift the number of early residents to 13 or more, but historians are not in general agreement with the actual number of new town inhabitants at that time. [22]

The Church did not relocate to the new townsite until 1794, when it was physically moved from the old townsite.

France lost all its North American territory after the

21 Bonnie Stepenoff. *From French Community to Missouri Town: Ste. Genevieve in the Nineteenth Century* (Columbia, Missouri: University of Missouri Press, 2006) 16-18.; Peterson. Early Ste. Genevieve, 212.; Rozier, *History of the Early settlement of the Mississippi Valley*, 16.; Ernst Connelly Papers, Copy of a Report of Zenon Trudeau, January 15, 1798, concerning settlements of the Spanish Illinois Country, Mercantile Library, Box 2 Folder History of Ste. Genevieve."

22 Ste. Genevieve Archives, Petitions, #22, December 21, 1787.

Seven Years' War/French and Indian War in 1763, and Spain took control of the land west of the Mississippi River and the port of New Orleans on the east side of the river, with England dominating control of lands east of the river. People continued to move from Kaskaskia and Cahokia to Spanish-controlled Ste. Genevieve, and in 1766, a Spanish census was conducted. It recorded a population that included 319 free people and 228 enslaved people, with Native Americans accounting for 29 of the enslaved individuals.[23] Between 1766 and 1800, the combined population of people of African descent, mixed-race, enslaved, and free people was recorded as 35 to 44% to the number of whites of European descent. Enslavement heavily influenced the demographics of Ste. Genevieve; the combined population of Black, mixed-race, enslaved, and free people of African descent was often near 40% of the total population on average.

Many of the agricultural pursuits in the Illinois Country required large tracts of land for their crops and were profitable because of the labor of enslaved individuals. Enslavement of Africans and African-descended people was more prominent in the Louisiana Territory, but the French also enslaved Native Americans. After coming under Spanish control in 1763, Native American enslavement in the territory was ostensibly prohibited. The Indigenous peoples of the Americas were recognized by Spanish law as "free vassals of the crown," and as such, Alejandro O'Reilly, the second governor of Louisiana, issued a degree 1769 outlawing their enslavement. However, this generally went unenforced in the formerly French territories, and Native American enslavement continued.[24] On the other side of the Mississippi River, the Northwest Ordinance was adopted by the United States in 1787, prohibiting slavery in territories located north of the Ohio River. As a result, some French moved west of the Mississippi River into Spanish territory to avoid loss of enslaved labor.

In Ste. Genevieve, the settlers mostly worked their own land in assigned long lots located in the Common Field. Wealthier families cultivated several lots and relied on enslaved labor to work these larger parcels. Census data taken at various times during the colonial period portray that a majority of households did not contain enslaved persons. In most of these years, several of the wealthier households held the majority of the enslaved persons in Ste. Genevieve, while other Ste. Genevieve families enslaved one to three African or Native American persons.[25] Trade also continued with the Native Americans in and near the community and included the Osage, Illinois, Peoria, and Shawnee nations who largely lived in villages on the banks of the Apple Creek and Shawnee Creek.[26]



Figure 7. 1796 drawing of French residence on a map illustration by Georges Collot. (Source: Bibliothèque nationale de France, https://gallica.bnf.fr/ark:/ 12148/btv1b55013299j#)

The early settlers of Ste. Genevieve built a typical dwelling that was unlike the log cabins seen in most of American westward expansion. Their built environment was populated largely with one story timber buildings, often of vertical logs either directly in the earth (*poteaux-en-terre)* or resting on a stone foundation or

23 National Park Service. "Ste. Genevieve Final Special Resource Study and Environmental Assessment." 4.

24 Gwendolyn Midlo Hall. *Africans in Colonial Louisiana: the Development of Afro-Creole Culture in the Eighteenth Century*. (Baton Rouge, LA: Louisiana State University Press, 1992) 336-337; Stephen Webre, "The Problem of Indian Slavery in Spanish Louisiana, 1769-1803." *Louisiana History: The Journal of the Louisiana Historical Association,* Vol. 25, No. 2 (Spring 1984), 117-135; and Leila K. Blackbird, " 'It Has Always Been Customary to Make Slaves of Savages': The Problem of Indian Slavery in Spanish Louisiana Revisited, 1769–1803." *The William and Mary Quarterly,* Vol. 80, No. 3 (July 2023), 525-558.

25 Henry Marie Brackenridge. *Views of Louisiana Together with a Journal of a Voyage Up the Missouri River in 1811*. (Chicago, IL: Americana Classics, Quadrangle Books, Inc., 1962 from first edition published in 1814) 127; Statistics from territorial census records from 1752, 1766, 1787, 1791, and 1787, as summarized by Robert Mueller.

26 Stepenoff, *French Community to Missouri Town*, 14.

sill (*poteaux-sur-sole)*. Homes typically had galleries or porches (*galeries*) that either wrapped the structure or were located on one or two sides, which sheltered exterior living and working space. Steeply pitched upper hipped roofs had a lower pitch that extended over the porch, creating the broken-pitch roof shape so characteristic to many Illinois Country homes.[27]

> *Scattered around the country however are several French villages as they are called. The inhabitants of these are all French and the French language is the only one spoke. They who are industrious cultivate a little land in small vegetables. The others live miserably by hunting and fishing, their houses are generally one story high and have curiously peaked roofs, with perhaps a little piazza in front overrun with evergreens, under that are congregated parrots, canary birds, cats, and lapdogs in the great harmony the greatest simplicity of manners prevails among them.*[28]

The farmers cultivated plots within Common Field, where long lots that extended from the river were divided among the residents. The larger Common Field was fenced to protect crops from wandering livestock. In his recollections, Henry Marie Brackenridge described the setting of Ste. Genevieve as follows:

> *One fence encloses the whole village field, and this is kept up at the common expense. The river side is left open, the steepness of the bank rendering any enclosure unnecessary. The field is divided into a number of small lots, of an equal size; a certain number of arpents in front, and a certain number in depth. The more wealthy possess and cultivate several of these lots, while some of the poorer class do not own one entire…Their agricultural labors commence in the month of April when the inhabitants with their slaves are seen going and returning each morning and evening, for eight or ten days with their ploughs, carts, horses., etc.*[29]

The new townsite was laid out roughly in a grid with

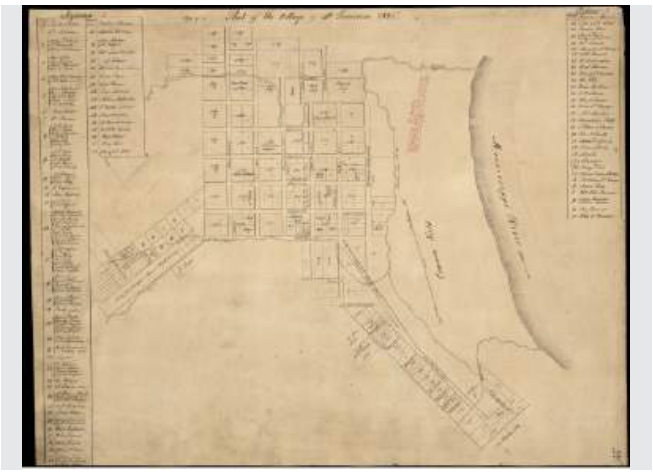


Figure 8. 1825 Map of Ste. Genevieve, showing the grid plat configuration and New Bourbon Road running southeast. (Source: State Historical Society of Missouri)

blocks of approximately 350 by 400 feet. Blocks were sometimes divided into two or more parts. Several residents owned an entire block. Each building site was termed an emplacement, and most were surrounded by wood fences, sometimes of palisaded logs.

By the time the William Clark of the Lewis and Clark Expedition reached the area across the Mississippi River near Ste. Genevieve in November 1803, the population was around 1,000 people, comprised of primarily French Creole families. Although this was a French community, France ceded lands west of the Mississippi River to Spain who controlled the area from late 1762-1800.[30]

Historical events including the American Revolution (1775-1783), the Louisiana Purchase (1803), and Missouri statehood (1821) shifted Ste. Genevieve from a French village to an American town, and the population grew to include English and German residents. During this period, Native American tribes including the Osage, Illini, Peoria, Shawnee, and Delaware nations had villages in the region with established trade networks between other tribes and European settlements. Villages between Ste. Genevieve and Cape Girardeau were in place until their forced removal in the 1820s.[31]

An event of historical note took place in 1811, when a significant earthquake struck along the New Madrid

27 National Park Service. “French Exploration and Settlement.” 26.

28 “St. Louis & French Villages in 1836” Extract from the *Journal of George A. Bicknell* prepared by Esther U. McNitt, Indiana State Library, Indianapolis for Charles E. Peterson, May 12, 1939. Ernst Connelly Collection. Box 2, Folder Ste Genevieve History.

29 Brackenridge. *Views of Louisiana*, 127.

30 Stepenoff. *From French Community to Missouri Town.* 11, 28.

31 Stepenoff. *From French Community to Missouri Town.* 11, 28.

Faultline in Missouri in 1811 and 1812. Though it caused severe damage in other communities, Ste. Genevieve survived with little damage.

THE JANIS-ZIEGLER HOUSE

The dwelling was built c. 1790, and between its construction and 1938, it was owned by just two families: the Janis family and the Ziegler family.

Nicolas François Janis built the residence, and his son François purchased the property in 1796 while his parents continued to reside there. Upon the death of François and his wife Pélagie Bienvenu in 1832, the property was purchased by Matthew Ziegler. The Ziegler family owned the residence until 1938. While the house is commonly known as Green Tree Tavern, this report uses the Janis-Ziegler House throughout.

Nicolas Janis

Nicolas Janis (1720-1804) was a French Canadian from Quebec, Canada, then called New France, who settled in Kaskaskia, on the east side of the Mississippi River. He married Marie-Louise Thaumur Lasource (1737-1791) in April 1751 in Kaskaskia and soon after was among those noted in the early village of Ste. Genevieve. Though Nicolas and Marie-Louise did not appear in the 1752 census, they were mentioned in a land grant as adjoining property owners to the Big Field. Many in Kaskaskia owned farmland in the Big Field while living east of the river;[32] all of Nicolas and Marie Louise's children were baptized in Kaskaskia, but whether this is an indication that Kaskaskia was the closest church or an indication of primarily residence is unclear. The preponderance of evidence in the Kaskaskia Manuscripts indicates that he was living in Kaskaskia well into the 1780s.[33] Together, they had six surviving children: Felicité (1752-1839), Jean Baptiste (1759-1836), François (1761-1832), Marie Françoise (1763-1801), Antoine (1765-1832), and Marie Catherine (1774-1839).[34] Two sons baptized in Kaskaskia, Jean (1776-?) and Nicolas Louis (1772-?), have no death records.

In 1785, Janis, sold his property in Kaskaskia and returned to Ste. Genevieve in 1788, following the great flood of 1785. Here, he remained permanently.[35] Nicolas Janis was part of a population influx in the late 1780s that included brothers Jean Baptiste and Vital St. Gemme Bauvais and Nicolas Caillot *dit* La Chance. Janis had extensive holdings both east and west of the Mississippi River in Upper Louisiana. When he moved to Ste. Genevieve in 1788, he brought with him 15 enslaved individuals as part of his household. Under a census conducted by the Spanish government in 1791, the Janis family was recorded as enslaving 10 people on their property.[36]

Nicolas received the land through a land grant transfered to him through Antoine Dufour.[37] Antoine Dufour obtained the original land grant from the controlling Spanish government in 1789 and then deeded the property to Janis, who received the original lot: a triangular piece of land along the South Gabouri

32 The Big Field or Common Field was a large tract of land that extended from the Mississippi River west to the hills surrounding Ste. Genevieve. *Habitants* (residents) were allotted land within the common field to plant crops. The common field was shared by all who lived in Ste. Genevieve.

33 The "Kaskaskia Manuscripts" are a collection of primarily French legal and notarial records dating between 7018 and 1816 which documented deeds, partnerships, wills, contracts, and other legal actions. While the original documents have not been digitized, an index prepared by Lawrie Dean in 1982 has been made available online by the n Foundation for Illinois Colonial and American Studies at https://www.illinoiscolony.org/kaskaskia-manuscripts.

34 The Janis family was influential and through marriage and business was deeply interconnected with numerous other families in Ste. Genevieve. Daughter Marie-Louise married Jean-Baptiste Vallé *fils* and lived with him in the vertical log house still standing at 99 South Main Street (see the Jean Baptiste Vallé House HSR). Daughter Felicité married Vital Bauvais and lived in a vertical log house still standing at 20 South Main Street (currently under private ownership); Felicité and Vital became sizable property owners who also enslaved many people at their property. Of those enslaved was Pélagie Amoureux, whose life and family were subject to research as part of the Bauvais-Amoureux House HSR. Son Antoine Janis became involved with a mixed-heritage enslaved woman named Marie-Louise. Their open relation stirred a great deal of controversy in the family and the community, to the point where complaints were filed in 1796 to the Spanish governing body informing them of the relationship. Like Pélagie Amoureux, Marie-Louise was enslaved by Vital and Felicité Bauvais. Marie-Louise was sent away to deter the relationship, but Antoine moved to be with her, eventually purchasing her freedom from Vital Beauvais, and they raised a large family together in St. Charles, Missouri.

35 Louis Houck, ed. *The Spanish Regime in Missouri*, (Chicago: R.R. Donnelley, 1909), II, 365-370 and 34-35. It is likely the property owned and sold by Janis at this time was located at the old town site. Ste. Genevieve Catholic Church marriage records. Their marriage was recorded in Ste. Genevieve Parish in 1773.

36 Houck,*The Spanish Regime in Missouri*, vol 2.

37 Land Grant Concession, Ste. Genevieve Archive Collection 3636, Folder 89.

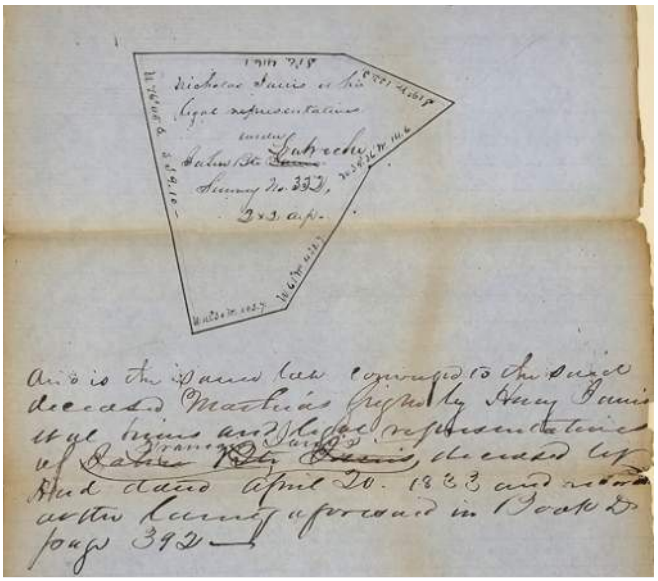


Figure 9. Survey of Nicolas Janis land from Matthew Ziegler estate records. (Source: Ste. Genevieve Archive)

Creek. The original lot was much bigger than the land associated with the property today and likely contained a barn, stable, garden, orchard, and other outbuildings that could have included quarters for enslaved people, a summer kitchen, and other small scale animal shelters.

Janis had a house built on the property in c. 1790 in the French colonial *poteaux-sur-sole* style (vertical logs/timbers on a wood sill, atop a stone foundation). Although no building contract for the house has been found to provide specific detail on the construction, the building was likely constructed by the individuals Janis enslaved, possibly along with other laborers working under a master carpenter.[38]

The residence was oriented with the primary facade to the northeast, roughly aligned with the creek and New Bourbon Road (now St Marys Road). Like other houses along this stretch of road, it was elevated on the slight embankment on the west side of the road, likely to reduce the opportunity for flooding from the creek. The house had a ground floor used for storage, with the raised first floor comprising living quarters and a place for Nicolas to conduct his business affairs. The house was large for the time, about 74-feet long, including the galleries, with a full limestone masonry basement and an full attic level. The exterior walls were fashioned with oak logs, oriented vertically between the sill and top plates.

Investigation into the attic framing by Jesse Frances after the publication of *Vanishing French Heritage* was suggests that changes were made to the roof framing shortly after the original construction. The east and west end walls appear to have originally been hipped and were later reframed as gables; notches for rafters and evidence of nail holes are present on the end wall top plates. This updates information previously published on the house that posited that the gable end walls were original.[39] Additionally, notches are visible in the top plate to receive corner braces which are not present today. The roof may also have experienced a fire very early in its history, possibly prompting some of the alterations. Further investigation, particularly during future structural repairs, is recommended to document these conditions more fully.

The roof is framed with paired rafters rather than the Norman trusses found at other large houses in Ste. Genevieve built around this same time; the collar ties may have been added at a later date. Additionally, the west gallery was enclosed very early on to form small *cabinets* or rooms.

Enslavement Under Nicolas Janis

Nicholas Janis was one of the larger enslavers in Ste. Genevieve, enslaving between 10 and 15 people at varies periods at the house. In the Spanish census conducted in 1791, Nicolas Janis is listed as a resident of Ste. Genevieve and within his household were two white males, two white females, six enslaved men, and four enslaved women.

Some of his enslaved workers were likely housed on the property of the Janis-Ziegler House. Archeological evaluations have identified locations of possible quarters for enslaved people in the yard behind the residence.[40]

It has been suggested that the raised basement may have served as the living quarters for those enslaved by the

38 Bonnie Stepenhoff, "Faire une Maison: Carpenters in Ste. Genevieve, 1750-1850," *The Confluence*, Spring/Summer 2014: 31-38.

39 Email and telephone correspondence between Jesse Frances and Brian McCutcheon, Ste. Genevieve NHP acting superintendent, September and October 2024.

40 Elizabeth M. Scott. “Excavation of Poteaux-en-Terre Outbuilding at the Janis-Ziegler Site in Ste. Genevieve, Missouri” *Society for Historical Archeology Conference*, Austin, Texas, Jan. 2011; Ste. Genevieve Archive, Roll 7 folder 107, Deed relinquishing land, Antoine Dufour et al. to Nicolas Janis, 1790.

Early Freemasonry in Ste. Genevieve

In 1806, the first meeting related to establishing the Freemason's Louisiana Lodge #109, believed to be the first lodge west of the Mississippi River took place in Ste. Genevieve. The Lodge received its charter in 1807 and meetings were held at the tavern. Many well-known Ste. Genevieve residents participated in the meetings. [41]

Freemasonry is a fraternal organization widely recognized as the oldest fraternal organization in the world, with origins dating to the Middle Ages in Europe. Their symbolism of the masonic square and compass is widely recognized and used on buildings and objects associated with the group. Freemasonry included members of many religious denominations, however the Catholic Church condemned Freemasonry in 1738, a ban that still exists today, although many Catholics participated in Louisiana Lodge #109, like the Janis Family.[42]

By 1805, the east bank of the Mississippi River marked the western most Masonic lodge in the United States. The Western Star Lodge #107 was organized in 1805 in Kaskaskia, but the Louisiana Purchase in 1803 sparked interest in the lands west of the river and population in the area increased. By 1807, nearly half of the members of the lodge lived on the west side of the river.

Otho Schrader, a territorial judge in Ste. Genevieve, and a group of supporters petitioned the Grand Lodge of Pennsylvania to establish the Louisiana Lodge in Ste. Genevieve. After seven months, in July 1807, the petition was awarded for Louisiana Lodge #109, the first lodge west of the river. The officers of the new lodge and original petitioners included James Edgar, Michael Jones, James Gilbreath, William Arundel, Aaron Elliott, Andrew Henry, George Bullitt, Thomas Riddick, Otho Schrader, and François Vallé among others. During rehabilitation work in 1997, proof of the house as an early meeting site was found. Masonic symbols, including the square and compass and an anchor, were found carved on porch posts stored in the lower level of the house.

Louisiana Lodge #109 was not long lived. It suffered financial instability and lack of support largely due to the distance from the Grand Lodge of Pennsylvania. It survived for eight years before the charter closed, and it took another 20 years for another lodge to be established, Tucker Lodge #13, which was established in Ste. Genevieve in 1824.[43]



Figure 10. Masonic compass and square carved on a gallery column of the Janis-Ziegler House. This symbol may overlay another of a "sword pointing to the naked heart," a masonic symbol of justice. (Source: RRJ 2023)



Figure 11. Masonic anchor, symbolizing hope, and the initials F.S., one of many symbols and names carved on the gallery columns of the Janis-Ziegler House, which are now stored in the house basement. (Source: RRJ 2023)

41 Gregory M. Franzwa, The Story of Old Ste. Genevieve. (St. Louis, MO: The Patrice Press, 1998), 137.

42 Fernández, Cardinal Víctor Manuel. Dicasterium Pro Doctrina Fidei... Regarding the Best Pastoral Approach to Membership in Freemasonry by the Catholic Faithful. November 13, 2023. Available at https://www.vatican.va/roman_curia/congregations/ cfaith/documents/ rc_ddf_doc_20231113_richiesta-cortes-massoneria_en.pdf.

43 Steve Harrison. "Freemasonry Crosses the Mississippi." *The Missouri Freemason* (Spring 2007), 39-41.

family. This type of "live-in" arrangement would have been unusual in Ste. Genevieve, as it is believed that space was not often allocated for enslaved individuals to reside in the primary domicile. No records have come to light to support that the basement was allocated for servant's quarters. However, it is possible that enslaved may have temporarily lived in the basement when the family first came to the area. Often the house would have been the first structure built and outbuildings later, so it is possible, though not likely, that enslaved individuals held by Janis could have initially lived with the family until subsequent structures were completed.

Those enslaved by Janis would have labored on his agricultural holdings, performed domestic labor for the family, and also likely labored to support the operation of the tavern later under his son François. Janis had significant agricultural holdings and was documented as possessing 200 bushels of wheat, 400 bushels of corn, and 800 pounds of tobacco, quantities well above the average possessions of those included in the agricultural census.[44]

François Janis

In 1796, Nicolas deeded the property to his second son François. Nicolas would live another eight years, but may have sold the property to François to avoid probate. Estate probate at the time was a notoriously complex and drawn out process, sometimes taking 10 years or more to settle a large estate and often resulted in the inheritors having to repurchase real property owned by the deceased as part of estate debt settlement. Nicolas Janis continued to live in the home until his death in October 1804.

François and his wife Pélagie Bienvenu lived at the house and raised their nine children there: Marie-Louise (1798-1827), François (1793-?), Emilie Renée (1794-1878), Antoine (1795-1861), Pélagie Odile (1800-1849), Aurore (1802-?), Emelia (1806-1829), Henri (1808-1872), and Felix (1810-1855).[45] In June 1803, François Janis entered into a contract with Baptiste Larose *dit* Bontabac to construct the stone wall in front of the dwelling. Unstable wet soil in front of the house was caused by the neighboring South Gabouri Creek, and the wall provided a stable barrier.[46] Bontabac furnished and prepared all the stone necessary to construct the wall along the front of the lot and measuring 100 feet long by 5-feet high and 2½-feet thick. He commenced work immediately after the wheat harvest and was obligated to complete the wall by October of that year. François agreed to provide a pair of oxen and a pair of wheels to assist with the construction, along with four *minots* (approximately equal to a modern bushel) of wheat, a mare and her foal, and fifty dollars in lead or peltries (animal pelts) at the market price.[47]

François Janis is credited with opening the first tavern at the house, at a currently undetermined date but likely shortly after the death of his father in 1804. Few historical documents directly reference the tavern, and historians are left with only hints of the accommodations that might have been offered by François and Pélagie. In a memoir documenting his travels through the Ohio and Mississippi River Valleys, British author Thomas Ashe arrived in Ste. Genevieve in September 1806 and likely stayed at the Janis tavern, which he described thus:

> *[I was] put up at an inn which had strong indication of comfort. I was by no means disappointed: the landlord, a lively Frenchman, looked after my horses, and his wife made me a cup of coffee with as much perfection as I ever drank it at the Palais Royale, or at the foot of the Pont Neuf.*[48]

The tavern likely offered only basic lodging and meals for travelers, who may have bedded down either in the hall or western rooms or possibly the attic. An early 19th century wood sign labeled "Entertainment by Fs. Janis" was believed to have hung at the house, advertising the

44 Scott, "Excavation of Poteaux-en-Terre Outbuilding..."

45 François Janis family tree. www.ancestors.familysearch.org.

46 20th century flood-mitigation improvements to North and South Gabouri Creeks by the Army Corps of Engineers have changed the course of the creeks from their historic alignment.

47 Contract in Ste. Genevieve Archives Folder . Translation of the original French language document notes that preparing the stone included cutting and squaring it off to appropriately lay the masonry courses.

48 Thomas Ashe. *Travels in America Performed in 1806: For the Purpose of Exploring the Rivers, Alleghany, Monongahela, Ohio, and Mississippi...*, Vol. 2. (London: W. Sawyer & Company, 1808): 116. The inn is possibly referenced in other documents including Henry Brackenridge's R*ecollections of Persons and Places in the West* and John Maley's *Travels, Hunting Expeditions, Trapping, Discoveries-Trading*. Both reference an inn in Ste. Genevieve, of which two were known to be in operation operated by Francois Janis and Guillaume Girouard.

Origins of the "Green Tree Tavern"

Today, the Janis-Ziegler House is more commonly known as Green Tree Tavern. While it is currently unclear when that name came into specific use, the symbol of a tree has been associated with the house since the early 19th century.

François Janis opened the tavern in his family home at an undetermined date, likely shortly after the death of his father in 1804. It is unknown if the Janis family called the tavern the "Green Tree," but an early 19th century sign in the collection of the Ste. Genevieve Museum Learning Center features the words "Entertainment by Fs. Janis" in English inscribed over a mature tree in full leaf. Although French was the dominant language in Ste. Genevieve at the time, the use of English points to an advertisement meant to appeal to travelers rather than local residents. Here, "entertainment" means providing food and lodging, rather than the more common modern usage meaning amusement.

Few historical references to the original tavern have yet been found. Curiously, in his 1908 A History of Missouri, Louis Houck makes only passing reference to Nicolas and François Janis and no reference to the house itself, despite the impressive size, the state of preservation, the regional prominence of the Janis family, and the structure's associations with early Freemasonry in Ste. Genevieve.

Tavern symbols and signage were a practical method to identify those buildings or residences that were licensed to provide services such as food, drink, and lodging to travelers. It was common to feed and stable horses as well, as described by Thomas Ashe in his 1806 stay at the tavern. The symbol of the green tree was a common name for taverns in history, and there are several Green Tree Taverns in other communities east of the Mississippi River. It is possible the symbol was widely recognized for an inn or tavern, which would have been especially important during this late colonial period in Upper Louisiana, where illiteracy was commonplace.

Colonial-era taverns, inns, public houses, and stands were often ordinary dwellings that were licensed to house travelers. The easiest way for a traveler from out of town to identify these businesses would have been by a sign or mark on the building.[49] Often travel routes would have taverns spaced at approximately 20 miles intervals along the road, about the distance a horse could ride in one day.

The name "Green Tree Tavern" is not referenced in estate records, property sales, or local newspapers until the 20th century. Local historians have typically referenced the property by the historic owner's name. Early scholars, including Charles Peterson with the National Park Service, called the property the Nicolas Janis-Ziegler or Janis-Ziegler house from the 1930s to the 1950s. In the late 1950s he shifts to "Greentree Tavern."[50] Additional study should be undertaken regarding the name Green Tree and the wood panel sign.



Figure 12. Tavern sign in the collection of the Ste. Genevieve Museum Learning Center. (Source: RRJ 2024)

49 Susan P. Schoelwer. "Tavern Signs Mark Changes in Travel, Innkeeping, and Artistic Practice." June 1, 2021, accessed at www.connecticuthistory.org/tavern-signs-mark-changes-in-travel-innkeeping-and-artistic-practice/text.

50 Peterson's reference to Greentree Tavern also leads to a question regarding the spelling, as the more common was Green Tree.

tavern's availability (see section "Origins of the “Green Tree Tavern" for further discussion).

François and Pélagie continued to operate the tavern within their residence until their deaths in 1832. They died three weeks apart with Pélagie 's death on September 13 and François's following on October 3, 1832. François died intestate, but without debt, which allowed four of their surviving children to divide the estate. Marie-Louise, Emilie Renée, François *fils* (son or junior), daughter Pélagie , and Aurore were not listed among his inheritors. Marie-Louise and Emilie Renée had died prior to François's passing. The lack of death date for Aurore may mean she died in infancy. Pélagie lived until 1849; she may not have married, but her circumstances are currently undetermined. Together with her brother François *fils,* it is unclear why these two were not beneficiaries of the estate.

The estate totaled almost $4,000 (approximately $145,000 in current currency)[51] and consisted of the following:

- His house and lot on which it was located, about four or five *arpents* worth $1,000
- Multiple tracts of land in the Common Field
- Furniture and household items
- Livestock
- Gold and cash[52]

While estate records are important documents to help identify people who were enslaved, they are also harsh documentation of the dehumanization and suffering experienced by those under enslavement. Enslaved individuals were listed as property, and some were further objectified and only identified by their gender. François’s 1833 estate identified the following people whom he enslaved and assigned to them a monetary value that totaled nearly half of François's entire estate. Families who were enslaved were often separated without consideration of the family bond. Illustrating this are Clarisse and her daughter Therese, who were given to Emilia and separated from son and brother John as part of the estate distribution.

- Marie, $200 (about $7,200 in current currency)
- Odile, $400
- Clariste (Clarisse), $200
- Therese, $150 (Clarisse's daughter, age 11)
- John, $150 (Clarisse's son, age 6)
- Simon, $400
- Zabeth, $400

Those enslaved by the Janis family were likely responsible for both the domestic work for the family directly and for attending to the needs of the travelers staying at the inn. The size of François's estate, along with the fact that three-quarters of his wealth was tied up in real property and those he enslaved, suggests that the family was comfortable but not extremely wealthy, compared to other local figures like Vital Beauvais and Jean Baptiste Vallé *père*.

A series of quit claim deeds settled the property between Antoine, Felix, Henry, and Emilia, who appear to have divided the estate approximately equally. Emilia Janis, now married to Hilaire LeCompte, received the following:

- One enslaved woman named Clarisse, $200[53]
- One enslaved woman named Therese, $150
- Four sheep, $4.00
- Eleven hogs, $10.00
- One table, $6.00
- One small table, $1.00
- One looking glass, $2.00
- Six chairs, $3.00
- One mattress, $2.50
- One silver spoon, $6.00
- One safe , $1.00

51 Parenthetical currency values represent the approximate buying power in 2024 United States dollars, and are provided as general context for the reader. Estimating historical currency equivalency is complex. The values presented here are drawn from the "CPI Inflation Calculator," an online resource which incorporates the Bureau of Labor Statistics' Consumer Price Index (CPI) for dates starting in 1913 and analysis of historic inflation rates and foreign currency values for dates prior to 1913. CPI Inflation Calculator, available at www.officialdata.org.

52 Ste. Genevieve Deeds, Book D, 366-375.

53 See sections "Slavery in Ste. Genevieve" and "Clarisse Janis" for more information on Clarisse.

- In Money cash, $107.65

Hilaire LeCompte also received one undivided interest of one fourth part of the house and lot where François lived, which contained in all about five arpents (more or less).[54] If any of the children and their families resided at the house after their father's death, they did not remain in residence. The year following the estate settlement, the house was sold to Matthias (Matthew) Ziegler, ending the Janis family association with the property and also ending the period of enslavement at the house.

Germans in Ste. Genevieve

The Zieglers were among the earliest German immigrant settlers in Ste. Genevieve. Mathias (Matthew) Ziegler (1796-1835) immigrated from Germany to the United States with his family in 1817. He earned his living as a tobacconist, a wholesale producer of tobacco products to merchants and tavern keepers. He was part of a large German family that arrived in Ste. Genevieve in the late 1820s, when Missouri became a popular destination for many German immigrants. He worked with the Vallé family selling tobacco products at the Vallé store.

Tourist propaganda produced by Gottfried Duden, a German writer, drove much of the German influx to Missouri. Duden published glowing reports during his travels through Missouri around the St. Louis area in 1824, extolling the lovely climate, available land, and extensive waterways. Immigration was also facilitated by societies like the German Settlement Society of Philadelphia, which purchased land near the Missouri and Gasconade Rivers to propagate agricultural and manufacturing pursuits. Planned cities were also established as unified locations for German immigrants where their language, culture, and customs could be preserved, such as Hermann, Missouri, in 1837.[55] Other religious communities including orthodox Lutherans moved to the state to secure open religious freedoms and eventually formed the Missouri Synod of the Lutheran Church. Many of the early German Catholics came from the Grand Duchy of Baden, an area in what is now southern Germany close to the French border, to escape famine and poor economic conditions. In Ste. Genevieve, they adapted to the neighboring French culture, ways, and language. There were almost no Germans in Missouri in 1821 at the time of statehood, but by 1834, there were 30,000 Germans in the state.[56]

Ste. Genevieve's cultural identity pivoted in the 1830s, with the new language and lifestyles brought by the Germans, and Germans became the largest ethnic group in Ste. Genevieve, comprising 46 percent of the town's population.[57]

Along with the Germans, significant numbers of Americans were moving into the community after the Louisiana Purchase in 1803. The French were the wealthiest merchants, major landowners, and mine owners. Skilled laborers tended to be both German and French, while unskilled workers were very rarely French or German, but were typically made up of Americans.

The more rigid cultural and class differences inherent in the French culture began to change along with the changing demographics. The German community had a strong middle class with a variety of skilled crafters, shopkeepers, carpenters, and brick and stone masons. Germans owned groceries, bakeries, butcher shops, fish markets, and vegetable markets. Germans were also the only ethnic group in Ste. Genevieve where women were represented as business owners and managers. Women, many of whom were widows, were noted at the helm of three saloons, one hotel, all the dressmaking and millinery houses, as well as general stores and groceries. There were only two non-German women who noted an occupation other than a housekeeper in Ste. Genevieve by the 1880s.[58]

The influx of German and English-speaking residents changed other aspects of the community as well, including English-language newspapers, starting with *The Correspondent and Record* in 1821, and later the

54 Ste. Genevieve Deed Book D, 368-373.

55 Petra DeWitt. "Early German Immigration: 1820-1860" accessed at http://showmemo.org/people/early-german-immigration-1820-1860

56 Max Okenfus. "The Germans and Why They Came to Ste. Genevieve." Presentation at The Foundation for Restoration of Ste. Genevieve meeting, December 8, 1979. The Ziegler family was in Missouri prior to Gottfried Duden's writing, as John's baptism placed them in Florissant, near St. Louis, by 1821.

57 Susan Flader. "The Germans of Ste. Genevieve, 1830-1890" paper in vertical files at Felix Vallé State Historical Site. 2-3.

58 Flader, "The Germans of Ste. Genevieve," 2-3.



Figure 13. c. 1890s photograph, looking slightly southwest from the east side of South Gabouri Creek (without water) and St. Marys Road, showing the house and the stone wall. Note the lack of stairs on the primary facade. The structure to the left of the house is no longer extant. (Source: Richard Deposki, *Ste. Genevieve, Images of America*)

German-language *Freie Presse and Freie Blatter* in 1874 and the *Ste. Genevieve Herald (*or *Ste. Genevieve Herold* in German*)*, which was initially published as a German-English newspaper in 1882 and is still in publication today.[59]

Ziegler Family

In 1833, Matthias (Matthew) Ziegler purchased the residence from the François and Pélagie Janis heirs for $1,410 (about $52,400 in current currency) to be paid over a period of six years.[60] Ziegler continued to operate the tavern and sold his tobacco products there. Some pages from Ziegler's Blotter Book from between 1833 and 1836 survive, noting sales of cigars, meat, and spirits.[61]

Mathias moved into the house with his wife Barbara Heafner (sometimes also spelled Hoeffner) and their five sons and one daughter: John (1821-1865), Alexander (1824-1902), Francis Joseph (1826-1900), Louis (1828-1886), Marie Anne Marguerite (1830-1910), and Charles Frederick (1832-1884). Matthew and his siblings were born in what is now Germany and were of a French-speaking Catholic background

The Zieglers did not enslave people at the Janis-Ziegler House. They hired domestic help, generally made up of Irish immigrants and other Americans who likely occupied the former quarters that previously housed enslaved people, including Rosine Palmer and Mary

59 Firmin A. Rozier. Rozier's History of the Early Settlement of the Mississippi Valley. (St. Louis, Missouri: G. A. Pierrot & Son, 1890): 136; Stepenoff, *From French Community to Missouri Town,* 67-68.

60 Ste. Genevieve County Courthouse Deed Record Book D, page 392.

61 Copied pages of the Blotter Book in vertical files at Felix Vallé House State Historic Site.

Rion (or Royan) according to census records.[62]

Ziegler only lived in the residence for the two years prior to his death. He recorded his will on December 11, 1835, and died two days later at the age of 39. His probate inventory clearly identified a room or area where tobacco products were made and purchased. His wife Barbara inherited his estate, and she was listed as the head of household in the 1840 and 1850 census records.

Though Mathias Ziegler only lived for two years in the dwelling, his estate records detail what the interior may have looked like through an accounting of his furnishings, decorative items, and other property. His furnishings included a cherry bureau, a pine writing desk, a walnut mounted clock, a walnut cupboard, two walnut tables, three sets of Windsor chairs, a cherry table, two looking glasses, and a rocking chair among other items. Bedding included three low post bedsteads, one high post bedstead, four old bedsteads, eight feather beds, two mattresses, nine straw beds, 14 bed quilts, 12 bed blankets, 30 cotton sheets, two linen sheets, and five bedspreads. Dining items included 11 table clothes of linen or cotton, along with 43 linen towels. Other bedding noted were 11 long pillowcases, 24 short pillowcases, two ticks for feather bed, and various yardages of cloth including bleached cotton, fine brown cotton, German linen, and blue jeans. There were three sets of window curtains, cotton umbrellas for sun protection, and a wide variety of glassware including wine glasses, cut glass drinking glasses, tumblers, pitchers, and plates. Along with a variety of common dinner plates, painted dinners plates, dishes, tureens, saucers, teapots, flatware, and salt cellars, there were 120 wine bottles and one keg of ale noted along with dried apples and an extensive collection of tobacco products from cigars to snuff to tools like cutters and pipes. Interestingly, he retained 16



Figure 14. 1930s postcard, looking east along St. Marys Road, showing the west end wall of the house and the stone wall. (Source: Missouri Printing and Sty Company, Cape Girardeau, Missouri)

62 Ste. Genevieve Deed Book D, 368-373. John and Alexander were baptized in St. Ferdinand Church at Florissant, Missouri. Mathias also signed a set of regulations concerning the annual rental of pews..



Figure 15. 1934 photograph, looking northwest at the rear porch of the house (Source: HABS)



Figure 16. 1936 photograph, looking slightly northwest, showing the south wall of the house. (Source: HABS)



Figure 17. c. 1930 postcard, looking southwest from the east side of South Gabouri Creek and St. Marys Road, showing the house and the stone wall. (Source: Auburn Greeting Card Company, Auburn, Indiana) Though this postcard notes this as the "First Tavern," Ekberg's *Colonial Ste. Genevieve* indicates Guillaume Girouard operated an inn or tavern in 1800.

window lights, either for repairs or stockpile.[63]

The wooden floors would have been covered, since there were thirty-two yards of woolen carpeting noted in his estate. This significantly contrasts with the items noted in the distribution of François Janis's estate, where nowhere near the number of beds, linens, dishes, or other tavern related items were noted.

The final line in his list of property is "one lot of ground and the houses and other improvements thereon where the widow and family now reside." This would indicate that there was more than one house on the lot, which could account for the former cabin for enslaved people, possibly now housing for the Ziegler's paid servants. Location of two outbuildings is also noted in archeology survey conducted in 2004 by Dr. Elizabeth Scott.[64]

The two oldest sons, John and Alexander Ziegler, continued the tobacco business in Ste. Genevieve. In 1851, Barbara sold the property to her son Francis for $1,760 ($74,400).[65] Five years later, Francis married Josephine Moreau, and together they raised their children, four daughters and one son, in the house.

After Francis completed payment of the property, his mother Barbara filed the sale with the court, and in 1860 census records, Francis is listed as the head of household with his mother Barbara still living in the house. The family eliminated the tobacco business sometime between 1850 and 1860; the 1850 census identified Francis as an Assistant Marshal, by 1860 he was listed

63 Matthew Ziegler Estate Records. Ste. Genevieve County Courthouse Probate Office. The estate also notes that the wool floor coverings were disposed of which could illustrate either new floor coverings or a removal of floor coverings following Matthew Ziegler's death.

64 Matthew Ziegler Estate Records, Ste. Genevieve County Probate Office.; Elizabeth M. Scott. "Excavation of a Poteaux-en-Terre Outbuilding at the Janis-Ziegler Site in Ste. Genevieve, Missouri." Presented at Society for Historical Archeology Conference, January 2011.

65 Ste. Genevieve Deed Book.



Figure 18. 1986 photograph, looking at the north main facade of the house (Source: HABS)



Figure 19. 1986 photograph, looking at the west rear wall of the house. (Source: HABS)



Figure 20. 1995 photograph from a newspaper article, showing the house before the restoration work. Note the elevation of the street and the exposed stone wall. (Source: *Jefferson County Post*, May 24, 1999, page JC8)

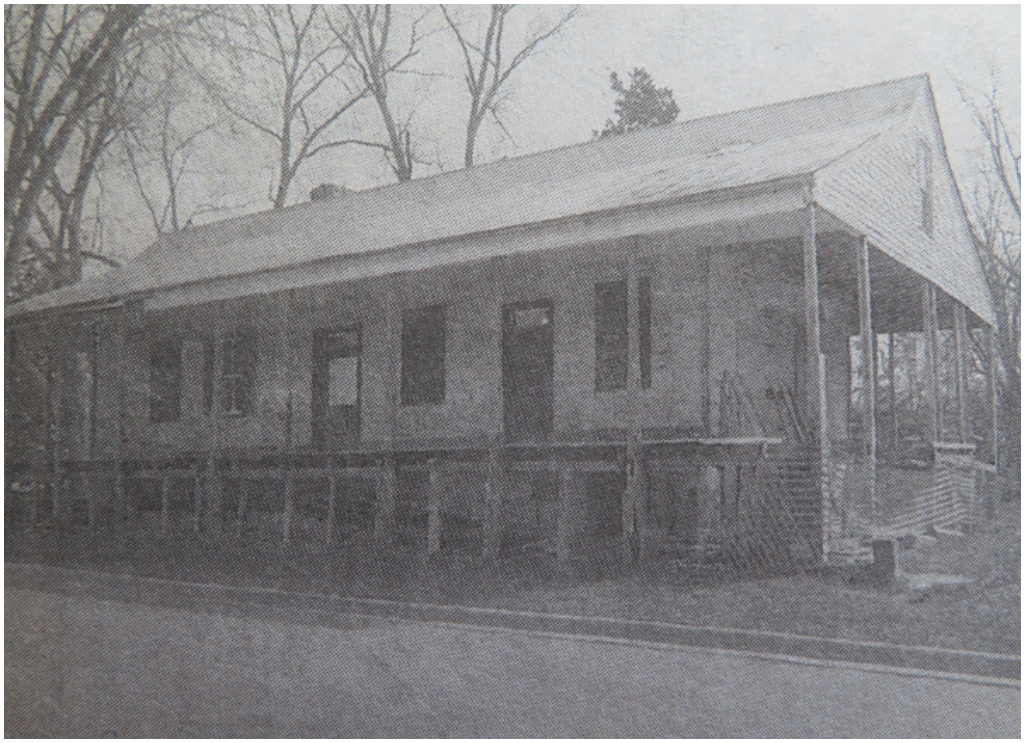


Figure 21. 1999 photograph from the same newspaper article, showing the house during the restoration work. Note the elevation of the street is now level with the top of the wall. Note also that the historic wall on the west gallery end has been removed. (Source: *Jefferson County Post*, May 24, 1999, page JC8)

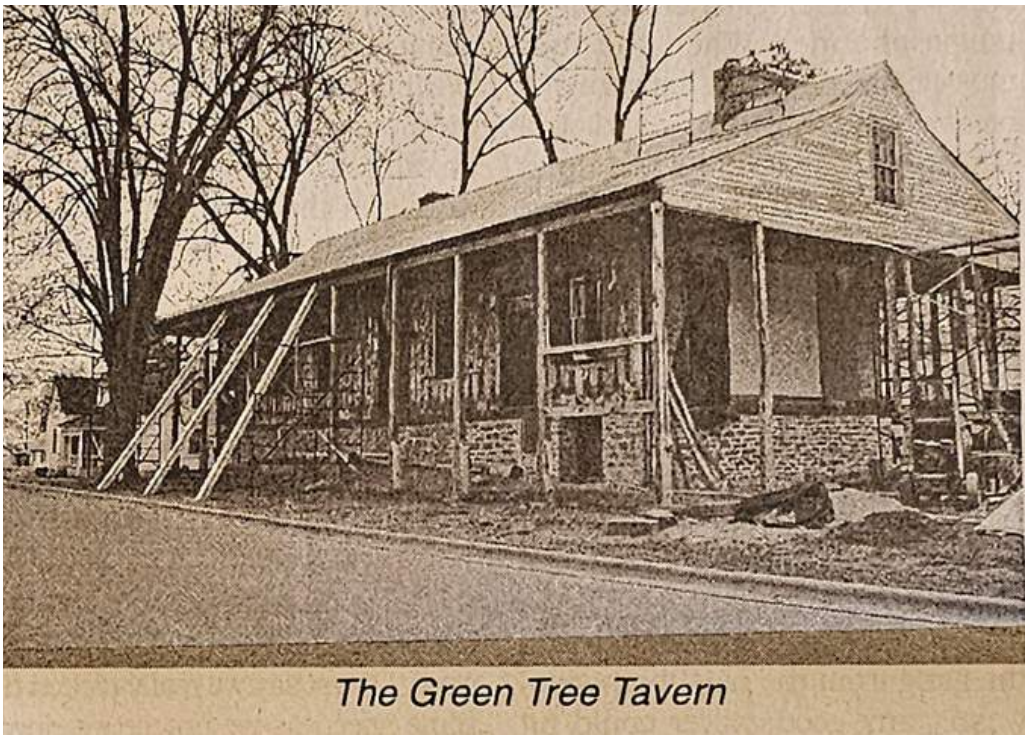


Figure 22. 2000 photograph from a newspaper article, showing the house under restoration. Note that the west and north galleries have been almost entirely removed. (Source: *Ste. Genevieve Herald*, November 8, 2000, page 18)



Figure 23. 2007 tour held by Jack Luer, showing the south wall exposed and the galleries mostly deconstructed. (Source: Felix Vallé House State Historic Site, vertical file for the Janis-Ziegler House)



Figure 24. 2007 photograph after restoration and reconstruction of the north gallery enclosure. Note the vertical logs are now exposed and a split stair has been added to the north gallery. (Source: Felix Vallé House State Historic Site, vertical file for the Janis-Ziegler House)



Figure 25. 1 2007 photograph of the south gallery after restoration. (Source: Felix Vallé House State Historic Site, vertical file for the Janis-Ziegler House)

as a clerk, in 1880 as a Collector of Revenue, and later in 1900 as a capitalist.[66]

It is currently undetermined if the Zieglers continued operating the tavern after they purchased in the property, although Sebastian Ziegler was recording as operating a billiard hall elsewhere in town. If they did, the tavern likely also closed sometime between 1850 and 1860, due to the enactment of licensing and temperance laws that made operating a tavern expensive and difficult in Ste. Genevieve. These laws, commonly today called "blue laws" or "Sunday laws," placed restrictions on business and trade of many types but especially those forms that involved the manufacture, sale, or consumption of alcohol. Such restrictions included forced closure on Sundays and high licensing costs for beer halls. The growing support of temperance movements, starting in the 1830s, threatened the businesses and livelihoods of many German residents, since many of the taverns in Ste. Genevieve were owned by Germans. Further study of licensing records in the Ste. Genevieve Archive Collection held by State Historic Society of Missouri may be able to help determine if the property ever held a license for as a tavern or boarding house while under early Ziegler ownership.

The temperance movement would continue to grow in popularity through the 19th century, primarily driven by American evangelical organizers and was often wielded as a political, social, and economic weapon against immigrant communities.

In the 1840s, license fees for merchants and businesses varied significantly. Shop-owners were charged $11 for a general store license, while proprietors of a bar or dramshop paid $15 ($600). However, if the establishment had billiards and alcohol together, the license fee was $100 ($4,100) per year. One high licensing law enacted in the 1880s required a $400 per year fee in addition to a $2,000 bond to operate a saloon. This forced three German widows to close their establishments.[67] The *Ste. Genevieve Herald* ran an anecdote likening the heavy hand of temperance laws and restrictions to a puritanical lifestyle, where only well-regulated prisons could satisfy a staunch temperance supporter.[68]

In 1883, Francis's wife Josephine Ziegler died, and in 1897, Francis recorded his will. He died in 1900 and left the house and property to their daughters Barbara (1856-1950), Blanche (1859-1923), Mary Isabelle (1867-1922), and Corinne (1863-1952). His son Joseph (1860-1937) was the executor of the will, and the estate was divided among them. None of the four daughters appeared to have ever married, and Barbara and Corinne were the last Zieglers to occupy the residence; they moved to St. Louis in 1935.

In 1937, Joseph died, and his portion of the estate went to his sisters Barbara and Corrine and his two daughters Josephine and Helen. Barbara and Corrine sold their portion of the property to Joseph's daughters for $1.00 in 1938. Barbara, Corrine, Josephine, and Helen were all living in St. Louis at this time; after acquiring the property, Josephine, and Helen rented the house and remained in St. Louis. Later that same year, they sold the residence to James and Annie Moranville in Ste. Genevieve, who were identified as tenants in the house. The Moranvilles paid $100 down payment with the promise to pay the remaining $1,200 ($28,200 total) by October 1939.[69]

After the Ziegler Family

The Moranvilles likely added the first heating and plumbing to the property after their purchase.[70] Ralph and Laverne Grannemann purchased the property in 1948 from the Moranvilles[71] and lived there until they sold the property to Frederick and Edna Foley 1963.[72]

In 1976, Norbert and Frances Donze purchased the property and operated it as a historic house museum

66 Scott, "Excavation of a Poteaux-en-Terre Outbuilding.."; U.S. Census records 1850, 1860, 1880, 1900; Catholic Church marriage records.

67 Flader, "The Germans of Ste. Genevieve, 1830-1890," 21.

68 *Ste. Genevieve Herald*. 2 Dec 1882, 1.

69 Ste. Genevieve Deed Book 634, p 60, December 31, 1993.

70 Scott, "Excavation of a Poteaux-en-Terre Outbuilding.."

71 Ste. Genevieve Deed Book 127, page 454, February 4, 1948.

72 Ste. Genevieve Deed Book 164, page 163, October 11, 1963.

until 1992.[73] The Donzes were influential, and early, historic preservation pioneers in Ste. Genevieve and owned several of the significant historic houses in the community, including the Bauvais-Amoureux House just south on St. Marys Road. During their period of ownership, the Donzes likely did some improvements, but the house remained in much the same condition as it had been through the start of the 20th century.

Steve and Emily Mellies purchased the property from the Donzes.[74] During their ownership, the dwelling sustained damage during the Great Flood of 1993, when the Mississippi River flooded the house for months. Water flooded the basement entirely and reached up to 18-inches deep within the first floor of the residence, and water marks can still be seen on the woodwork on the first floor.

After the flood, a major restoration of the property took place in 1996, under the ownership of Hilliard and Bonnie Goldman of St. Louis.[75] They completed a certified historic rehabilitation at the property with the goal of returning the house to its original c. 1790 form. Their work included repointing the stone foundation, removing plaster from the exterior log walls, repairing and patching the log walls, whitewashing the logs, repairing and replacing missing elements from the galleries, repairing historic doors and hardware, replacing windows with historically appropriate windows, reconstructing much of the gallery decking and structure, and repairing and replacing historic shutters.[76]

At the time of the renovation the residence had a metal roof that had been added over older wood shingles. Both these layers were removed, and new hand rived western cedar shingles installed to match the original shingles. Interior plaster walls and trim were repaired where needed. Originally there were two triangular fireplaces. The fireplaces at the east end of the building had three fireplace openings which remain. The fireplaces at the west end of the building had the cooking fireplace for the kitchen with an oven in the back and a fireplace opening in the tavern room. This fireplace and chimney was removed except for its foundation in the basement. The original mantel was reinstalled at the rebuilt tavern fireplace and a new Roth Quarry stone hearth installed to match the original.

Many alterations to the building occurred following the 1993 flood that were not sensitive to the significant historic character of the property. Many of these items were either removed or reversed as part of the 1996 renovation. Plumbing and electrical were updated and repaired, and a new furnace with air conditioning was added. The steps at the front gallery were reconstructed as a central entry with two flights of steps rising from the north and south.

The Goldmans maintained ownership of the home until 2017, when the Missouri Department of Natural Resources, with the assistance from Les Amis, purchased the property.[77] The National Park Service acquired the property in 2021 as a contributing resource within the Ste. Genevieve NHP.[78]

Slavery in the Illinois Country

Laws Under French Rule

Enslavement in Louisiana began during French authority in the territory (1720-1762), continued during the Spanish period (1763-1804), and into the American Period (1804-1865). Intergenerational enslavement of people of Native American descent and people of African descent occurred through all regimes. Understanding and identifying those who were enslaved is challenged by the ambiguous, inconsistent, and sometimes intentionally misleading nomenclature of identifying Native Americans, people of African descent, and mixed-race people as used by their enslavers. Spanish

73 Ste. Genevieve Deed Book 242, page 210, November 16, 1976.

74 Ste. Genevieve Deed Book 115, page 305, December 29, 1939.

75 Ste. Genevieve Deed Book 712, p 112, April 26, 1996.

76 Janis-Ziegler Historic Tax Credit application, copies from Felix Vallé Historic Site vertical files; Theresa Tighe. “Colonial landmark in Ste. Genevieve, Green Tree Tavern, is being Restored.” *St. Louis Post-Dispatch* (St. Louis, MO) may 24, 1999, 8.

77 Ste. Genevieve Deed Book 2017-0646, March 4, 2017

78 Ste. Geneveive Deed Book 2021-3680, April 17, 2021.

racial identifiers such as *negro*, *moreno*, *mulato*, *pardo*, *cuarteron*, *mestizo*, and *grifo* blur the record because of the inconsistent and interchangeable use of racial taxonomy. French terms used to describe race were no less clear, with "*rouge ou mulatresse ou sauvage* was one example of this distortion of identity."[79]

Trade with the French islands in the Caribbean, Martinique, Guadeloupe, and Saint-Dominigue supported the institution of slavery within the Illinois Country of French Louisiana. Native Americans and people of mixed race were also enslaved under French occupation and subject to the same racial laws. Under Spanish rule, laws prohibiting enslavement of Native Americans were widely ignored in the Illinois Country. These marginalized enslaved groups are often edited from or minimized in the history of this area. Except for a few brave examples of men and women who successfully fought for their human right to freedom through the Euro-intertriba;centric legal system, most enslaved individuals were kept intentionally subjugated and uninformed of what few protections or rights they may have had under European and later American laws. Yet, enslaved people learned the systems, shared information with other enslaved people, and did what they could to gain their freedom, despite enslavers attempts to keep them in the dark.

Race-based laws in the Louisiana Territory were primarily built on slavery within the French system, which was defined by the Code Noir. The Code Noir attempted to define slavery in French Louisiana by codifying the separation of the races and how they would share the same communities. The Code Noir governed both the behavior of enslaved people and their enslavers. It also governed the free Black population who were classified as "free people of color."

First published in 1685 as the Colonial Ordinance, or formally the *Édit royal de mars 1685 touchant la police des îles de l'Amérique française* (*Royal edict of March 1685 affecting the policies of the islands of French America*), the document is largely attributed to Jean-Baptiste Colbert, a minister of King Louis XIV. Colbert was a financier, founder of the French Navy, and a well-regarded jurist. He codified ordinances during

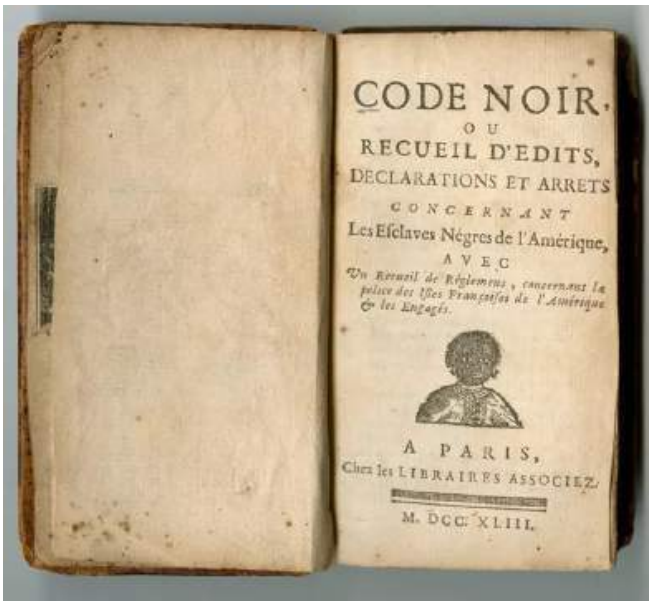

CODE NOIR,
OU
RECUEIL D'EDITS,
DECLARATIONS ET ARRETS
CONCERNANT
Les Esclaves Négres de l'Amérique,
AVEC
Un Recueil de Réglemens, concernant la police des Isles Françoises de l'Amérique & les Engagés.
A PARIS,
Chez les LIBRAIRES ASSOCIEZ.
M. DCC. XLIII.

Figure 26. The cover page of a 1743 book entitled "Black Code or Collection of Edicts, Declarations, and Decrees Concerning the Negro Slaves of America." (Source: NPS, The Historic New Orleans Collection, https://www.nps.gov/articles/000/the-code-noir-and-the-missouri-compromise.htm)

King Louis XIV's reign including the Civil Ordinance, Criminal Ordinance, Commerce Ordinance, and Navy Ordinance. The Code Noir was one of the last ordinances prepared by him prior to his death and continued to be revised by his son Jean-Baptiste Antoine Colbert. It was instituted in French Louisiana in 1724, under the expanded edition *Le code noir, ou, Recueil des reglemens rendus jusqu'à présent concernant le gouvernement, l'administration de la justice, la police, la discipline & le commerce des negres dans les colonies françoises* (*The Black Code, or, Collection of regulations issued up to now concerning the government, the administration of justice, the police, discipline & the trade of negroes in the French colonies*), and the intent of its restrictions remained in place until 1848.[80]

During the French colonial period, enslaved Africans, many of whom originated from the Senegambia region of West Africa, were transported up the Mississippi River through New Orleans. Native Americans who were captured during inter-tribal skirmishes and wars were also enslaved by white traders. Upon their arrival to the territory, individuals were isolated, often

79 Leila K. Blackbird. "Entwined Threads of Red and Black: The Hidden History of Indigenous Enslavement in Louisiana, 1699-1824" (2018). University of New Orleans Theses and Dissertations. 2559. https://scholarworks.uno.edu?td/2559 59-64. *Rouge ou mulatresse ou sauvage* is roughly translated as red or mulatresse or savage/wild.

80 *Le code noir, ou, Recueil des reglemens rendus...* Paris, France: Chez Prault, 176, 7. Available through GoogleBooks at https://www.google.com/books/edition/Le_Code_Noir_ou_recueil_des_r%C3%A9glemens_r/az5cAAAAcAAJ?hl=en&gbpv=1.

Year	Enslaved in Missouri	Total State Population	Percent of State Population	Enslaved in Ste. Genevieve County	Total County Population	Percent of County Population
1820	10,222	66,586	15.4%	983	4,962	19.8%
1830	25,096	140,455	17.9%	523	2,186	23.9%
1840	58,240	383,702	15.2%	548	3,148	17.4%
1850	87,422	682,044	12.8%	616	5,313	11.6%
1860	114,931	1,182,012	9.7%	617	8,029	7.7%

with no family structure, and no or limited general knowledge of the surrounding landscape. Familial bonds formed among enslaved individuals, networks, and communities of support. In some cases, if Native Americans were enslaved in a familiar territory, they may have knowledge of the landscape, and tribal structure could support a place of return if escape were to be successful.[81] The number of enslaved Native Americans is not clear, largely because of the distortion of identity labels in the historic record, and the search for marginalized narratives continues to uncover the extent of Native American, African, African American, and mixed-race enslavement in Louisiana Territory.[82]

Colonists in French Louisiana during the early 1700s initially sought mineral deposits, especially lead, and traded with the Native Americans, primarily for furs. In Lower Louisiana, some efforts toward establishing tobacco and indigo plantations were made in the 1720s, which failed because of an organized alliance of the Natchez Nation and escaped Africans that led to a rebellion known as the Natchez Rebellion, near modern day Natchez, Mississippi, in 1729. The revolt killed over 200 French colonists and destroyed Fort Rosalie. The revolt was somewhat successful, and threatened to destabilize the French foothold in Lower Louisiana for a short time. Despite the rebellion, the French persisted with their colonization of the region, and slavery continued in French Louisiana, along with the systematic persecution of the Native American nations.

In parts of French North America, including the Illinois Country where the plantation economy was not the dominant use of enslaved labor, the revised Code Noir "allowed for more fluid legal definitions and experiences of race, slaver, and social status," allowing the enslavers to apply the code to fit local practices where interaction between enslavers, enslaved people, and free people of African descent were more fluid than the rigid social structure traditionally associated with plantation culture of the Deep South.[83]

The Code Noir, implemented in 1724 in Louisiana, had 54 clauses that regulated and defined the activities of life, death, purchase, religion, and treatment of enslaved people by their enslavers in all French colonies, and included clauses which dealt with the expulsion of Jews and others related to judicial proceedings.

Enslaved individuals were to be baptized and educated in the Catholic faith; enslavers were not supposed to force their enslaved individuals to work on Sundays and holy days of obligation; enslavers were required to clothe, feed, and care for sick enslaved individuals; and for those enslaved, the code provided strict conditions for marriages, burials, punishment, property ownership, employment, and manumission. Under these laws and later laws as well, restrictions were also placed on assembly, conducting business, and carrying firearms.[84]

From the start, the Code Noir had detractors who

81 Erin Nicole Whitson. "Identifying with the Help: an examination of Class, Ethnicity and Gender on a post-Colonial French Houselot." (2013) Theses and Dissertations. Paper 62. Illinois State University, 27-29.

82 Blackbird. "Entwined Threads of Red and Black," 37-39.

83 "Contrasting Beginnings of Slavery in North America." Low Country Digital Heritage Initiative, accessed at https://ldhi.library.cofc.edu/exhibits/show/africanpassageslowcountryadapt/sectionii_introduction/contrasting_beginnings_of_slavery

84 Nicole Atwill. "Slavery in the French Colonies: Le Code Noir (the Black Code) of 1865." January 13, 2011. Law Librarians of Congress. Library of Congress, accessed at https://blogs.loc.gov/law/2011/01/slavery-in-the-french-colonies/. Some conditions of the Code Noir also targeted members of other marginalized and historically persecuted groups; for example the first article of the code also decreed the all those of the Jewish faith were to be expelled from the colony.

condemned both the document and the practice of slavery itself. During the 18th century in France, the movement to abolish slavery continued to gain support, paralleling similar abolitionist movements, primarily in England, but also the United States and Spain, supported by groups such as *La Société des amis des Noirs* (Society of the Friends of the Blacks), the first French abolitionist society founded in 1788.[85] While not an active abolitionist, the 18th century writer and philosopher Voltaire had an influential platform to criticize slavery in many of his writings, most famously in his satirical novel *Candide*. He also wrote, "the Black Code only serves to show that the legal schools consulted by Louis XIV had no ideas regarding human rights." In 20th century writing, historians have called the document a crime against humanity and "the most monstrous legal document of modern times."[86]

Laws Under Spanish Rule

Under Spanish and French administration of the territory, enslavement of both Native Americans and people of African descent was widespread. The most significant populations of enslaved Native Americans in the Spanish Territory were at New Orleans, Natchitoches, and Spanish Illinois (St. Louis and Ste. Genevieve).[87]

When Spanish Territorial governor Alejandro O'Reilly arrived in New Orleans from Cuba in 1769, he began to implement Spanish law in the formerly French colony, but largely kept the Code Noir in effect. Under Spanish law of the Indes, enslaved Native Americans had the rite under the law to sue for their freedom, but Louisiana Governor François Louis Hector de Carondelet dismissed all pending Native American enslavement suits in 1794.

Though the Spanish law established the principle that the Native inhabitants of the Americas were considered free and were not to be enslaved, this ruling did not end the enslavement of Native Americans in Spanish ruled territory.[88] The Spanish laws sought to prohibit the sell and purchase of enslaved Native Americans, but those who were already enslaved remained so. For example, in 1776, the Spanish census identified 29 enslaved Native Americans in Ste. Genevieve.[89] There are cases of enslaved Native Americans suing to gain their freedom well into the mid-1800s in Missouri. Although people of African descent made up the majority of those enslaved in Louisiana, the number of enslaved Native Americans documented under Spanish rule is likely to be highly inaccurate considering the use of inconsistent and intentionally inaccurate documentation to circumvent the decree.[90]

Slavery was banned in what is now Illinois and other areas north of the Ohio River as part of the 1787 Northwest Ordinance. This spurred an influx of French, living on the French-controlled east side of the Mississippi River, to move to the Spanish-controlled west side of the river where slavery remained legal. Then in 1794, France ended slavery both in the mainland and in all French colonies. Napoleon Bonaparte would reinstate slavery in France in 1802, until it was finally abolished in 1848. Thus, the French Code Noir remained in effect for some 163 years.

Missouri Territorial and State Laws

After the Louisiana Purchase in 1803 made French and Spanish Louisiana part of the United States, the Missouri territorial government legislated their own version of a Black Code. On October 1, 1804, the Laws of the District of Louisiana applied to people of African descent in Missouri, whether they were free or enslaved. These laws stated that enslaved people were not permitted to leave their enslavers property; they could not bear arms or weapons unless required for

85 Lawrence C. Jennings, "The Interaction of French and British antislavery, 1789-1848," *Proceedings of the Meeting of the French Colonial Historical Society*, 15 (1992): 81-91. Bernard Gainot, "La Société es amis des Noirs (1788 – 1799)." Bibliothèque nationale de France. Accessed at https://heritage.bnf.fr/france-ameriques/fr/societe-amis-noirs-article.

86 Atwill, "Slavery in the French Colonies."

87 Carl Ekberg. *Stealing Indian Women. Native Slavery in the Illinois Country.* Urbana and Chicago: University of Illinois Press, 2007.; T.N. Ingersoll. "The Slave Trade and the Ethnic Diversity of Louisiana's Slave Community." Louisiana History: The Journal of the Louisiana Historical Association, 1996, 37 (2): 133-161

88 Stephen Webre. "The Problem of Indian Slavery in Spanish Louisiana, 1769-1803." L*ouisiana History: The Journal of the Louisiana Historical Association,* Vol. 25, No. 2 (Spring, 1984) 117-119.

89 The 1776 Spanish Census is considered the most successful census undertaken by the Spanish government to accurately and completely count the occupants of its colonial territories; however, as discussed above, the racial terminology used in the documentation of people of color and mixed race, both free and enslaved, was inconsistently applied between regions and must be carefully considered.

90 Ekberg. *Stealing Indian Women.*; Ingersoll. "The Slave Trade and the Ethnic Diversity of Louisiana's Slave Community."

hunting or personal protection; they could not assemble or gather in groups; and they could not do business with others regardless of color without special permissions. Severe punishments were identified for infractions, from public beating to death; with subsequent revisions to the laws, these punishments generally intensified over time and constituted a framework that encouraged the brutal treatment of those enslaved. In 1807, the laws provided an avenue for those who were wrongfully held in slavery to sue for their freedom. Few were able to successfully achieve their freedom through legal avenues.[91]

Missouri's entry into the United States in 1821 set forth a national debate in Congress regarding the status of slavery. The Missouri Compromise of 1820, a piece of federal legislation passed in an attempt to assuage tensions between pro- and anti-slavery parties, struck an arbitrary line at Missouri's southern border - the 36°30′ parallel, north of which slavery would not be permitted in all other lands within the Louisiana Purchase. The compromise allowed Missouri to be admitted as a "slave state" and Maine to enter as a "free state," to maintain an equal number of "slave" and "free" states.

The Missouri Compromise was loudly criticized from all angles. Certainly there were supporters of abolition as a moral stance on human rights, but political motivations against slavery had other goals. Arguments in favor of slavery focused heavily on the primacy of state's rights over the federal government's ability to impose restrictions on slavery; arguments against the further admission of enslavement states focused heavily on the political advantages that enslavement states gained through the "Three-Fifths Clause" in the Constitution, which added three-fifths of the enslaved population to the state's overall population for the purposes of calculating members of the House of Representatives and the number of Electoral College votes. The Missouri Compromise would eventually be challenged and repealed in the charged decades before the Civil War, first by the Kansas-Nebraska Act of 1854 and then the Supreme Court ruling of the *Dred Scott v. Sandford* case in 1857, neither of which were favorable changes for those enslaved.

In 1825, Missouri legislated against any free African-American "other than a citizen of some one of the

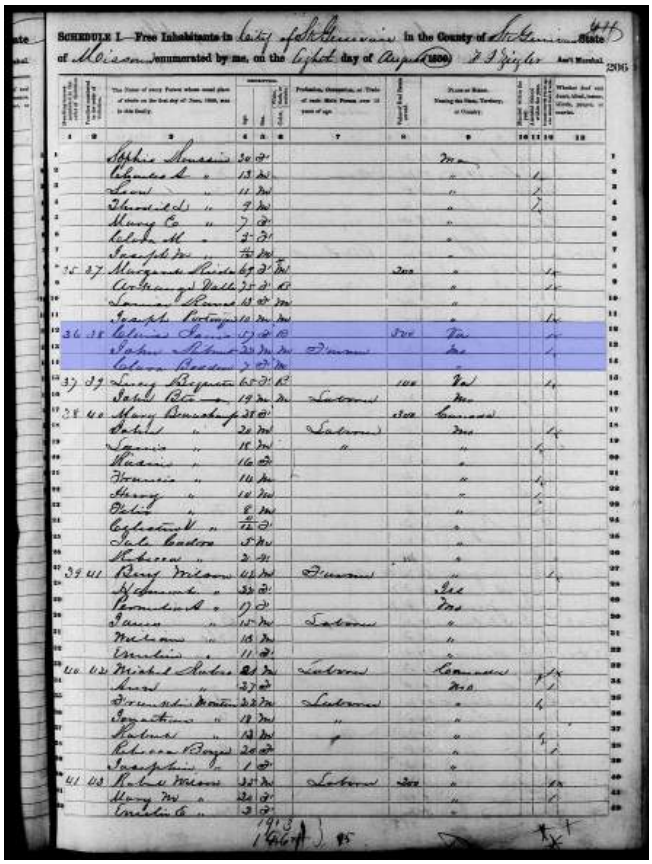


Figure 27. Page from the 1850 Census, showing Clarisse, her son John, and granddaughter Clara.

United States," to settle into Missouri. If proof of citizenship was not provided, African Americans were forced to leave the state and could be fined, imprisoned, or beaten for not obeying the law. This attempt to control the population did not apply to those traveling through the state, whether on overland trails or waterways, or to those individuals who were manumitted or emancipated from slavery in Missouri and continued to live in the state. However, such laws encouraged the persecution and violence against all people of color, regardless of status. These laws were enforced on any individual who was one-quarter Black or greater, and "slave patrols" were organized to police communities and empowered with the authority to whip anyone not conforming to rules of congregation or transportation.[92]

Missouri continued to itemize and intensify legislation regarding slavery. Information and community was denied to enslaved Missouri residents. Abolitionists

91 "The Black Code in Missouri Territory." Missouri State Archives Missouri's Early Slave Laws: A History in Documents. Accessed at Missouri Secretary of State www.sos.mo.gov/archives/education/aahi/earlyslavelaws/slavelaws

92 "The Black Code in Missouri Territory."; *Laws of the State of Missouri*, 1825, p. 600.



Figure 28. Bequette-Ribault House from the southeast, c. 1937 with a gabled roof. (Source: HABS MO-1114, https://www.loc.gov/rr/print/res/114_habs.html)

Clarisse Janis

Clarisse was likely born around 1795 and likely into slavery. At some point, she came into enslavement under the Janis family in Ste. Genevieve. She would have been around 38 years of age when François Janis's estate was partitioned in 1833. Baptism records show a woman named Clarisse enslaved to Francois Janis as mother to Odil (1817), Marie (1819), Marie Sophie (1820), Therese (1822), Jean (he also used "John") (1827), and Marie Louise (1832).

Clarisse and Therese remained together after the estate was divided, and they were then enslaved by Emily Janis LeCompte, daughter of François Janis. Felix Janis, son of François, enslaved Clarisse's son John after the disposition of the estate.[93]

Clarisse had several children with a white Frenchman named Jean Ribault. Ribault fled to Ste. Genevieve between 1810 and 1820, seeking a safe haven from the Haitian Revolution, a revolt of enslaved people in Saint Domingue from 1791-1804. He and Clarisse began a relationship in the 1820s while she was in her twenties and enslaved by François Janis.[94]

Clarisse's daughter Therese, was born on October 7, 1822, also into enslavement to François Janis, was baptized in the Catholic Church on November 1, 1822. Other children with Ribault soon followed: son Jean Guillaume (John) in 1827 and daughter Marie Louise in 1832, both born into slavery.[95] Clarisse and some, or possibly all of her children, were able to achieve freedom, possibly with the financial assistance of Ribault or by purchasing her own freedom as some enslaved people were able; further research into her story may be able to determine the early details of her life and information surrounding her transition to freedom.

In 1836, Clarisse was identified in the "Register of Free Negroes and Mulattoes" as a "mulatto" woman, standing five feet three inches high and aged 45. Clarisse along with 12 other individuals from Ste. Genevieve, including Pélagie Amoureux, were identified on this list.

93 Ste. Genevieve Deed Book D, 368-373. Information regarding Clarisse's place of birth varies greatly with Census' showing her born in Virginia, Kentucky, and even Missouri throughout the years. The father of the children is not identified in the records.

94 Elizabeth M. Scott. "François Janis, John Ribault, and Clarisse, a Free Woman of color: A Discussion of Exclusion, Structural Violence, and Privilege in Ste. Genevieve." Presented at Society for Historic Archeology Conference, Washington, D.C. 2016

95 Ste. Genevieve Catholic Church Baptism Records



Figure 29. Bequette-Ribault House from the northwest, after the 1980s restoration restored it to the c. 1807 appearance. (Source: RRJ 2022).

In 1838, Clarisse's daughter, Therese, married Michel Badeau, both of whom were recognized as free people in Ste. Genevieve. The 1840 census includes Clarisse ("Clarice") on her own line as head of household, along with one male aged 10-24 who is likely John.

Jean Ribault was described as a free white person, between the ages of 50 and 60 in the 1830 census. Jean died in 1849 and provided an annual income for Clarisse and his children in his will. Later that year, Clarisse purchased a residence on St. Marys Road, today known as the Bequette-Ribault House. The house was auctioned and purchased by Antoine Recole, a free man of African descent, for $405.00. Two months later, Clarisse purchased the residence from him for the same amount. There is speculation whether Recole purchased the house on Clarisse's behalf, possibly for legal reasons, but the particular details of the transaction are not clear in the historic record.

Clarisse was identified in the 1850 census as "Clarise Janis," a "57-year-old Mulatto," and living in her household was John Ribault (22-year-old male) and Clara Badeau (seven-year-old female), who was Therese and Michel's daughter. Her property is given at a value of $500 ($20,000).

In October 1857, John Ribault petitioned for a license as a "free person of color." He was described as a "free person of color, 24 years old, five feet eight inches tall, weighing 154 pounds with ordinary speech, good personal appearance and without any apparent deformity of person." He requested license to reside within the State of Missouri, likely to establish residency in response to Missouri's punitive laws which sought to prevent African Americans from settling in the state.[96]

In 1860, Clarisse is identified in the census as a 65-year-old female living in the residence with her 31-year-old son John, who was listed as a farmer. By this time, the value of her property had increased significantly - to $1,500 ($56,600). She remained in the residence in the house until her death in 1886.

Future generations of the Ribault family remained in the property until 1969 and owned it until the 1980s.

Further research into Clarisse and her family is recommended, as much about her extraordinary life remains to be understood.

96 Registry of Free Negroes and Mulattoes in Ste. Genevieve,1836.

attempting to spread their doctrines were prohibited and could be fined up to $1,000 and jailed up to life in prison. Forbidding education, the rite to congregate, and instilling harsh discipline and fear were all attempts to demean and control those who were enslaved. The subjugation of all people of color and mixed race in the state was the state's response to controlling the risk of "rebellion."[97]

As an enslavement state, those enslaved in Missouri were counted in census records through the enslavement schedules. The table above illustrates the numbers of people compared to the total population that were enslaved in Missouri and in Ste. Genevieve County.[98]

African Americans in Ste. Genevieve

In 1791, three free people of African descent were identified in Ste. Genevieve. By 1830, there were 46 individuals, which made up a small percentage of the population. That number increased again to 59 individuals by 1860, but as the population of Ste. Genevieve grew, the number of free people of African descent became a smaller percentage of the total population. From 1791 to 1860, the proportion of enslaved individuals to the total population of Ste. Genevieve decreased from 38.3 percent to 7.7 percent. During the same period, the population of white enslavers decreased from 7.7 percent to 1.8 percent. However, these statistics should not be interpreted as a decrease in enslavement. Between 1820 and 1830, the county has a sharp drop in population, but the number of individuals enslaved continued to rise, despite the lower number of people in the county.

By 1860, there were 58 enslavers in Ste. Genevieve. Most had one separate house for those they enslaved and most enslaved between two to nine individuals in one house, with 4.4 enslaved individuals as the average.[99]

In Ste. Genevieve, there was a small and growing community of free African Americans who owned property. In 1850, 15 households were led by free African Americans. In the 1860 census, there were 59 free African Americans in Ste. Genevieve, though only ten of those owned real estate, and most had an occupation listed as a farmer; one of those ten was Clarisse Janis, a woman formerly enslaved by François Janis, who owned property valued at $1,500 ($20,000). Clarisse lived into her 90s in her residence on St. Marys Road just a few parcels south of the Bauvais-AmoureuxHouse; her heirs occupied the residence until 1969 and retained ownership of the house until 1982.[100]

Clarisse Janis and Pélagie Amoureux were women whose lives are being studied by NPS. Both Clarisse and Pélagie had relationships with white Frenchmen in Ste. Genevieve, Clarisse with Jean Ribault and Pélagie with Benjamin Amoureux. These relationships occurred within a context of unequal power, and both women were enslaved when their relationships began, which raises complicated questions that may never be able to be fully answered. Pélagie and Benjamin married and had six children together in the 1830s and 1840s, and starting in 1852, their multi-generational family lived under one roof at the Bauvais-Amoureux House. Upon her death in 1890, her obituary recognized Pélagie as Benjamin's widow. Clarisse and Jean never lived together, but Jean did provide financially for Clarisse, which gave her the means to purchase her residence. Both lived out their lives in French colonial vertical log houses on St. Marys Road as neighbors. They were still required to register as a free person of African descent with the government and this continued to objectify and distort their identity by listing each person's color, shade of color, height, weight, age, and any noticeable marks or deformities.

In 1852, a group of freedom seekers comprising five men left Ste. Genevieve to Valle Lead Mines where they connected with three others. These eight enslaved men named Bernard, Edmund, Henry, Joseph, Theodore, Isaac, Joseph, and William were equipped with firearms

97 "The Black Code in Missouri Territory."

98 Missouri Department of Natural Resources, Division of State Parks. "Slavery's Echoes: Interviews with Former Missouri Slaves: Slaves in Missouri By County." Accessed at https://mostateparks.com/page/58368/slaverys-echoes-interviews-former-missouri-slaves; United States Census Bureau, Missouri Census by decade.

99 Scott. "François Janis, John Ribault, and Clarisse, a Free Woman of Color."; Missouri Secretary of State Population Statistics.

100US Census, 1850 and1860 Ste. Genevieve census. Scott. "Excavation." The house owned and resided in by Clarisse and her family is a small poteaux-en-terre structure today known as the Bequette-Ribault House at 351 St. Marys Road. At the time of Clarisse's ownership, the house looked very different than it does today; 19th century alterations were removed during a major restoration in the early 1980s. For additional information, see section "Clarisse Janis" in this report and the HABS documentation available at https://www.loc.gov/item/mo0248/.



Figure 30. Decorative pan-de-bois facade from the mid-18th century, located in Eu, Normandy, France. (Source: Lurita McIntosh Blank, 2024)

and crossed the Mississippi River, seeking freedom in Illinois. This event was dubbed the "Ste. Genevieve Stampede" in the press. *The Missouri Republican* advertised a $1,600 reward for anyone who would return the men. All the men were captured in Illinois within weeks of their flight and returned to a St. Louis jail. It's unknown what happened to the men after their capture. These eight men and their desire for freedom contributes to an understanding of the context of the enslaved in Ste. Genevieve, Clarisse, Pélagie, and their families, and the men of the Stampede are all examples of people seeking their freedom.[101]

Additional studies on the statistics and relationships among those African Americans in Ste. Genevieve will contribute to recognizing this under represented group. It is notable that Clarisse, Pélagie , and other mixed-race families lived in houses very near each other, both on St. Marys Road.

Architectural Antecedents in France and French Canada

> *Creole architecture… represents an amalgam of elements drawn from widely separated cultures and synthesized into something novel, but with clear attachments to its multiple forbears. Though traces of the parental building traditions survive in the newly established forms, they are now synthesized into a unique pattern which cannot be said to represent the patrimony of any single contributing culture. They are, rather, innovations that differ in both form and in social function from their antecedents.*
>
> *Jay Edwards, "Long Distance Implantation of Vernacular Architecture Traditions: The Canadians in Early Louisiana"*[102]

The vertical log structures of Nouvelle France represent an unusual typology that evolved along nearly 300 years of French settlement and culture in North America. In the Illinois Country, building traditions from both Canada and Lower Louisiana were woven together, responding to the extremes of both cold, wet winters and hot, humid summers. These competing needs created the characteristic form of the houses in Ste. Genevieve: a house with a massive fireplace and a steeply sloped roof to shed snow, surrounded by open galleries to provide shade and ventilation. Multiple architectural historians have researched the genesis and evolution of vertical log structures in much detail, highlighting how unique these buildings are to the New World.

Pan-de-Bois

The origins of vertical log structures are found in the *pan-de-bois* structures of France. Pan-de-bois is a type of post and beam construction that uses heavy timbers as the load bearing structure for the walls, floors, and roof. The voids between the timbers are infilled with

101 Matthew Pinsker. "The 1852 Ste. Genevieve Stampede." House Divided Project ,Dickinson College, Carlisle, PA, accessed at www.housedivided.dickinson.edu/sites/stampedes/st-genevieve-stampede/ ;Richard Blackett. "Dispossessing Massa: Fugitive Slaves and the politics of Slavery After 1850." *American Nineteenth Century History* 10 (June 2009): 119-136; Missouri Republican, September 11, 1852.

102 Edwards, "Long Distance Implantation of Vernacular Architecture Traditions: The Canadians in Early Louisiana," *Material Culture Review / Revue de la culture matérielle* 88-89 (2018): 45-78.



Figure 31. 17th century barn near Livet-sur-Authou, Normandy, France showing close-stud pan-de-bois construction technique that was the architectural antecedent to poteaux-sur-sole. (Source: Lurita McIntosh Blank, 2024)



Figure 32."Norman" style king post truss at an 18th century carriage house in Gouy, Normandy, France. (Source: Lurita McIntosh Blank, 2024)

colombage of straw and clay, brick, tile, or stone, depending on regional practices. The colombage is not structural, but provides insulation, weatherproofing, and pest proofing. For aesthetic purposes, the timber frame is often left exposed and the colombage may be colorfully painted.

Called "half timbering" in English and "*Fachwerk*" in German, pan-de-bois construction in Europe began in the early medieval period and continued under common use until the latter half of the 19th century, when dimension lumber and frame construction became more prevalent. Surviving examples of pan-de-bois structures in France typically date to the 15th century and later, although buildings from as early as the 13th century survive, at least in part.

Structures in France

Pan-de-bois structures vary greatly in size, ornamentation, and sophistication of the structural system, with some buildings exhibiting multiple corbeled stories and ornate wood carving. The simplest pan-de-bois structures are single-story vernacular or agricultural buildings; these will typically be stud construction, meaning constructed with many vertical timbers, and will have steep gabled or hipped roofs covered with tile, slate, or thatch. These smaller, rural structures share many characteristics with vertical log houses and provide much insight into the knowledge and skill of the early settlers of the Illinois Country.



Figure 33. 17th century, close-stud pan-de-bois buildings in Pont-Audemer, Normady, France, showing a typical configuration for urban buildings with multiple stories and shared party walls. (Source: Lurita McIntosh Blank, 2024)

Straw and mud infill on lath, woven wattle, or torchis are commonly seen, as is stone or brick infill. Foundations are typically stone with later alterations made in brick. In parts of the country where clay or slate readily available, these will be used for roofing; in other regions, thatch is still often used, especially on agricultural buildings. Many roofs have also been replaced with 20th century materials like asphalt shingles or metal panels. Similar to the houses in Ste. Genevieve, many roofs are king post trusses with an elevated collar tie member - the



Figure 34. A stable, possibly 18th century, in Saint-Georges-du-Vièvre, Normandy, France, with close-stud pan-de-bois construction. (Source: Lurita McIntosh Blank, 2024)



Figure 36.Maison Lamontagne, built in 1744 in Rimouski, Quebec, one of the oldest half-timbered structures in Quebec, following pan-de-bois building tradition. (Source: Site Historique de la Maison Lamontagne, https://maisonlamontagne.com)



Figure 35. 18th or 19th century farm structure on the grounds of the Château de Bailleul in Picardy, France, with close-stud pan-de-bois construction. (Source: Lurita McIntosh Blank, 2024)

"Norman" truss.

Early Structures in New France

The vertical log structures of the Illinois Country were influenced by a wide variety of sources and exhibit an amalgam of building traditions. During the 17th century, residents of Normandy, Brittany, and Poitou comprised the majority of the French who immigrated to Canada, settling particularly around Quebec. It is from these émigrés that the many of early settlers of Kaskaskia and Ste. Genevieve can trace their family lines. Other settlers arrived directly from France and the Caribbean. Additionally, there were significant cultural exchanges with settlers from other home countries, particularly the English, who also had a shared tradition of half-timbered construction.[103]

With the earliest structures in Quebec, the influence of building types from northern and western can be readily seen. In an early description of house construction, written in 1621 by Samuel de Champlain, a French explorer and founder of Quebec City, he describes a structure to be built in Cap -Tourmente as “made of wood and earth in the manner of those built in the villages of Normandy.” Champlain spends the next several paragraphs describing the measurements, materials, and skilled labor required for the work.[104]

The house described by Champlain likely followed a building form seen throughout Normandy, with a simple, rectangular form, small windows, and a steeply pitched roof. A similar extant example is the Maison Lamontagne, built in 1744 in Rimouski, Quebec, today one of the oldest half-timbered structures in Quebec.[105]

Torchis Construction

In both pan-de-bois and vertical log construction, voids

103Edwards, "Long Distance Implantation of Vernacular Architecture Traditions," 47 and 50.

104Robitaille, Andre. *Habiter en Nouvelle-France, 1534-1648*. Quebec: Publications MNH, Inc., 1996: 230-231; and Champlain, Samuel de. *Les voyages de la Nouvelle France occidentale, dicte Canada, faits par le sr de Champlain*. Paris, France: Chez Pierre Le Mur, 1632: 113-114.

105Site Historique de la Maison Lamontagne, https://maisonlamontagne.com/. Accessed August 12, 2024.



Figure 40. Zig-zag torchis at the Janis-Ziegler House. (Source: RRJ, 2023)

between the timbers are often infilled with wood slats or staves, called *torchis* or sometimes *barreaux* (meaning, literally "bars"), which are used to reinforce and support the clay and straw mixture, called *bousillage* in Creole French and *colombage* in European French. The slats are sharpened on one or both ends to allow them to be more easily fixed into channels carved on the interior faces of the logs.

Torchis construction is an ancient building method that entered into wide use in the Illinois Country via French migration through both French Canada and the Caribbean.[106] In Ste. Genevieve, torchis are seen primarily in two configurations: with the slates set at angles but parallel to one another and where the slats are set in a zig-zag configuration. In France, torchis construction followed regional vernacular practices, resulting a wide range of styles and methods seen, from simple branches, to riven or later sawn lath, to woven configurations similar to wattle and daub.

In the New World, the use of bousillage with torchis would have been an efficient and effective manner to weatherproof and insulate the exterior walls of the vertical log structures. When protected by limewash or clay plaster, the bousillage would have performed well for many decades with minor repairs.



Figure 37. Zig-zag torchis made of small diameter branches with the bark intact on a 17th century barn in Saint-Cyr-la-Campagne, Normandy, France. (Source: Lurita McIntosh Blank, 2024)



Figure 38. Slightly angled and parallel torchis made of riven lath, on a 17th century house in Bernay, Normandy, France. (Source: Lurita McIntosh Blank, 2024)



Figure 39. Horizontal and parallel torchis made of riven lath on a 17th century convent building in Eu, Normandy, France. (Source: Lurita McIntosh Blank, 2024)

106Laura Blokker and Heather Knight. "Louisiana Bousillage: The Migration and Evolution of a French Building Technique in North America." *Construction History* 28, no. 1 (2013): 27-48.

Chronology of Development and Use

Through the historical research and assisted by the physical evidence of changes over time documented during the physical investigation, a tabular chronology has been prepared on the following pages to organize the major historical events, important people, and alterations that have influenced the Janis-Ziegler House and its site as they currently exist.

HISTORICAL EVENT	DATE	HISTORICAL CONTEXT
	1787	The Northwest Ordinance prohibits slavery in American territory north of the Ohio River. Some French enslavers move west of the Mississippi River into Spanish controlled territory to avoid losing their enslaved people. Eleven inhabitants are documented at the new Ste. Genevieve townsite, although this number is disputed and maybe somewhere closer to 13 or a few more residents.
Nicolas Janis and his family arrive in Ste. Genevieve from Kaskaskia.	**1788**	
Antoine Dufour acquires a Spanish land grant and sells part of the land to Nicolas Janis, including the parcel on which the Janis-Ziegler House now stands.	**1789-90**	Ste. Genevieve floods again in 1789.
Nicolas Janis has a poteaux-sur-sole house constructed along New Bourbon Road (now St. Marys Road), lives there with his family, and manages his businesses from the central hall.	**1790**	
François Janis married Pélagie Bienvenue and lived in the house with Nicolas where they raised their family of five children.	**1792**	
Nicolas sells the property to François. François and his wife Pélagie open the tavern and remain in the residence until their deaths in 1832.	**1796**	
	1800	Control of the Louisiana Territory returns to France.

HISTORICAL EVENT	DATE	HISTORICAL CONTEXT
François contracts to have the stone wall in front of the dwelling constructed. The original stone wall had a semi-circular protrusion built near the west end of the wall.	**1803**	The United States acquires the territory as part of the Louisiana Purchase, which doubles the size of the United States. The Corps of Discovery (the Lewis and Clark Expedition) begins from St. Charles, Missouri, approximately 75 miles north of Ste. Genevieve. Clark likely passed near Ste. Genevieve during his 1803 visit to Fort Kaskaskia.
Nicolas Janis dies.	**1804**	The original five districts of Missouri are identified as Cape Girardeau, New Madrid, St. Charles, St. Louis, and Ste. Genevieve, by proclamation from William Henry Harrison, then governor of the Indiana Territory which held administrative control over the District of Louisiana.
Freemason's Louisiana Lodge No. 109, of which François Janis is a member, is organized as the first Freemason lodge west of the Mississippi River. Meetings are held in the building.	**1807**	
	1811-1812	New Madrid Earthquakes, a series of three severe earthquakes from December through February, cause widespread, regional damage and are today recognized as some of the most intense seismic events experienced in North America since the time of European settlement. Ste. Genevieve experiences minor damage.
	1814	First American Missouri census is taken in October 1814.
	1820	The "Missouri Compromise," passed by Congress on March 3, 1820, allows Maine to enter the United States as a "free state" and Missouri to enter as a "slave state." The compromise, which maintained the balance between states where slavery was legally allowed and those states where it was prohibited, was a temporary patch on the increasingly volatile issue of slavery.
François and Pélagie Janis die intestate. With no debts against the estate, it is divided among their children.	**1832**	
Mathias Ziegler purchases the property from heirs of François and Pélagie Janis. The Zieglers live there with their family and continue to maintain a tavern at the residence.	**1833**	

HISTORICAL EVENT	DATE	HISTORICAL CONTEXT
Mathias Ziegler dies at the age of 39. His wife Barbara inherits the estate and remains in the house with her children, operating the tavern.	**1835**	
John Ziegler may be operating the tobacco business out of the residence or assisting with his uncle Sebastian's business, based on pages from his blotter book identifying sales and receipts.	**1836**	
Alexander Ziegler is identified as a tobacconist at the dwelling.	**1850**	
Francis Ziegler marries Josephine Moreau, who also lives nearby on St. Marys Road. They raise their five children in the dwelling.	**1851**	
	1854	Kansas-Nebraska Act passes, repealing the Missouri Compromise of 1820 and allowing "popular sovereignty" in determining if a territory would be free or permit slavery. This spurs years of violence between pro- and anti-slavery forces along the Missouri-Kansas border.
Sometime during this decade, the family ends their tobacco business. Francis is listed as clerk in the 1860 census. This may also mark the period when the tavern closed.	**1850-1860**	
Barbara Ziegler filed the final sale of the property with the court. She remains in the house with her son Francis and his family.	**1860**	
	1861	Following the secession of South Carolina and six other states, the Missouri State Convention votes against succession in a 98-1 vote on March 19. The Civil War officially begins with the Battle of Fort Sumter on April 12. By June, Union forces would occupy Jefferson City, Missouri, and the state was fully embroiled in the war. Ste. Genevieve is spared the worst of the fighting but the war is divisive among the citizens.
Josephine Ziegler dies.	**1883**	
Francis Ziegler records his will.	**1887**	
Francis Ziegler dies and leaves his property to his four daughters. His son Joseph is the executor of the will. The daughters never marry and share the house while the son moves to St. Louis.	**1900**	

HISTORICAL EVENT	DATE	HISTORICAL CONTEXT
	1917	The United States enters World War I on April 4, 1917
Daughter Isabelle Ziegler dies.	**1922**	
Daughter Blanche Ziegler dies.	**1923**	
Son Joseph Ziegler records his will.	**1925**	
	1929	The stock market crash starting on October 28, 1929, triggers a severe economic downtown - the Great Depression, that lasts for over a decade.
Surviving daughters Barbara and Corinne Ziegler move to St Louis. The Ziegler family retains ownership of the property, but no longer resides there. The house is rented out.	**1935**	
Alexander Piaget and Charles van Ravenswaay document the house for HABS.	**1936-1940**	
Joseph Ziegler dies and leaves part of his property to his sisters Barbara and Corinne who are living in St. Louis, and the rest of his property to his daughters Josephine and Helen.	**1937**	
Barbara and Corinne Ziegler sell all of the Ziegler properties in Ste. Genevieve to Helen and Josephine for $1. Later that year, Josephine and Helen sell the residence to James and Annie Moranville, who were tenants in the building.	**1938**	
The Moranvilles settle the mortgage debt and become the owners of the property. Possibly at this time is when heating and plumbing were added to the building.	**1939**	
	1941	The United States enters World War II on December 7, 1941. Labor shortages for farm workers becomes a widespread issue. Many women entered the workforce by choice and necessity, including the agricultural trades.
Ralph and Laverne Grannemann purchase the property from James and Annie Moranville and live there for many years.	**1948**	
Frederick and Edna Foley purchased the property from the Grannemanns.	**1963**	
The house is included as a contributing resource to the Ste. Genevieve National Historical Landmark district.	**1966**	
Norbert and Frances Donze purchase the property from the Foleys and operate it as a historic house museum until 1992.	**1976**	

HISTORICAL EVENT	DATE	HISTORICAL CONTEXT
Measured drawings and photographs of the house are developed by HABS.	**1985**	
Dendrochronology study conducted by Dr. Richard Guyette establishes the approximate age of the logs, supporting the assumed construction date of c. 1790.	**c. 1986**	
The house sustains major water damage during the Great Flood, with standing water for two to three months in the basement and up to 18 inches high on the raised first floor.	**1993**	The Great Flood of 1993 inundates Ste. Genevieve and floods many of the historic buildings along the Common Field.
The roadway in front of the house was raised to the top of the wall as a flood protection measure.	**1993-1995**	
Steven and Emily Mellies purchase the property from the Donzes.	**1994**	
Hilliard and Bonnie Goldman purchase the property from the Mellies and rehabilitate the house to its c. 1790 form.	**1996-2000**	
The road level is lowered, exposing the stone retaining wall again. Around this time, the Goldmans may have removed the round feature of the roadway wall where the wall as built out around a tree.	**2005**	
First systematic archaeological investigations by Illinois State University are completed on the property that find evidence of poteaux-en-terre outbuildings that likely housed enslaved persons and other now missing site features.	**2006-2009**	
State of Missouri Department of Natural Resources with funds from Les Amis purchases the property from the Goldmans.	**2017**	
	2018	The Ste. Genevieve NHP is authorized by the Consolidated Appropriations Act of 2018 on March 2.
NPS acquires the property as a contributing resource to the Ste. Genevieve NHP.	**2021**	
NPS engages a consultant team to prepare this HSR.	**2023-2024**	

Statement of Significance

PERIOD OF SIGNIFICANCE

The National Register of Historic Places Ste. Genevieve Historic District nomination identifies the period of significance as 1790 to 1951. This period begins with the construction of the oldest extant buildings in the district and extends through the fifty-year recommended cut-off date (from the time written in 2001) as established by the National Register. The nomination incorporates discussions of all aspects of the history of the community and architectural styles including ranch houses.

Though precise dates for significance are not associated with the federal acquisition of properties, Ste. Genevieve NHP enabling legislation was authorized by the Consolidated Appropriations Act of 2018 on March 23 to "preserve, protect, and interpret for the benefit of present and future generations the themes of French settlement, vernacular architecture, and community form and farming on the frontier associated with Ste. Genevieve."[107]

Janis-Ziegler House: c. 1790 - 1939

This HSR is specific to the Janis-Ziegler House and recommends a period of significance that begins in c. 1790, the likely construction date of the house by Nicolas Janis and extends through 1939, with the end of the Ziegler family ownership.

1960 / 1970 National Historic Landmark District

In 1960, the Ste. Genevieve National Historic Landmark District was recognized for the national significance of its collection of extant French vernacular vertical log architecture and was designated under the theme of "French Exploration and Settlement." As one of the earliest NHL districts, the nomination specifically identified only eight structures believed to have 18th century construction dates but established no specific period of significance. When the NHL district nomination was revised and expanded in 1970, the district boundaries were established, and the number of contributing resources was kept at eight.

The Janis-Ziegler House was specifically listed among the eight contributing resources and is within the boundaries of the NHL district.

2002 National Register District

The 2002 designation of the Ste. Genevieve National Register District included overlap with the 1960 / 1970 NHL district but was generally broader to encompass buildings also significant at the state and local level. The National Register district was nominated under the following criteria:

> *Criterion A (Event) in part for association with an "ethnically diverse population including French, Anglo-Americans, African Americans, and Native Americans."*
>
> *Criterion C (Design/Construction) in part for its "French vertical log architecture" that "represents the early French and French Canadian settlement of the community."*
>
> *Criterion D (Information Potential) in part for the "potential for significant archeological deposits" related to the "French, German, Anglo-American and African American communities."*

(Note: The National Register nomination does not identify pre-European or Native American resources under this criterion as the majority of these resources are located outside the district boundaries.)

The period of significance for the National Register district was given as 1790 – 1951, approximately the founding of "New Town" Ste. Genevieve to the minimum age requirement of 50 years at the time of nomination. The Janis-Ziegler House is specifically listed as a contributing resource and is located within the boundaries of the district.

2016 Special Resource Study

Public Law 109-319, the Ste. Genevieve County National Historic Site Study Act of 2005 tasked the NPS with studying the historic resources of Ste. Genevieve for potential inclusion in the national park system. The study culminated in a 2016 report that found the Ste.

107 National Park Service. Ste. Genevieve National Historical Park Legislation and Map. https://parkplanning.nps.gov/document.cfm?parkID=155&projectID=31496&documentID=86827 accessed 3 May 2021.

Genevieve district to be nationally significant under the following criteria.

Criterion 4 (Architecture) for:

> *the district's "large and rare collection of French vernacular vertical log houses."*

Criterion 1 (Broad Patterns of United States History) for French colonial settlement, which also includes reference to the vertical log structures. Included also under this criterion is a discussion of the ethnic diversity of Ste. Genevieve, stating:

> *The richness of the town's cultural heritage is further amplified by the fact that several French vertical log houses had owners and occupants who were free people of African heritage in the years before the Civil War ended slavery in the United States.*

The Special Resource Study identified a period of significance for the district of 1750 – 1846, approximately the founding of "Old Town" Ste. Genevieve to the construction date of the last French vertical log structure in New Town.

2018 Ste. Genevieve National Historical Park

In 2018, Ste. Genevieve NHP was established as the 422nd Unit of NPS. The Ste. Genevieve NHP enabling legislation was authorized by the Consolidated Appropriations Act of 2018 on March 23 to:

> *preserve, protect, and interpret for the benefit of present and future generations the themes of French settlement, vernacular architecture, and community form and farming on the frontier associated with Ste. Genevieve.*[108]

2021 Archeological Overview and Assessment

This report identifies a time frame of c. 1770 – 1860 as the period of significance, representing the major time of "French influence and associated cultural expressions" in Ste. Genevieve.

The report identifies the importance of the Janis-Ziegler House, particularly in relation to the archeological investigations that identified outbuildings potentially associated with enslaved persons on the property.[109]

SIGNIFICANCE

Criterion C (Design/Construction)

The Janis-Ziegler House is primarily significant under National Register Criterion C, at the national level, for embodying the distinctive characteristics of a late 18th-century French vernacular vertical log structure in the poteaux-sur-sole style. The house is impressively intact, with few major alternations made during its history. Alterations made during the period of significance include alterations to one of the three-sided fireplaces, and relocation of an interior staircase. An early 2000s rehabilitation restored the fireplace and stair to their historic appearance and also reconstructed the north gallery enclosure and the gallery decking and floor framing. Much of the plaster was replaced and the woodwork refinished in the mid-20th century, possibly during the 1960s.

The current building form from the c. 1790 time period is majorly intact. The house retains a high level of integrity of the original c. 1790 fabric including the post-on-a-sill vertical logs and remnants of extant interior finishes.

Criterion A (Event)

The Janis-Ziegler House is also significant under National Register Criterion A, at the national level, for its contribution to the patterns of French colonial settlement in Ste. Genevieve. The house contributes to the patterns of settlement for Ste. Genevieve. The house is also significant under Criterion A for its contribution to the pattern of German immigration in the 19th century.

Criterion D (Information Potential)

The Janis-Ziegler House is also significant under National Register Criterion D, at the local level, for its potential to contribute our understanding of human history. Colonial and Pre-Civil War era deposits are known to be present at the site. This criterion should be revisited after further archaeological study.

108National Park Service. Ste. Genevieve National Historical Park Legislation and Map. https://parkplanning.nps.gov/docu-ment.cfm?parkID=155&projectID=31496&documentID=86827, accessed 3 May 2021.

109 National Park Service. *Archeological Overview and Assessment of Ste. Genevieve National Historical Park*, 2021, 25-27.

Character-Defining Features

A "Character-Defining Feature" is an aspect of a building's design, construction, or detail that is representative of the building's function, type, or architectural style. Character-defining elements include the overall shape of the building, its materials, craftsmanship, decorative details, interior spaces and features, as well as the various aspects of its site and environment. Generally, character-defining features date to a property's period of significance. For a historic resource to retain significance, its character-defining features must be retained to the greatest extent possible. An understanding of a building's character-defining features is a crucial step in developing a rehabilitation plan that incorporates an appropriate level of restoration, rehabilitation, maintenance, and protection.

There are numerous extant features that date to within the period of significant that contribute to the historic character of the Janis-Ziegler House and its surrounding environs. The property retains a high degree of integrity due to the surviving poteaux-sur-sole construction and the preservation of its context in relation to South Gabouri Creek, New Bourbon Road (now St. Marys Road), and the Common Field.

The form and configuration of the current house are also some of the primary character defining features. The house retains much of its original c. 1790 configuration on both the exterior and interior.

A summary of the Janis-Ziegler House's character defining features is as follows, developed from the guidance provided by Preservation Brief 17.

CHARACTER DEFINING FEATURES		
OVERALL VISUAL ASPECT		
Element	**Feature or Element**	**Commentary**
Setting and Context	Urban location south of downtown Ste. Genevieve, along New Bourbon Road, facing South Gabouri Creek.	c. 1790 The existing orientation of the house, with primary wall facing the main north-south transportation corridor and South Gabouri Creek, maintains the same orientation as the original construction in relation to the natural landscape. The house is located south of downtown Ste. Genevieve within walking distance of the city center. The Janis-Ziegler House's contextual relationship with downtown Ste. Genevieve, the road, and the creek is a key character defining feature of the overall site. Contributing features include: • The Janis-Zielger House and its proximity to the historic city center • The alignment of St. Marys Road and South Gabouri Creek • Stone masonry retaining wall along St. Marys Road • Turf lawn areas around the house

CHARACTER DEFINING FEATURES		
Shape and Massing	Long building with broken-pitch, gable roof and galleries.	c. 1790, with later alterations The house is a rectangular plan and is longer along the longitudinal axis, which is typical for many of the larger vertical log houses in Ste. Genevieve. Only a few like the Delassus-Kern House and the Jean Baptiste Vallé House have a more square plan,which may be the result of early alteration of the original footprint. The double or broken-pitch roof and galleries represent a building form common to French vernacular structures in Ste. Genevieve. At some point, likely either during initial construction or shortly after, the north portion of the gallery was enclosed. Despite this alteration, the character defining massing has been maintained since the House's original construction date. Contributing features include: • Long, rectangular massing, with the long side forming the primary facade • Broken-pitch roof form with the gable end walls • Open galleries on the north, east, and south walls with wood plank decking and wood plank ceilings • Chamfered wood gallery posts • Board railings at galleries • Enclosed gallery on the north wall • East gallery stairs aligned with main entry (not extant) • West gallery stairs aligned with rear entry (extant)
Construction Methodology	Poteaux-sur-sole exterior wall framing and transitional roof framing	c. 1790 The Janis-Ziegler House is one of a select number of known extant poteaux-sur-sole structures in Ste. Genevieve. The vertical log walls bearing on the limestone foundation walls, along with the bousillage infill are key character defining features, representing a rare and valuable construction methodology with national historical significance. This construction is exposed to view throughout the first floor exterior. Contributing features include: • Timber vertical logs forming the wall framing • Bousillage infill between the logs • Timber framing for galleries • Timber framing for first floor structure • Paired-rafter with collar tie roof framing

CHARACTER DEFINING FEATURES		
Openings	Exterior windows and doors	c. 1790 and later alterations The existing wood doors and windows appear to be in the same locations as established during initial construction c. 1790. One window on the west wall was removed during the 1990s restoration, presumably to restore the window location to it's original state. Although the primary facade is asymmetrical, there is alignment of window and doors openings on the north-south axis. The existing windows are 20th century replacement units that are compatible with the window style present during the later half of the period of significance. The c. 1790 windows were likely casements with divided lites, similar to the historic windows still in place at on the rear gallery of Guibourd-Vallé House. The c. 1790 doors may have been simple wood panel doors or more likely a more elaborate style with lower panels and an upper lite, similar to the door purported to be a c. 1793 original door in the main hallway of the Jean Baptiste Vallé House. Contributing features include: • Asymmetrical primary facade with its rhythm of window and door openings • Alignment of window and door openings on the north-south axis • Double-hung sash windows with 12-over-12 lites • Small, barred window openings on the basement level • Wood panel casement shutters on the main level windows • Wood batten-style, single-swing shutters on the attic windows • Wood panel doors with upper divided lites at the main entrances on the east and west walls • Wood batten-style doors on the basement level

CHARACTER DEFINING FEATURES		
Materials	Roofing and exterior wall covering materials	c. 1790, with modern replacement materials Wood shingles, as seen in the earliest photographs of the house, were likely the original roof covering and were in place for much of the house's history. Wood shingles are characteristic of the roofing treatment for French vernacular vertical log structures in Ste. Genevieve in the 18th and 19th centuries. Weatherboard lap siding and plaster were also common exterior wall finishes in Ste. Genevieve. The existing cedar wood tapersawn shake roofing and cedar lap siding are modern replacement materials that maintain a character defining appearance aligned with the character defining massing. Exterior plaster was removed from the vertical log walls during the 1900s restoration, but reinstallation of exterior lime plaster would maintain the character defining appearance of this era of construction, and would further protect the underlying vertical log construction. Contributing features include: • Wood shingle roofing • Wood weatherboard siding on the gable end walls • Wood weatherboard siding the enclosed north gallery • Exposed rubble stone masonry foundation wall • Brick masonry chimneys • Plaster or limewash treatment of the vertical log walls (not extant)
VISUAL CHARACTER AT CLOSE RANGE		
Craft Details	Hewn structural members with traditional joinery	c. 1790 The structural members for the original c. 1790 construction were fabricated by hand with an axe which created a distinctive hewn surface, in contrast to later 19th century and 20th century wood framing members which were sawn. Joinery between timber structural members is typically accomplished with mortise and tenon connections with wood pins. Of particular interest at the Janis-Ziegler House are the prolific marriage marks on the vertical logs, indicating placement and sequencing of each structural member. Such marriage marks provide valuable insight on the design and construction processes for timber structures. These techniques provide valuable insight into the hand-crafted and labor-intensive nature of building construction in early Ste. Genevieve.

CHARACTER DEFINING FEATURES		
		Contributing features include: • Hewn wood surfaces visible on the vertical log wall members, gallery framing members, roof framing, and floor framing members in the basement • Carpentry joinery using traditional methods with wood pins (without metal fasteners), including mortise-and-tenon, enfourchements (bladed), half lap, scarf, and dovetail joints • Marriage marks visible on the logs • Pièce-sur-pièce wood partition wall in basement • Hewn timber stud partition walls on the first level
INTERIOR VISUAL CHARACTER		
Exposed Structure	Ceilings and Exposed Beams	c. 1790 The existing beams are exposed to view in the first-floor rooms. The ceiling beams are hewn and are likely original c. 1790 members that were kept in place to support the attic level. Exposed ceiling beams as an intentional interior finish are commonly seen in contemporary buildings in Ste. Genevieve, and the beams have slightly chamfered edges as a decorative element. As original structural members and given the evidence that they were likely originally intended to be exposed to view, the ceiling beams are character defining features. Contributing features include: • Exposed wood plank ceilings • Exposed beaded wood ceiling beams
Interior Finishes	Wood flooring, wood trim and interior casing, wood and plaster wall surfaces	c. 1790, with later alterations The finishes utilized throughout the interior all contribute as the character defining features of each room. Many of the extant finishes, such as wood flooring and trim, appear to date from the original construction date c. 1790, but other materials, such as plaster, were updated and repaired after the 1993 flood and during the 1990s restoration with compatible materials. Contributing features include: • Hardwood flooring • Plaster wall finishes • Door and window casing • Baseboards, chair rails, and wall trim • 6-panel wood panel interior woods with period hardware

CHARACTER DEFINING FEATURES		
Interior Features	Triangular chimneys and fireplaces	c. 1790, with later alterations Two unique triangular fireplaces are present within the house. The east fireplace is original to the house's construction c. 1790 and features three hearths that serve three different rooms. The west fireplace features two hearths that serve two rooms and was reconstructed during the 1990s, following archeological evidence of a previous triangular fireplace that was removed at an unknown date. These features are rare in Ste. Genevieve and contribute to the character defining appearance of the house. Contributing features include: • Wood fireplace mantels • East triangular fireplace with three fireboxes • West triangular fireplace with two fireboxes • Stone hearths

Assessment of Integrity

Historic integrity is the ability of a property to convey its historic significance. Integrity involves seven aspects: location, design, setting, materials, workmanship, feeling and association. These aspects closely relate to the resource's significance and should be primarily intact for designation. Depending on the significance criterion, some aspects of integrity are more critical to conveying the building's historic significance.

A property that is significant for architectural merit must retain the historic elements that characterize the type, period, or method of construction that the property represents. Retention of design, workmanship, and materials is usually more important than location, setting, feeling, and association when determining integrity. Location and setting are important for properties whose design is a reflection of their immediate environment.

Per the National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation, "integrity" is the ability of a property to convey its historic significance. Integrity is evaluated under seven aspects: Location, Design, Setting, Materials, Workmanship, Feeling, and Association. Depending on the significance criterion of the property, some aspects of integrity are more critical to expressing the building's historic significance than others, but the property must retain integrity to be considered significant.

The primary historical significance of the Janis-Ziegler House is its use of the poteaux-sur-sole construction technique, which remains intact.

The discussion below considers each of the seven aspects of integrity as they relate to the Janis-Ziegler House. The integrity of the house is evaluated below in terms of the most important physical aspects of the building that convey its historic character.

INTEGRITY ASSESSMENT	
Location	
The place where the historic property was constructed or the place where the historic event occurred.	
High	The Janis-Ziegler House retains a high degree of integrity of location in relationship to its site. The House is located approximately one-quarter mile south of downtown Ste. Genevieve across from South Gabouri Creek. The house maintains is association with the main north-south transportation corridor now called St. Marys Road, and its views to the north end of the Ste. Genevieve Common Field.
Design	
The combination of elements that create the form, plan, space, structure, and style of a property.	
High	The Janis-Ziegler House has a high degree of integrity of design. The c. 1790 vertical log house above a full-height basement is readily recognizable in the current building, along with the original rhythm and interior alignment of window and door penetrations. The interior arrangement of rooms has been restored to its original arrangement, and historic partitions are still extant in the basement level.
Setting	
The physical environment of a historic property.	
High	The Janis-Ziegler House has a high level of integrity of setting. The house was originally constructed in a rural setting, on the outskirts of the "New Town" of Ste. Genevieve. The house overlooks the South Gabouri Creek which provides a pastoral feel to the setting despite the house's proximity to downtown Ste. Genevieve.
Materials	
The physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property.	
High	The Janis-Ziegler House retains a high degree of integrity of materials. The character-defining features, including the c. 1790 walls and floor systems of the original poteaux-sur-sole structure and the stone masonry foundation, remain majorly intact.
Workmanship	
The physical evidence of the crafts of a particular culture or people during any given period in history or prehistory.	
High	The Janis-Ziegler House has a high integrity of workmanship. As a poteaux-sur-sole structure, the house represents an excellent example of the French Colonial vernacular architecture for which Ste. Genevieve has been determined to be significant. Due to the absence of exterior wall finishes, the Janis-Ziegler House provides substantial visibility of the log framing, these openings in finishes demonstrate the high level of craft required to build these structures.

INTEGRITY ASSESSMENT	
Feeling	
A property's expression of the aesthetic or historic sense of a particular period of time.	
Medium	The Janis-Ziegler House has a medium integrity of feeling, which is supported by the high integrity of the setting. The site still conveys much of the historic and aesthetic feeling of its location with its proximity to downtown Ste. Genevieve and South Gabouri Creek. The integrity of feeling is diminished by the neighboring railroad bridge, the surrounding post-1900 residential neighborhood, and the loss of historic outbuildings.
Association	
The direct link between an important historic event or person and a historic property.	
High	The Janis-Ziegler House has a high integrity of association, as dendrochronology has revealed it may be the oldest verified house in Missouri. Additionally, the house was the meeting site of the first masonic lodge in the state.

Physical Description

ARCHITECTURAL FEATURES

The Janis-Ziegler is rectangular in plan, measuring 73'-6" feet long and 39'-9" feet wide. As documented by dendrochronology tests, the floor beams of the Janis-Ziegler House are logs that were harvested in c. 1790-1791. Other structural members, such as some wall logs and truss collars date to c. 1807-1806, suggesting a possible early alteration. The foundation and first floor were built in the French tradition of poteaux-sur-sole. This French term translates to "post-on-a-sill," in which exterior walls are constructed from vertical logs mounted on a wood timber sill atop a stone foundation. The house is of the "Mississippi Valley French Colonial" Style, having a broken-pitch gable roof and an open wraparound gallery on the east, south and west elevations. The north gallery was enclosed very early in the house's history. An unfinished attic is accessible from an interior stairwell, and the full basement is accessible from an exterior door on the west side of the house.

There are two entrances to the main room of the house, each centered on the north and south walls. Two additional entry points for the first floor are present at the west side of the north wall, and a fourth ancillary entrance is located at the west side of the enclosed gallery. The two primary entry doors have multi-paned glazed upper panels of varying configurations, with wood panels below. The two other doors on the east wall are wood six-panel doors with glazed transoms.

Ten large 12-over-12 double-hung wood windows are distributed throughout the east, south, and west walls. Three smaller 12-over-12 wood windows are located within the enclosed north gallery.

The foundation is stone rubble masonry; the siding at the enclosed gallery is wood weatherboard; and the roof is clad with cedar wood shakes. The vertical log construction is exposed on the exterior; in the past, it was covered with plaster. Interior plaster finishes are intact but were heavily restored in the 20th century.

SITE AND LANDSCAPE FEATURES

SETTING

The Janis-Ziegler House sits perched atop an elevated knoll that closely edges St. Marys Road. The road extends between South Main Street to the north and U.S. Highway 61 to the south. St. Marys Road follows the margin of a terraced landform that overlooks the Mississippi River floodplain, located to the east. Flowing parallel to St. Marys Road is South Gabouri Creek, a stream that turns to the east towards the Mississippi River at the end of the block that contains the Janis-Ziegler House.

Jour de Féte Park is located across the creek from the Janis-Ziegler House. Currently, there is no parking



Figure 41. View toward the Janis-Ziegler House from St. Marys Road. (Source: LSHLA 2023)

on the Janis-Ziegler House property. Visitors typically park within Jour de Féte Park and cross South Gabouri Creek via a wooden footbridge. Visitors following the footbridge to St. Marys Road must cross the street to reach the Janis-Ziegler House without the benefit of a crosswalk. Views of the house are afforded both from the road as well as the park.

At one time, Green Tree Tavern was used as a meeting place for Louisiana Lodge 109, the first Masonic Lodge west of the Mississippi River. A memorial commemorating Louisiana Lodge 109 stands across St. Marys Road and South Gabouri Creek from the Green Tree Tavern property.[110]

The Janis-Ziegler House property also falls within Ste Genevieve National Historical Park, a unit of the National Park System established in 2020 to protect and interpret a collection of French colonial era properties administered by the National Park Service. The park is comprised of several discontiguous parcels within the town of Ste. Genevieve and to the south in an area known as New Bourbon. Approximately three blocks to the north along South Main Street is the Jean Baptiste Vallé House, a French colonial property that also falls within the park. Across the street is the Ste. Genevieve Welcome Center, which is staffed with National Park Service personnel. The Welcome Center provides visitors with information about the park and the area. Approximately three blocks to the south of Green Tree Tavern is the Bauvais-Amoureux House, another French colonial property that falls within Ste. Genevieve National Historical Park. To the west of the Bauvais-Amoureux House is the Wilhauk House, a residence that postdates the French colonial era. It currently serves as the administrative headquarters for park staff. The last French colonial-era residence associated with the park is the Delassus-Kern House. It is located a few miles to the south along U.S. Highway 61 past the intersection with St. Marys Road. While driving along St. Marys Road, as well as U.S. Highway 61, visitors can view east toward the Mississippi River across Les Grands Champs, a field system established during the French colonial period that continues to serve agricultural use today, although it is currently in private ownership.

110 National Park Service, “François Nicolas Janis,” Ste. Genvieve National Historical Park, https://www.nps.gov/people/François-nicolas-janis.htm (accessed February 23, 2024).



Figure 42. South Gabouri Creetk looking south (left), with St. Marys Road to the right and Jour de Féte Park to the left. (Source: LSHLA 2023)



Figure 43. The footbridge crossing the creek from Jour de Féte Park (right) to St. Marys Road (left). (Source: LSHLA 2023)



Figure 44. View north toward the Janis-Ziegler House, with the stone wall to the right and the shaded lawn to the left (Source: LSHLA 2023)



Figure 45. View toward the Janis-Ziegler House from Jour de Féte Park. (Source: LSHLA 2023)

The Janis-Ziegler House also falls within the Ste. Genevieve Historic District, a National Historic Landmark (NHL) established in 1959 without a defined boundary but listing eight buildings as significant. Among them was the Janis-Ziegler House, believed constructed 1790-1791. Green Tree Tavern was also listed as contributing to the NHL district in Ste. Genevieve as part of a 1970 documentation of the district boundary. As one of only a few surviving French colonial vertical log dwellings of poteaux-sur-sole (posts on a sill)/bousillage construction in the United States, the dwelling contributes to the NHL as a significant example of French vernacular architecture. In 2001, a draft amended nomination expanded the documentation available for the NHL. It suggested an expansion of the NHL district as listed in 1970 to encompass a larger part of the town and its associated French colonial and later heritage resources.[111]

111 Ste. Genevieve Historic District was designated a National Historic Landmark in 1960, with boundaries defined in 1970. A draft nomination prepared by Douglas C. McVarish in 2001 augmented the available documentation and suggested expansion of the historic district boundary. The Ste. Genevieve Historic District was also administratively listed in the National Register based on the National Historic Preservation Act of October 15, 1966.

HOUSE AND LANDSCAPE

The Janis-Ziegler House property is located at 244 St. Marys Road between its intersection with South Main Street and Seraphin Street. The property encompasses approximately 0.555 acres of land. The house closely edges St. Marys Road, which is located to the northeast. Residential properties occupy the remainder of the block, which is also edged by Seraphin Street to the south, and South Main Street to the west and northwest. The house sits on an elevated knoll overlooking St. Marys Road, South Gabouri Creek, and Jour de Féte Park to the east. A stone retaining wall edges a large part of the property along St. Marys Road. A flight of concrete steps extends through the wall, and a series of contained garden spaces to the west of the wall, from the road. Beside the stairs, a sign identifying Green Tree Tavern as a feature of Ste. Genevieve National Park is affixed to the stone wall. Behind the house are several mature trees, turf grass lawn (Figure 9), and two wells/cisterns, although only one cistern can be seen today. Contemporary fencing edges portions of the lot as it abuts other residential properties. Stairs lead onto the porch of the house from the rear lawn. The Grand Champs is visible to the southwest from the property.

HISTORIC DOCUMENTATION

Little is known about the early appearance and use of the site under either the Janis or the Ziegler families. Few historic documents exist from that era that provide descriptions of properties in much detail. Historians can gather information from estate records, agricultural surveys, and archeological documentation regarding what features and structures may have once existed at the property. Based on archeological investigations, evidence of poteaux-en-terre outbuildings were found on the property, possibly associated with the housing of those enslaved by the Janis family or later those in service to the Zieglers. François Janis also likely had other structures on the site, such as a horse stable, privy, cisterns, and other outbuildings that supported the operation of the tavern. Typical with other Ste. Genevieve house lots, sustenance gardens, flower gardens, and orchards may also have been present.

The first site plan dates to 1985, when representatives of the HABS program documented the property. The site plan for the property shows the stone retaining wall in front of the house, with a break to the southeast, and a continuation at the southeastern end of the property. A

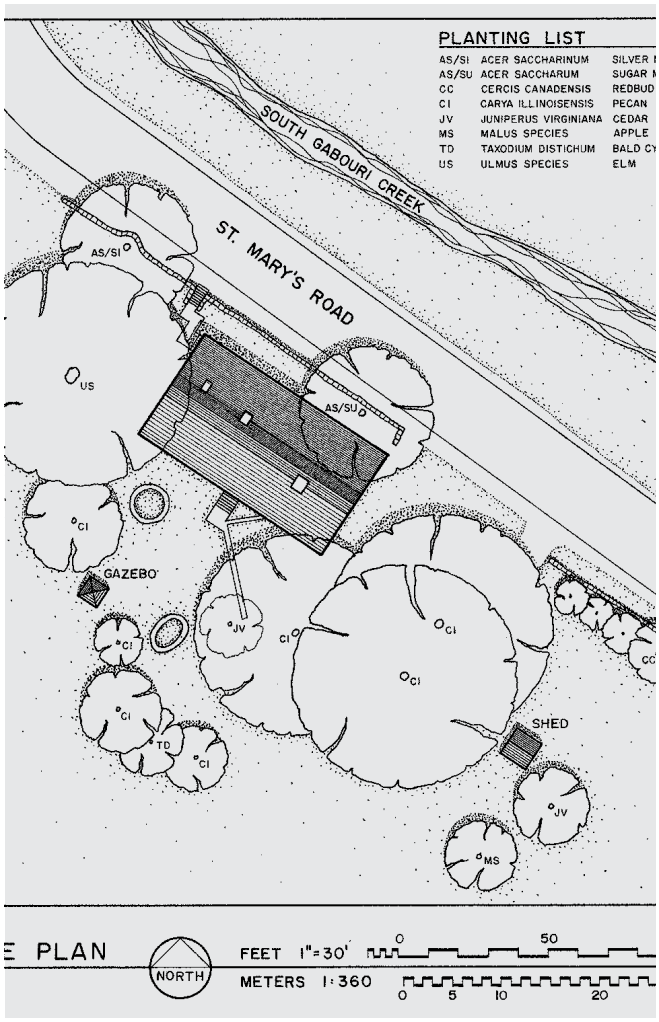


Figure 46. The site plan for the 1985 HABS documentation of the property. (Source: Historic American Buildings Survey, Library of Congress, MO-1104)

shed is indicated south of the house, and a gazebo to its west, along with two wells or cisterns.

Trees

Trees mapped on the property today include a silver maple (*Acer saccharinum*), sugar maple (*Acer saccharum*), redbud (*Cercis canadensis*), pecan (*Carya illinoiensis*), eastern red cedar (*Juniperus virginiana*), bald cypress (*Taxodium distichum*), and elm (*Ulmus sp.*). The shed and gazebo are no longer standing. Evidence of only one well or cistern is present today. Several of the trees survive, while others are no longer extant.

Historic photographs of the house show four trees were planted between the house and the stone retaining wall, likley in the later half of the 19th century. By the time

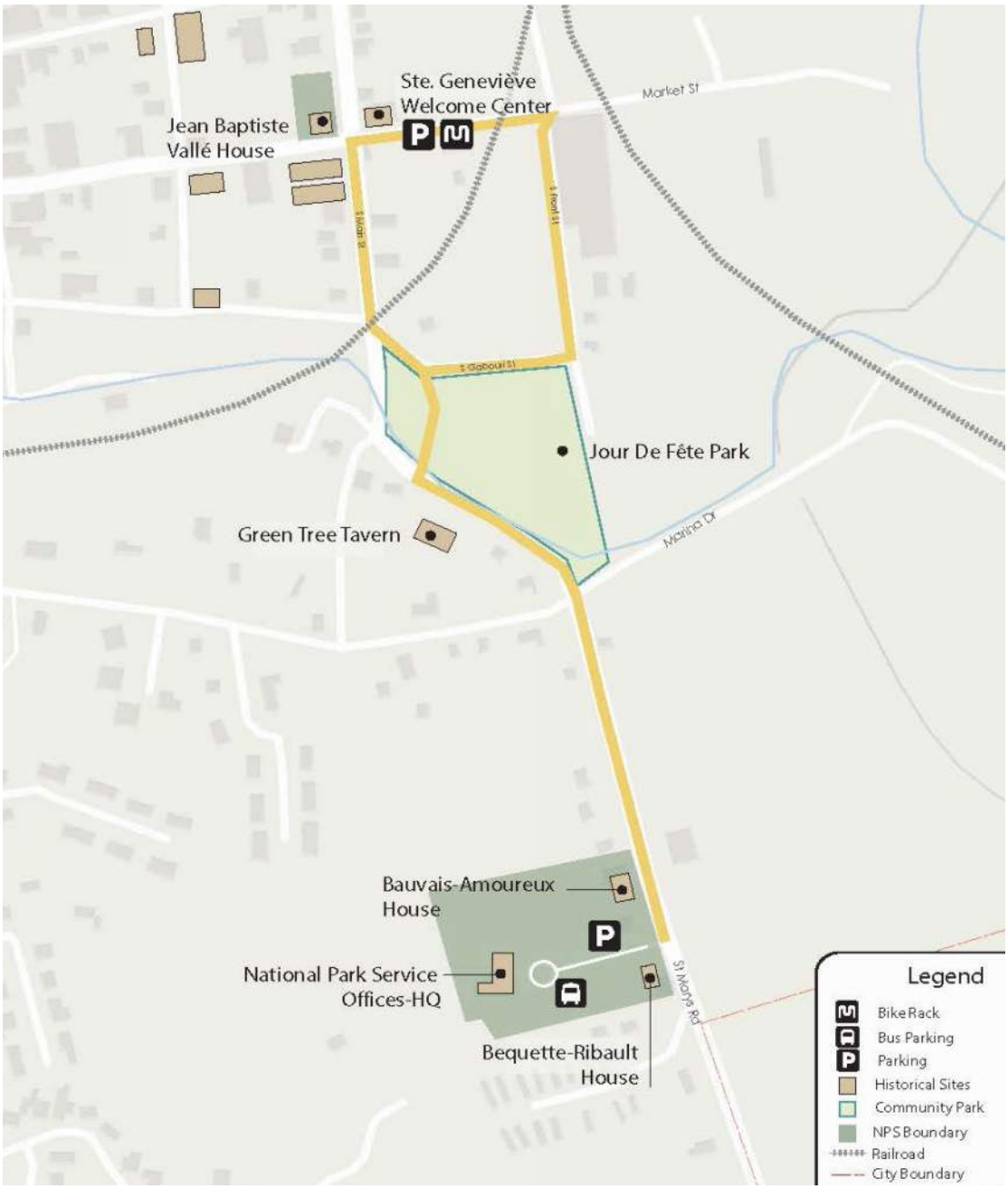


Figure 47. Map showing the locations of Green Tree Tavern, Bauvais-Amoureux House, Wilhawk (NPS offices), Jean Baptiste Vallé House, and the Ste. Genevieve Welcome Center. (Source: NPS, "Ste Genevieve Sidewalk & Trail Planning Analysis, map 2)

of the HABS documentation, on the easternmost tree remained in place. In photographs, the trees appeared to have be pollarded. Pollarding is a formal pruning practice that involves cropping the upper limbs of a tree to encourage new growth of smaller branches to create a dense and controlled canopy. Pollarding of ornamental trees is popular in Europe and may be a continuation of French gardening traditions into Ste. Genevieve.



Figure 48. Aerial photograph showing the locations of properties comprising Ste. Genevieve National Historical Park. (Source: NPS GIS data)

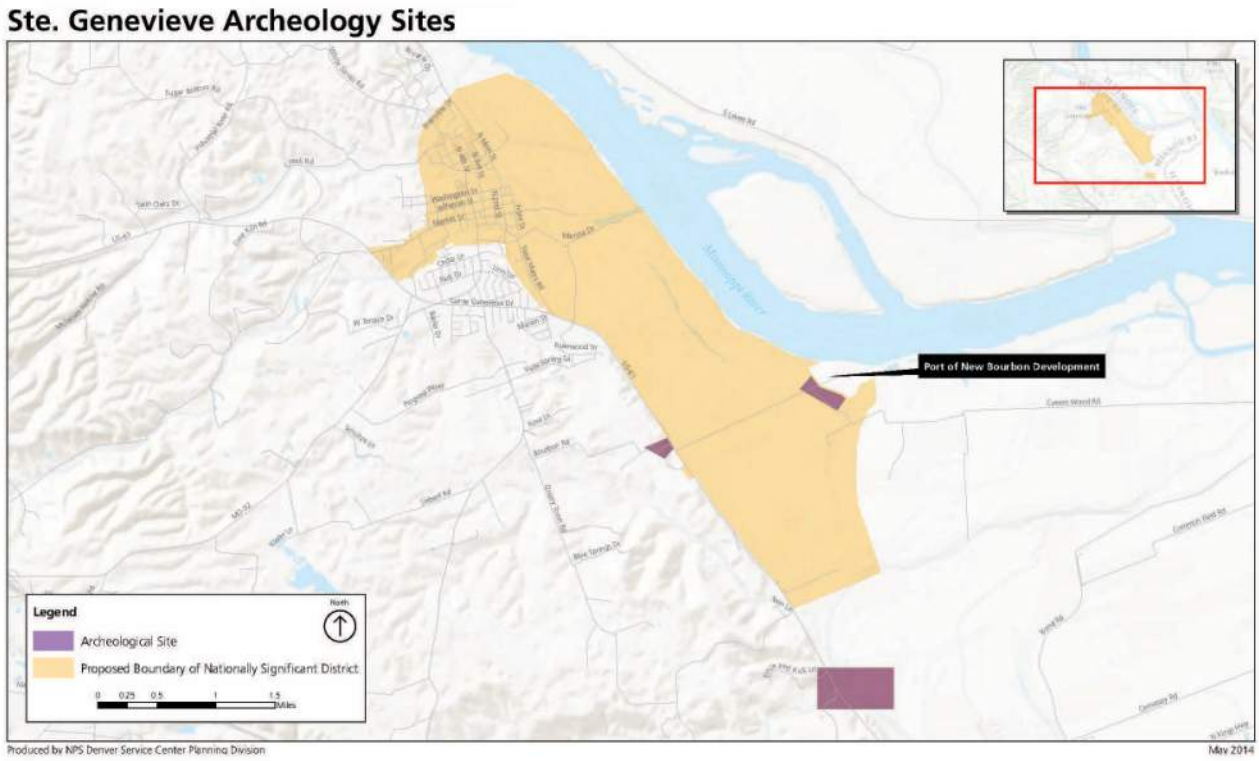


Figure 49. Map of the proposed Ste. Genevieve National Historic Landmark property. (Source: NPS, “Ste. Genevieve Special Resource Study,” 58)

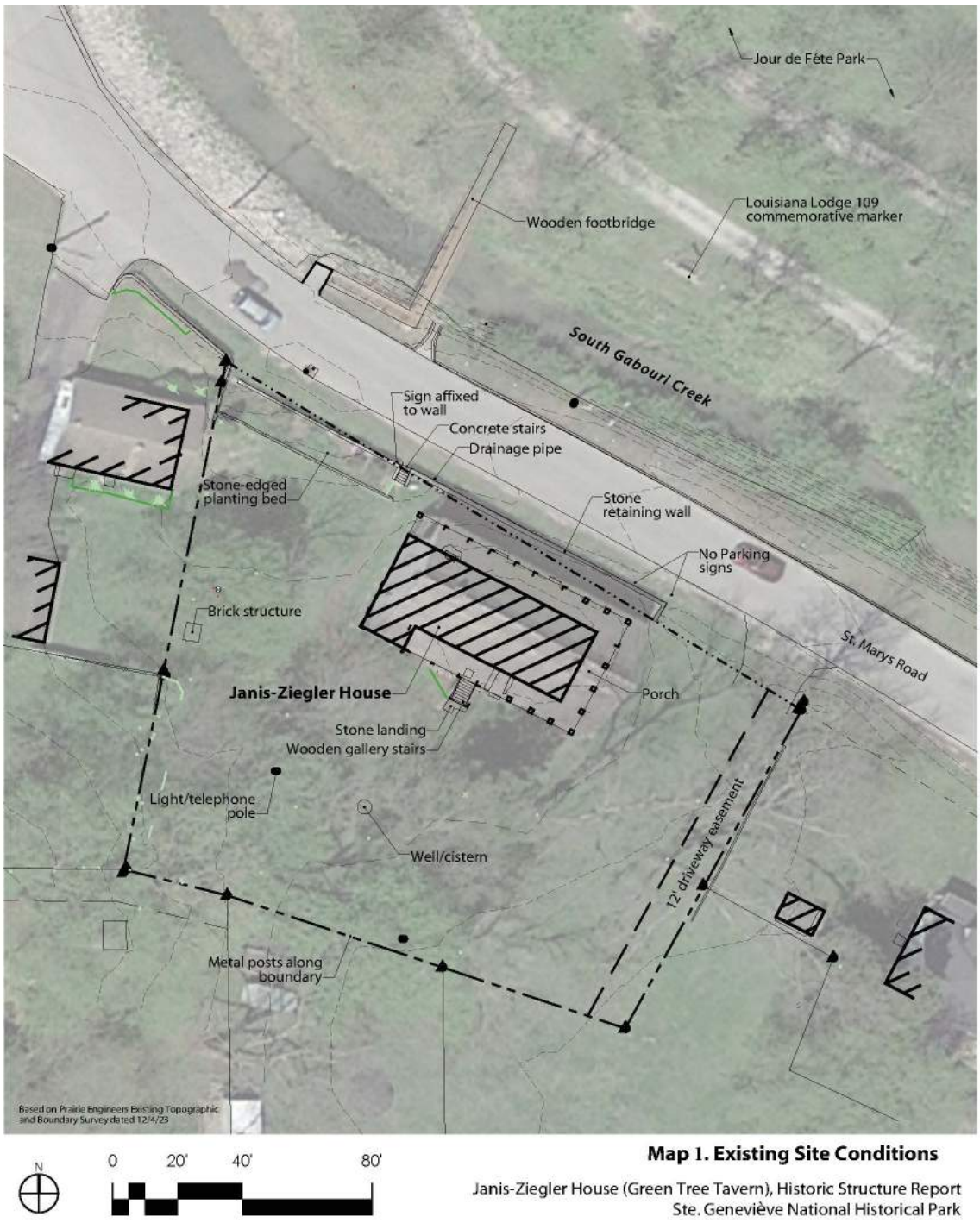


Figure 50. Site plan, showing the relation of the house to the current parcel boundaries, St. Marys Road, and Jour de Fete Park. (Source: LSHLA)

Condition Assessments

DEFINITIONS

The following terms define subjective ratings used in this part to apply a sliding scale of condition rating, deficiency of the component and priority of the repair, as developed from Sections 7.2 and 7.4 of the "Field Operations Manual, Volume 1", United States National Park Service, Washington, D.C., 1985.

CONDITION RATING

Good The element is intact, structurally sound, and performing its intended purpose. There are few or no cosmetic imperfections, and the elements need no repair and only minor or routine maintenance.

Fair There are early signs of wear, failure, or deterioration, though the element is generally structurally sound and performing its intended purpose. There is failure of a sub-component of the element. Up to 25 % of the element or replacement of a sub-component is required.

Poor The element is no longer performing its intended purpose. The element is missing. Deterioration or damage affects more than 25% of the element and cannot be adjusted or rebuilt. The element shows signs of imminent failure or breakdown. The element requires major repair or replacement.

Failed The element is no longer performing its intended purpose and has deteriorated to a point where it presents a life-safety hazard or is contributing to damage to other elements. Full replacement of the component may be required to restore function and service.

REPAIR PRIORITY

Immediate There is advanced deterioration which has resulted in the failure of the building element or will result in the failure of the building element if not corrected within two years; and/or there is accelerated deterioration of adjacent or related building materials as a result of the element's deficiency; and/or there is a threat to the health and/or safety of the user; and/or there is failure to meet a legislative requirement.

Short-Term There is deterioration which, if not corrected within two to five years, will result in the failure of the building element, and/or; a threat to the health and/or safety of the user may occur within two to five years if the deterioration is not corrected, and/or; there is deterioration of adjacent or related building materials and/or systems as a result of the element's deficiency.

Long-Term Standard preventative maintenance practices and building conservation methods have not been followed, and/or; there is a reduced life expectancy of affected or related building materials and/or systems, and/or; there is a condition with long-term impact beyond five years.

Summary Condition Assessment Tables by Category

SITE AND LANDSCAPE						
Category	Topic	Code	Number	Subtopic	Assessment	
					Condition	Priority
G	BUILDING SITE WORK					
G20	SITE IMPROVEMENTS					
	G2049	MISCELLANEOUS STRUCTURES				
			G204901	Limestone Masonry Site Wall	Fair	Short-Term
			G204902	Circulation: Concrete Stairs	Fair	Short-Term
			G204903	Circulation: Gallery Stairs	Good	Long-Term
	G2055	PLANTING				
			205501	Vegetation: Trees	Good	None
			205502	Vegetation: Turf lawn	Good	None
			205503	Vegetation: Planting Bed	Fair	Long-Term
	G2045	SITE FURNISHINGS				
			G204501	Small Scale Features: Signs	Good	None
G30	SITE MECHANICAL UTILITIES					
	G3013	WELL SYSTEMS				
			G204501	Small Scale Features: Signs	Good	None
			G204502	Small Scale Features: Boundary Fence	Good	Long-Term
			G204503	Small Scale Features: Light/Telephone Pole	Good	None

ENCLOSURE SYSTEMS						
Category	Topic	Code	Number	Subtopic	Assessment	
					Condition	Priority
A	SUBSTRUCTURE					
A10	STANDARD FOUNDATION					
	A1011	WALL FOUNDATION				
			A101101	Stone Masonry Foundation Wall	Good	Long-Term
B	SHELL					
B10	SUPERSTRUCTURE					
	B1013	BALCONY CONSTRUCTION				
			B101301	North, East & South Gallery Decking	Fair	Immediate
			B101302	South Gallery Stairs and Handrails	Good	Long-Term
			B101303	Horizontal Railing at Galleries	Fair	Immediate
	B1029	FLOOR CONSTRUCTION				
			B102901	East Chimney	Good	Long-Term
			B102902	West Chimney	Good	Long-Term
B20	EXTERIOR ENCLOSURE					
	B2011	EXTERIOR WALL CONSTRUCTION				

	B201101	Weather Board Siding	Good	Low
	B201102	Vertical Log Walls	Fair	Long-Term
	B201103	Bousillage Infill	Fair	Short-Term
B2021	**EXTERIOR WINDOWS**			
	B202101	WA	Fair	Long-Term
	B202102	WB	Fair	Long-Term
	B202103	WC	Fair	Long-Term
	B202104	WD	Fair	Long-Term
	B202105	WE	Fair	Long-Term
	B202106	WF	Fair	Long-Term
	B202107	WG	Fair	Long-Term
	B202108	WH	Fair	Long-Term
	B202109	WI	Fair	Long-Term
	B202110	WJ	N/A	N/A
	B202111	WK	Poor	Short-Term
	B202112	WL	Poor	Short-Term
	B202113	WM	Poor	Short-Term
	B202114	WN	Poor	Short-Term
	B202115	WO	Fair	Long-Term
	B202116	WP	Fair	Long-Term
	B202117	WQ	Fair	Long-Term
	B202118	WR	Fair	Long-Term
	B202119	WS	Fair	Long-Term
	B202120	WT	Fair	Long-Term
	B202121	WU	Fair	Long-Term
B2030	**EXTERIOR DOORS**			
	B203001	D1	Good	Long-Term
	B203002	D2	Good	Long-Term
	B203003	D3	Fair	Short-Term
	B203004	D4	Fair	Short-Term
	B203005	D5	Fair	Short-Term
	B203006	D15	Good	Long-Term
	B203007	D16	Poor	Immediate
	B203008	D17	Poor	Immediate
B30	**ROOFING**			
B3010	**ROOF COVERING**			
		Roof Overall	Good	None
	B301001	Split Wood Shingles	Good	None
	B301002	Metal Flashing at Chimneys	Good	None
	B301003	Gutters	Good	None
	B301004	Downspouts	Good	None

STRUCTURAL SYSTEMS						
Category	Topic	Code	Number	Subtopic	Assessment	
					Condition	Priority
B						
B10	SUPERSTRUCTURE					
	B1010	FLOOR CONSTRUCTION				
			B101001	First-Floor Framing	Poor to Fair	Immediate
			B101002	Attic Floor Framing	Good	Long-Term
	B1020	ROOF CONSTRUCTION				
			B102001	Primary Rafter Framing	Poor to Fair	Short-Term
			B102002	Gallery Rafter Framing	Poor to Fair	Short-Term
			B102003	Collar Ties	Poor to Fair	Short-Term
			B102004	Gable End Wall Framing	Poor to Fair	Short-Term
			B102005	Lateral Purlins and Kickers		
	B1013	BALCONY CONSTRUCTION				
			B101301	Gallery Framing - Posts	Poor to Good	Short-Term
			B101302	Gallery Floor Framing	Poor to Good	Short-Term
			B101303	Gallery Ceiling Framing	Poor to Fair	Short-Term
			B101304	Gallery Ceiling Planks/Attic Decking		Long-Term
	B2011	EXTERIOR WALL CONSTRUCTION				
			B201104	Vertical and Diagonal Log Members		Immediate
			B201105	Vertical Log Wall Sill Plate	Fair to Poor	Immediate
			B201106	Vertical Log Wall Top Plate	Fair to Poor	Immediate
			B201107	Enclosed Gallery Wall Framing	Fair to Good	Long-Term

INTERIORS						
Category	Topic	Code	Number	Subtopic	Assessment	
					Condition	Priority
C	INTERIORS					
C10	INTERIOR CONSTRUCTION					
	C1011	FIXED PARTITIONS				
			C101101	First-Floor Partition Walls	Fair	Long-Term
			C101102	Pièce-sur-Pièce Partition Wall	Fair	Short-Term
	C1020	INTERIOR DOORS				
			C102001	D6	Fair	Short-Term
			C102002	D7	Fair	Short-Term
			C102003	D8	Good	Long-Term
			C102004	D9	N/A	Long-Term
			C102005	D10	Good	Long-Term
			C102006	D11	N/A	None
			C102007	D12	N/A	None

		C102008	D13	Good	Long-Term
		C102009	D14	Good	Long-Term
C30	**INTERIOR FINISHES**				
	C30xx	**ROOM 001, 002, and 003**			
			Basement 001, 002, 003 Interior Overall	Fair	Long-Term
		C300000	001-003 Flooring	Fair	Long-Term
		C301000	001-003 Wall Finishes	N/A	N/A
		C301000	001-003 Wall Mouldings	N/A	None
		C303000	001-003 Ceiling Finishes	N/A	N/A
	C30xx	**ROOM 101**			
		C300001	Room 101 Interior Overall	Fair	Short-Term
		C302001	101 Flooring	Fair	Short-Term
		C301001	101 Wall Finishes	Fair	Short-Term
		C301001	101 Wall Mouldings	Good	Long-Term
		C303001	101 Ceiling Finishes	Good	Long-Term
		C303001	101 Exposed Ceiling Beams	Good	Long-Term
	C30xx	**ROOM 102**			
		C300002	Room 102 Interior Overall	Fair	Short-Term
		C302002	102 Flooring	Fair	Short-Term
		C301002	102 Wall Finishes	Fair	Short-Term
		C301002	102 Wall Mouldings	Fair	Short-Term
		C303002	102 Ceiling Finishes	Good	Long-Term
		C303002	102 Exposed Ceiling Beams	Good	Long-Term
	C30xx	**ROOM 103**			
		C300003	Room 103 Interior Overall	Fair	Short-Term
		C302003	103 Flooring	Fair	Short-Term
		C301003	103 Wall Finishes	Fair	Short-Term
		C301003	103 Wall Mouldings	Fair	Short-Term
		C303003	103 Ceiling Finishes	Good	Long-Term
		C303003	103 Exposed Ceiling Beams	Good	Long-Term
	C30xx	**ROOM 104**			
		C300004	Room 104 Interior Overall	Good	Long-Term
	C30xx	**ROOM 105**			
		C300005	Room 105 Interior Overall	Fair	Short-Term
		C302005	105 Flooring	Fair	Short-Term
		C301005	105 Wall Finishes	Fair	Short-Term
		C301005	105 Wall Mouldings	Fair	Short-Term
		C303005	105 Ceiling Finishes	Good	Long-Term
		C303005	105 Exposed Ceiling Beams	Good	Long-Term

C30xx	**ROOM 106**				
		C300006	Room 106 Interior Overall	Good	Long-Term
		C302006	106 Flooring	Good	Long-Term
		C301006	106 Wall Finishes	Fair	Short-Term
		C301006	106 Wall Mouldings	Good	None
		C303006	106 Ceiling Finishes	Good	Long-Term
		C303006	106 Exposed Ceiling Beams	Good	Long-Term
C30xx	**ROOM 107**				
		C300007	Room 107 Interior Overall	Good	Long-Term
		C302007	107 Flooring	Good	Long-Term
		C301007	107 Wall Finishes	Fair	Short-Term
		C301007	107 Wall Mouldings	Good	None
		C303007	107 Ceiling Finishes	Good	Long-Term
		C303007	107 Exposed Ceiling Beams	Good	Long-Term
C30xx	**ROOM 108**				
		C300008	Room 108 Interior Overall	Good	None
		C302008	108 Flooring	Good	None
		C301008	108 Wall Finishes	Good	None
		C301008	108 Wall Mouldings	Good	None
		C303008	108 Ceiling Finishes	Good	None
C30xx	**ROOM 109**				
		C300009	Room 109 Interior Overall	Good	Long-Term
		C302009	109 Flooring	Good	Long-Term
		C301009	109 Wall Finishes	Good	Long-Term
		C301009	109 Wall Mouldings	Good	Long-Term
		C303009	109 Ceiling Finishes	Good	Long-Term
		C303009	109 Exposed Ceiling Beams	Good	Long-Term
C30xx	**ROOM 110**				
		C300010	Room 110 Interior Overall	Good	Long-Term
		C302010	110 Flooring	Good	Long-Term
		C301010	110 Wall Finishes	Good	Long-Term
E	**FURNISHING**				
E10	**FIXED FURNISHINGS**				
		E201001	Fireplace Mantel in Room 101	Good	Long-Term
		E201002	Fireplace Mantel in Room 102	Good	Long-Term
		E201003	Fireplace Mantel in Room 103	Good	Long-Term
		E201004	Fireplace Mantel in Room 106	Good	Long-Term
		E201005	Fireplace Mantel in Room 107	Good	Long-Term
		E201006	Built-in Cabinet in Room 109	Good	None

MEP/FP SYSTEMS						
Category	Topic	Code	Number	Subtopic	Assessment	
					Condition	Priority
D	PLUMBING					
D20	SITE UTILITIES					
	D2010	WATER UTILITY				
			D201001	Water Service	Poor	Immediate
			D201002	Abandoned Cistern	Undetermined	Immediate
	D2020	GAS UTILITY				
			D202010	Gas utility at south side of house	Good	Long-Term
	D2091	GAS DISTRIBUTION				
			D209101	Gas piping in house	Good	Long-Term
D20	WATER DISTRIBUTION					
	D2021	WATER DISTRIBUTION				
			D201101	Water piping in house	Fair	Short-Term
	D2023	PLUMBING FIXTURES				
			D202301	Water closet and lavatory	Fair	Immediate
			D202302	Restroom shower	Good	Long-Term
			D202303	Kitchen sink	Good	Long-Term
D30	HEATING, VENTILATING AND AIR CONDITIONING (HVAC)					
	D3040	HVAC EQUIPMENT				
			D304001	Gas-Fired Furnace	Poor	Immediate
	D3041	HVAC DISTRIBUTION SYSTEMS				
			D3040101	Air distribution ductwork and insulation	Good	Long-Term
			D304102	Supply air registers	Good	Long-Term
			D304103	Floor registers and grilles	Good	Long-Term
D	ELECTRICAL					
D50	ELECTRICAL					
	D5010	ELECTRICAL UTILITY				
			D101001	Outdoor Electrical Service to House	Fair	Long-Term
	D5011	ELECTRICAL POWER DISTRIBUTION				
			D501101	Electrical Meter Socket Grounding	Fair	Long-Term
			D501102	Electrical Panel In House	Poor	Short-Term
	D5021	INTERIOR WIRING AND BRANCH CIRCUITS				
			D502101	NM Cable	Poor	Short-Term
			D502102	Wiring Devices, Receptacles, and Switches	Fair	Long-Term
	D5022	INTERIOR LIGHTING				
			D502201	Lighting Fixture Types	Fair	Long-Term
	D5030	TELECOMMUNICATIONS UTILITY				
			D503001	Fiber Optic Service to House	Fair	Long-Term

D5037	**FIRE DETECTION**				
		D503701	Fire Alarm System	N/A	Short-Term
D5038	**BUILDING PROTECTION**				
		D503801	Intrusion Alarm System	Fair	Long-Term
D5092	**GROUNDING SYSTEMS**				
		D509201	Exit Lighting and Emergency Lighting	N/A	Short-Term
D5092	**EGRESS LIGHTING**				
		D509201	Exit Lighting and Emergency Lighting	N/A	Short-Term
D5094	**LIGHTNING HAZARD REDUCTION**				
		D509401	Lightning Protection System	N/A	Short-Term

Summary Condition Assessment Tables by Priority

IMMEDIATE PRIORITY

ENCLOSURE SYSTEMS						
Category	**Topic**	**Code**	**Number**	**Subtopic**	**Assessment**	
					Condition	**Priority**
B						
B10	**SUPERSTRUCTURE**					
	B1013	**BALCONY CONSTRUCTION**				
			B101301	North, East & South Gallery Decking	Fair	Immediate
			B101303	Horizontal Railing at Galleries	Fair	Immediate
	B2030	**EXTERIOR DOORS**				
			B203007	D16	Poor	Immediate
			B203008	D17	Poor	Immediate

STRUCTURAL SYSTEMS						
Category	**Topic**	**Code**	**Number**	**Subtopic**	**Assessment**	
					Condition	**Priority**
B	**SHELL**					
B10	**SUPERSTRUCTURE**					
	B1010	**FLOOR CONSTRUCTION**				
			B101001	First-Floor Framing	Poor to Fair	Immediate
	B2011	**EXTERIOR WALL CONSTRUCTION**				
			B201104	Vertical and Diagonal Log Members	Fair to Good	Immediate
			B201105	Vertical Log Wall Sill Plate	Fair to Poor	Immediate
			B201106	Vertical Log Wall Top Plate	Fair to Poor	Immediate

MEP/FP SYSTEMS						
Category	Topic	Code		Subtopic	Assessment	
					Condition	Priority
D	PLUMBING					
D20	SITE UTILITIES					
	D2010	WATER UTILITY				
			D201001	Water Service	Poor	Immediate
			D201002	Abandoned Cistern	Undetermined	Immediate
	D2023	PLUMBING FIXTURES				
			D202301	Water closet and lavatory	Fair	Immediate
D30	HEATING, VENTILATING AND AIR CONDITIONING (HVAC)					
	D3040	HVAC EQUIPMENT				
			D304001	Gas-Fired Furnace	Poor	Immediate

SHORT-TERM PRIORITY

SITE AND LANDSCAPE						
Category	Topic	Code		Subtopic	Assessment	
					Condition	Priority
G	BUILDING SITE WORK					
G20	SITE IMPROVEMENTS					
	G2049	MISCELLANEOUS STRUCTURES				
			G204901	Limestone Masonry Site Wall	Fair	Short-Term
			G204902	Circulation: Concrete Stairs	Fair	Short-Term

ENCLOSURE SYSTEMS						
Category	Topic	Code		Subtopic	Assessment	
					Condition	Priority
B	SHELL					
B10	SUPERSTRUCTURE					
			B201103	Bousillage Infill	Fair	Short-Term
	B2021	EXTERIOR WINDOWS				
				Windows Overall	**Fair**	**Short-Term**
	B2030	EXTERIOR DOORS				
			B203003	D3	Fair	Short-Term
			B203004	D4	Fair	Short-Term
			B203005	D5	Fair	Short-Term

STRUCTURAL SYSTEMS						
Category	Topic	Code		Subtopic	Assessment	
					Condition	Priority
B	SHELL					
B10	SUPERSTRUCTURE					
	B1020	ROOF CONSTRUCTION				
			B102001	Primary Rafter Framing	Poor to Fair	Short-Term
			B102002	Gallery Rafter Framing	Poor to Fair	Short-Term
			B102003	Collar Ties	Poor to Fair	Short-Term
			B102004	Gable End Wall Framing	Poor to Fair	Short-Term
	B1013	BALCONY CONSTRUCTION				
			B101301	Gallery Framing - Posts	Poor to Good	Short-Term
			B101302	Gallery Floor Framing	Poor to Good	Short-Term
			B101303	Gallery Ceiling Framing	Poor to Fair	Short-Term

INTERIORS						
Category	Topic	Code		Subtopic	Assessment	
					Condition	Priority
C	INTERIORS					
C10	INTERIOR CONSTRUCTION					
	C1011	FIXED PARTITIONS				
			C101102	Pièce-sur-Pièce Partition Wall	Fair	Short-Term
	C1020	INTERIOR DOORS				
			C102001	D6	Fair	Short-Term
			C102002	D7	Fair	Short-Term
C30	INTERIOR FINISHES					
	C30xx	ROOM 101				
			C300001	Room 101 Interior Overall	Fair	Short-Term
			C302001	101 Flooring	Fair	Short-Term
			C301001	101 Wall Finishes	Fair	Short-Term
	C30xx	ROOM 102				
			C300002	Room 102 Interior Overall	Fair	Short-Term
			C302002	102 Flooring	Fair	Short-Term
			C301002	102 Wall Finishes	Fair	Short-Term
			C301002	102 Wall Mouldings	Fair	Short-Term
	C30xx	ROOM 103				
			C300003	Room 103 Interior Overall	Fair	Short-Term
			C302003	103 Flooring	Fair	Short-Term
			C301003	103 Wall Finishes	Fair	Short-Term
			C301003	103 Wall Mouldings	Fair	Short-Term

C30xx	**ROOM 105**				
		C300005	Room 105 Interior Overall	Fair	Short-Term
		C302005	105 Flooring	Fair	Short-Term
		C301005	105 Wall Finishes	Fair	Short-Term
		C301005	105 Wall Mouldings	Fair	Short-Term
C30xx	**ROOM 106**				
		C301006	106 Wall Finishes	Fair	Short-Term
C30xx	**ROOM 107**				
		C301007	107 Wall Finishes	Fair	Short-Term

MEP/FP SYSTEMS						
Category	**Topic**	**Code**		**Subtopic**	**Assessment**	
					Condition	**Priority**
D	**PLUMBING**					
D20	**WATER DISTRIBUTION**					
	D2021	**WATER DISTRIBUTION**				
			D201101	Water piping in house	Fair	Short-Term
D	**ELECTRICAL**					
D50	**ELECTRICAL**					
	D5011	**ELECTRICAL POWER DISTRIBUTION**				
			D501102	Electrical Panel In House	Poor	Short-Term
	D5021	**INTERIOR WIRING AND BRANCH CIRCUITS**				
			D502101	NM Cable	Poor	Short-Term
	D5037	**FIRE DETECTION**				
			D503701	Fire Alarm System	N/A	Short-Term
	D5092	**GROUNDING SYSTEMS**				
			D509201	Exit Lighting and Emergency Lighting	N/A	Short-Term
	D5092	**EGRESS LIGHTING**				
			D509201	Exit Lighting and Emergency Lighting	N/A	Short-Term
	D5094	**LIGHTNING HAZARD REDUCTION**				
			D509401	Lightning Protection System	N/A	Short-Term

LONG-TERM PRIORITY

SITE AND LANDSCAPE						
Category	**Topic**	**Code**		**Subtopic**	**Assessment**	
					Condition	**Priority**
G	**BUILDING SITE WORK**					
G20	**SITE IMPROVEMENTS**					
	G2049	**MISCELLANEOUS STRUCTURES**				
			G204903	Circulation: Gallery Stairs	Good	Long-Term
	G2055	**PLANTING**				
			205503	Vegetation: Planting Bed	Fair	Long-Term

G30	**SITE MECHANICAL UTILITIES**				
	G3013	**WELL SYSTEMS**			
		G204502	Small Scale Features: Boundary Fence	Good	Long-Term

ENCLOSURE SYSTEMS						
Category	**Topic**	**Code**		**Subtopic**	**Assessment**	
					Condition	**Priority**
A	**SUBSTRUCTURE**					
A10	**STANDARD FOUNDATION**					
	A1011	**WALL FOUNDATION**				
			A101101	Stone Masonry Foundation Wall	Good	Long-Term
B	**SHELL**					
B10	**SUPERSTRUCTURE**					
	B1013	**BALCONY CONSTRUCTION**				
			B101302	South Gallery Stairs and Handrails	Good	Long-Term
	B1029	**FLOOR CONSTRUCTION**				
			B102901	East Chimney	Good	Long-Term
			B102902	West Chimney	Good	Long-Term
B20	**EXTERIOR ENCLOSURE**					
	B2011	**EXTERIOR WALL CONSTRUCTION**				
			B201101	Weather Board Siding	Good	Low
			B201102	Vertical Log Walls	Fair	Long-Term
			B201103	Bousillage Infill	Fair	Short-Term
	B2021	**EXTERIOR WINDOWS**				
			B202101	WA	Fair	Long-Term
			B202102	WB	Fair	Long-Term
			B202103	WC	Fair	Long-Term
			B202104	WD	Fair	Long-Term
			B202105	WE	Fair	Long-Term
			B202106	WF	Fair	Long-Term
			B202107	WG	Fair	Long-Term
			B202108	WH	Fair	Long-Term
			B202109	WI	Fair	Long-Term
			B202111	WK	Poor	Short-Term
			B202112	WL	Poor	Short-Term
			B202113	WM	Poor	Short-Term
			B202114	WN	Poor	Short-Term
			B202115	WO	Fair	Long-Term
			B202116	WP	Fair	Long-Term
			B202117	WQ	Fair	Long-Term
			B202118	WR	Fair	Long-Term
			B202119	WS	Fair	Long-Term

		B202120	WT	Fair	Long-Term
		B202121	WU	Fair	Long-Term
	B2030	**EXTERIOR DOORS**			
		B203001	D1	Good	Long-Term
		B203002	D2	Good	Long-Term
		B203006	D15	Good	Long-Term

STRUCTURAL SYSTEMS						
Category	**Topic**	**Code**		**Subtopic**	**Assessment**	
					Condition	**Priority**
B	**SHELL**					
B10	**SUPERSTRUCTURE**					
	B1010	**FLOOR CONSTRUCTION**				
			B101002	Attic Floor Framing	Good	Long-Term
	B1020	**ROOF CONSTRUCTION**				
			B102005	Lateral Purlins and Kickers	Fair to Good	Long-Term
	B1013	**BALCONY CONSTRUCTION**				
			B101304	Gallery Ceiling Planks/Attic Decking	Fair to Good	Long-Term
	B2011	**EXTERIOR WALL CONSTRUCTION**				
			B201107	Enclosed Gallery Wall Framing	Fair to Good	Long-Term

INTERIORS						
Category	**Topic**	**Code**		**Subtopic**	**Assessment**	
					Condition	**Priority**
C	**INTERIORS**					
C10	**INTERIOR CONSTRUCTION**					
	C1011	**FIXED PARTITIONS**				
			C101101	First-Floor Partition Walls	Fair	Long-Term
	C1020	**INTERIOR DOORS**				
			C102003	D8	Good	Long-Term
			C102004	D9	N/A	Long-Term
			C102005	D10	Good	Long-Term
			C102008	D13	Good	Long-Term
			C102009	D14	Good	Long-Term
C30	**INTERIOR FINISHES**					
	C30xx	**ROOM 001, 002, and 003**				
				Basement 001, 002, 003 Interior Overall	Fair	Long-Term
			C300000	001-003 Flooring	Fair	Long-Term
	C30xx	**ROOM 101**				
			C301001	101 Wall Mouldings	Good	Long-Term
			C303001	101 Ceiling Finishes	Good	Long-Term
			C303001	101 Exposed Ceiling Beams	Good	Long-Term

C30xx	**ROOM 102**				
		C303002	102 Ceiling Finishes	Good	Long-Term
		C303002	102 Exposed Ceiling Beams	Good	Long-Term
C30xx	**ROOM 103**				
		C303003	103 Ceiling Finishes	Good	Long-Term
		C303003	103 Exposed Ceiling Beams	Good	Long-Term
C30xx	**ROOM 104**				
		C300004	Room 104 Interior Overall	Good	Long-Term
C30xx	**ROOM 105**				
		C303005	105 Ceiling Finishes	Good	Long-Term
		C303005	105 Exposed Ceiling Beams	Good	Long-Term
C30xx	**ROOM 106**				
		C300006	Room 106 Interior Overall	Good	Long-Term
		C302006	106 Flooring	Good	Long-Term
		C303006	106 Ceiling Finishes	Good	Long-Term
		C303006	106 Exposed Ceiling Beams	Good	Long-Term
C30xx	**ROOM 107**				
		C300007	Room 107 Interior Overall	Good	Long-Term
		C302007	107 Flooring	Good	Long-Term
		C303007	107 Ceiling Finishes	Good	Long-Term
		C303007	107 Exposed Ceiling Beams	Good	Long-Term
C30xx	**ROOM 109**				
		C300009	Room 109 Interior Overall	Good	Long-Term
		C302009	109 Flooring	Good	Long-Term
		C301009	109 Wall Finishes	Good	Long-Term
		C301009	109 Wall Mouldings	Good	Long-Term
		C303009	109 Ceiling Finishes	Good	Long-Term
		C303009	109 Exposed Ceiling Beams	Good	Long-Term
C30xx	**ROOM 110**				
		C300010	Room 110 Interior Overall	Good	Long-Term
		C302010	110 Flooring	Good	Long-Term
		C301010	110 Wall Finishes	Good	Long-Term
E	**FURNISHING**				
E10	**FIXED FURNISHINGS**				
		E201001	Fireplace Mantel in Room 101	Good	Long-Term
		E201002	Fireplace Mantel in Room 102	Good	Long-Term
		E201003	Fireplace Mantel in Room 103	Good	Long-Term
		E201004	Fireplace Mantel in Room 106	Good	Long-Term
		E201005	Fireplace Mantel in Room 107	Good	Long-Term

MEP/FP SYSTEMS						
Category	Topic	Code		Subtopic	Assessment	
					Condition	Priority
D	PLUMBING					
D20	SITE UTILITIES					
	D2020	GAS UTILITY				
			D202010	Gas utility at south side of house	Good	Long-Term
	D2091	GAS DISTRIBUTION				
			D209101	Gas piping in house	Good	Long-Term
D20	WATER DISTRIBUTION					
	D2023	PLUMBING FIXTURES				
			D202302	Restroom shower	Good	Long-Term
			D202303	Kitchen sink	Good	Long-Term
D30	HEATING, VENTILATING AND AIR CONDITIONING (HVAC)					
	D3041	HVAC DISTRIBUTION SYSTEMS				
			D3040101	Air distribution ductwork and insulation	Good	Long-Term
			D304102	Supply air registers	Good	Long-Term
			D304103	Floor registers and grilles	Good	Long-Term
D	ELECTRICAL					
D50	ELECTRICAL					
	D5010	ELECTRICAL UTILITY				
			D101001	Outdoor Electrical Service to House	Fair	Long-Term
	D5011	ELECTRICAL POWER DISTRIBUTION				
			D501101	Electrical Meter Socket Grounding	Fair	Long-Term
	D5021	INTERIOR WIRING AND BRANCH CIRCUITS				
			D502102	Wiring Devices, Receptacles, and Switches	Fair	Long-Term
	D5022	INTERIOR LIGHTING				
			D502201	Lighting Fixture Types	Fair	Long-Term
	D5030	TELECOMMUNICATIONS UTILITY				
			D503001	Fiber Optic Service to House	Fair	Long-Term
	D5038	BUILDING PROTECTION				
			D503801	Intrusion Alarm System	Fair	Long-Term

Site and Landscape

N/A	GENERAL				
N/A	BUILDING: JANIS-ZIEGLER HOUSE				
	N/A	N/A			
		Number	Description	Condition	Priority
		N/A	Janis-Ziegler House	Good	N/A

Date: c. 1790 Contributing: Contributing

Description

The Janis-Ziegler House is an example of French vertical log, or poteaux-sur-sole/bousillage construction, where the exterior walls rest on a wooden sill atop a stone foundation. This method of construction is characteristic of French colonial architecture during the 18th and early 19th centuries in the region. Nicolas Janis built the dwelling c. 1790; it is believed to be the oldest standing house in the town of Ste. Genevieve.[1]

The Janis-Ziegler House is a one-and-one-half-story vertical log on sill dwelling with a gable roof that measures 74 feet by 40 feet in plan (Figures 15 and 16). The building is set on a raised stone masonry basement that housed enslaved persons at one end and a secure storeroom at the other. The house has galleries, or porches, on the north, south, and east sides. The perimeter walls are exposed vertical logs with gable end walls clad in wood clapboard. The logs are set on a wood timber sill atop the stone foundation. A set of nine wooden stairs edged by a wooden handrail, metal slip guards, and a stone landing extend from the southern porch into the mown grass yard, shaded by a grove of mature shade trees.

While most French colonial architecture features an interior composed of two to four rooms of roughly the same size, the Janis-Ziegler House is somewhat unique in having a large central room flanked by two or three smaller rooms on either side, each of which had its own fireplace. There is an unusual triangular fireplace serving three rooms and evidence of a second triangular fireplace that has been removed. The roof and gable ends enclose an attic. Associated with the space was a permanent stairway that made the attic more accessible. The arrangement of the house reflects American ideas of comfort. As such, it combines American spatial and functional concepts with the traditional French poteaux-sur-sole/bousillage construction, roof overhangs shading the wall for comfort, and a family dwelling and business under the same roof.[2]

The Janis-Ziegler House is recognized for its unaltered interior featuring original doors, shutters, moldings, hardware, and fireplace surrounds.

As noted by McVarish, the house has experienced a few alterations, the most extensive of which occurred in 1800 when "The triangular-shaped chimney [sic] with its two fireplaces and oven was removed from the west end. The door between the kitchen and tavern has been changed to a cased opening, the interior walls of the original cabinets have had doors added, three new brick stove flues were also added, and in the trading room in the center of the building, a replacement boxed stair was added. The mantelpieces are of the Federal period and were probably additions."[3]

1 National Park Service, "Green Tree Tavern," Ste. Genvieve National Historical Park, https://www.nps.gov/places/green-tree-tavern.htm (accessed February 23, 2024).

2 McVarish, DRAFT Updated NHL documentation "Ste. Genevieve Historic District," 7 - 26.

3 McVarish, DRAFT Updated NHL documentation "Ste. Genevieve Historic District," 7 - 27.



Figure 51. Views northwest toward the Janis-Ziegler House. (Source: LSHLA 2023)



Figure 52. Views northeast toward the Janis-Ziegler House. (Source: LSHLA 2023)

G	BUILDING SITE WORK				
G20	SITE IMPROVEMENTS				
	G2049	MISCELLANEOUS STRUCTURES			
		Number	Description	Condition	Priority
		G204901	Limestone Masonry Site Wall	Fair	Short-Term

Date: c. 1803 Contributing: Contributing

Description

The Janis-Ziegler House sits on an elevated terrace overlooking St. Marys Road. A limestone retaining wall constructed c. 1803 parallels the road in front of the house. The wall was built by stone masons, contracted by François Janis in 1803, to protect against flooding and prevent the house from sliding down the hill. During the Great Flood of 1993, the wall was completely covered by water and debris.

The wall is roughly 4 feet tall at its highest and measures 149'-3" along the eastern edge of the property before turning a corner for another 6'-7" until it disappears into the hillside. Coping stones measuring 2 feet long, 1'-5" wide, and 3-½ inches thick finish the top surface of the wall. Located roughly 60 feet from the westernmost edge of the wall, a flight of concrete steps measuring 3 feet wide intersects the wall, providing access to the property interior at its northern end. At this entrance, a sign is affixed to the wall identifying Green Tree Tavern as a component of Ste. Genevieve National Historical Park, administered by the National Park Service. To the west of the steps, a drainage pipe extends approximately 6 inches from the face of the wall. The pipe emerges about 1 foot below the top of the wall and is located roughly 7 feet east of the concrete stair. Behind the wall is a planting bed.

The wall appears to have undergone repointing at various times, with some mortar conveying an appearance that is less sensitive to the historic wall materials. The wall is known to have been damaged in the 1993 Great Flood and may have undergone some rebuilding to repair the damage prior to being transferred to state of Missouri ownership. Currently, the wall is displaced and exhibits some structural distress.



Figure 53. Views northwest along the stone retaining wall that fronts the property at St. Marys Road. (Source: LSHLA 2023)



Figure 54. View along the stone retaining wall and metal drainage pipe in front of the Janis-Ziegler House. (Source: LSHLA 2023)

G	BUILDING SITE WORK				
G20	SITE IMPROVEMENTS				
	G2049	MISCELLANEOUS STRUCTURES			
		Number	Description	Condition	Priority
		G204902	Circulation: Concrete Stairs	Fair	Short-Term

Date: c. 2000s Contributing: Non-Contributing

Description

A flight of concrete stairs is set into the stone retaining wall along St Marys Road. The concrete stair replaced an earlier flight of stairs that is visible in the c. 1890 photograph of the house. Evidence of these original stairs can be seen in the way the stone wall turns to form a cheekwall to either side of the current steps. Each step is composed of a 10-inch tread and 6-inch riser. A concrete landing extends 10 inches from the bottom of the stair towards St. Marys Road.

The steps are cracked in a few places where they meet the sides of the stone wall. The steps lead to the mown grass yard northeast of the house (Figure 19). The date of origin of the stairs is not currently known, but they postdate the period of significance and are non-contributing.



Figure 55. View west toward the concrete stairs that provide access to the property through the stone retaining wall. (Source: LSHLA 2023)

G	BUILDING SITE WORK				
G20	SITE IMPROVEMENTS				
	G2049	MISCELLANEOUS STRUCTURES			
		Number	Description	Condition	Priority
		G204903	Circulation: Gallery Stairs	Good	Long-Term

Date: Undetermined, with 20th century alterations Contributing: Non-Contributing

Description

On the southwestern side of the Janis-Ziegler House is a set of wooden stairs that provide access to the gallery or porch level and the main entrance into the house. The stairs extend from the middle of the porch on the west side of the house. The stairs measure 5 feet 8 inches in width. A 4-inch-wide wooden handrail edges the stairs to either side. Each of the nine stairs consists of a 1-foot tread and 7-inch riser. Metal slip guards are affixed to the treads. The stairs lead to a stone landing with angled stone edging in the southwestern yard. The stairs have likely been rebuilt over the years.



Figure 56. The southwest facade of the Janis-Ziegler House, including the gallery and stairs. (Source: LSHLA 2023)

G	BUILDING SITE WORK				
G20	SITE IMPROVEMENTS				
	G2055	PLANTING			
		Number	Description	Condition	Priority
		205501	Vegetation: Trees	Good	None

Date: Undetermined, 20th century Contributing: Non-Contributing

Description

A grove of trees shades a turf lawn area west of the Janis-Ziegler House. The trees, which are large and mature, include pecan, bald cypress, silver maple, sugar maple, redbud, and eastern red cedar. The trees, which are scattered throughout the yard, form a canopy which extends over most of the rear of the property.

The trees in the yard are of an unknown date of origin. Trees appear in historic photographs between the house and the stone retaining wall that are no longer extant. Many of the trees appear on the site plan prepared as part of HABS documentation in 1985, suggesting that they are at least 50 years of age. They are not likely, however, to date to the period of significance.



Figure 57. A grove of trees provides shade within the yard west of the Janis-Ziegler House. (Source: LSHLA 2023)

G	BUILDING SITE WORK				
G20	SITE IMPROVEMENTS				
	G2055	PLANTING			
		Number	Description	Condition	Priority
		205502	Vegetation: Turf lawn	Good	None

Date: 1930s Contributing: Contributing

Description

Much of the landscape associated with Green Tree Tavern property consists of mown grass turf lawn. The grass is lush and does not exhibit any areas in need of care (Figure 22). Historic photographs suggest that the property was maintained in turf grass during the period of significance.



Figure 58. View across the turf lawn behind the Janis-Ziegler House. (Source: LSHLA)2023)

G	BUILDING SITE WORK				
G20	SITE IMPROVEMENTS				
	G2055	PLANTING			
		Number	Description	Condition	Priority
		205503	Vegetation: Planting Bed	Fair	Long-Term

Date: Undetermined, 20th century Contributing: Non-Contributing

Description

A perennial garden is planted in the sunny area behind the stone wall along the north edge of the property. The planting bed measures 9 feet 3 inches in width and is edged by limestone curbing that measures 8-½ inches in width and comes in 3-foot-10-inch lengths, although the lengths of the blocks vary. The curbing has a crowned top. The planting bed contains evidence of plants being installed and tended, such as rose daylily and resurrection lily, but has not been maintained and is filled with many volunteer herbaceous and woody species.



Figure 59. The planting beds behind the stone retaining wall at the Janis-Ziegler property. (Source: LSHLA 2023)

G	BUILDING SITE WORK				
G30	SITE MECHANICAL UTILITIES				
	G3013	WELL SYSTEMS			
		Number	Description	Condition	Priority
		G301301	Small-scale Feature: Well/cistern	Good	Short-Term

Date: 19th century Contributing: Contributing

Description

A well or cistern is located in the mown grass yard southwest of the Janis-Ziegler House. The well/cistern is similar in character to features present at other French colonial-era properties such as the Jean Baptiste Vallé House, Bauvais-Amoureux House, and Delassus-Kern House. It appears to date to the period of significance and retains integrity. The well/cistern is a good example of a feature that would have been important to residents of the property during the period of significance.

The cover is a circular slab of limestone that measures 4 feet 6-½ inches in diameter. A metal hatch and ring handle is affixed in the center that measures 9 inches in length and is 1 foot 5 inches wide .

The cover was not able to be lifted to determine if the well had previously been backfilled or decommissioned.



Figure 60. : View towards the well/cistern located within the turf lawn and grove of trees behind the Janis-Ziegler House. (Source: LSHLA 2023)

G	BUILDING SITE WORK				
G20	SITE IMPROVEMENTS				
	G2045	SITE FURNISHINGS			
		Number	Description	Condition	Priority
		G204501	Small Scale Features: Signs	Good	None

Date: 2020s Contributing: Non-Contributing

Description: NPS Identity Sign

An identity sign installed by the National Park Service edges the concrete stair leading through the stone retaining wall into the property. The sign identifies the site as Green Tree Tavern and part of Ste. Genevieve National Historical Park. The sign is affixed to the stone retaining wall beside the concrete entrance steps. The sign features a metal panel measuring 3 feet 4 inches in width by 2 feet 8 inches in height. The base of the sign is 9 inches off the ground



Figure 61. The identity sign for the property and its association with the National Park Service and Ste. Genevieve NHP. (Source: LSHLA 2023)

Description: Traffic and Parking Management Signs

Two “no parking” signs are set into the lawn between the stone retaining wall and St. Marys Road. The signs face the road in both directions. Both consist of a metal post to which is affixed a metal plaque, standing 3 feet 10 inches tall.



Figure 62. No parking signs set in the grass in front of the stone retaining wall. (Source: LSHLA 2023)

G	BUILDING SITE WORK				
G20	SITE IMPROVEMENTS				
	G2045	SITE FURNISHINGS			
		Number	Description	Condition	Priority
		G204502	Small Scale Features: Boundary Fence	Good	Long-Term

Date: 2000s Contributing: Non-Contributing

Description

The southwestern and southeastern boundaries of Green Tree Tavern property are marked with fencing. The fencing consists of metal posts used to support wire mesh fencing. The fencing stands approximately 3 feet in height.



Figure 63. Metal posts marking the southern boundary of the Janis-Ziegler property. (Source: LSHLA 2023)

G	BUILDING SITE WORK				
G20	SITE IMPROVEMENTS				
	G2045	SITE FURNISHINGS			
		Number	Description	Condition	Priority
		G204503	Small Scale Features: Light/Telephone Pole	Good	None

Date: Undertermined, c. 1970s-2000s Contributing: Non-Contributing

Description

A wooden telephone pole is located in the yard to the west of the Janis-Ziegler House, not far from the building. The pole supports an overhead light, which is attached to the top of the pole. The pole measures 9 inches in diameter and stands roughly 15 feet in height.

The pole and light appear to postdate the period of significance although the date of origin is not known.



Figure 64. Telephone pole in the southwest yard of the Janis-Ziegler property. (Source: LSHLA 2023)

Enclosure Systems

B	SHELL				
B30	ROOFING				
	B3010	ROOF COVERINGS			
		Number	Description	Condition	Priority
		B301001	Split Wood Shingles	Good	None
		B301002	Metal Flashing at Chimneys	Good	None
		B301003	Gutters	Good	None
		B301004	Downspouts	Good	None

Date: Undetermined Contributing: Contributing

Description

The broken-pitch gabled roof is clad in split wood shingles in a traditional overlap pattern. A projecting comb wood shingle ridge was present with the shingles projecting toward the north wall.

The roof shingles were in fair to poor condition and have likely surpassed their useful life. Extensive biological growth was noted on the north and south sides of the roof. The projecting comb shingle ridge was failed along a majority of the length of the roof. Lead flashing was located at both chimney projections. Lead flashing was also visible along the break in pitch of the roof along the south wall.

No gutters or downspouts were present on the Janis-Ziegler House. A detail for a new wood gutter was noted on repair drawings dating from 1999, but it appears the gutter was never installed.

Update: The roofing system was fully replaced by NPS in 2024 and the condition and priority ratings have been updated accordingly.



Figure 65. East wall showing broken-pitch gabled roof. (Source: RRJ 2023)



Figure 66. Failed shingle ridge and excessive biological growth at roof. (Source: RRJ 2023)

B	SHELL				
B20	EXTERIOR ENCLOSURE				
	B2011	EXTERIOR WALL CONSTRUCTION			
		Number	Description	Condition	Priority
		B201101	Weather Board Siding	Good	Long-Term
		B201102	Vertical Log Walls	Fair	Immediate
		B201103	Bousillage infill	Fair	Short-Term

Date: c.1790 with later alterations Contributing: Contributing

Description

The original exterior walls of the Janis-Ziegler House were constructed of vertical log posts resting on sills. The voids between logs are filled with a mixture of clay and straw known as bousillage. Later alterations utilized wood weatherboard siding to enclose areas of the gallery, resulting in new rooms to the west wall and southwest corner. The log walls were once covered with a stucco finish, but this was removed, likely in the early 2000s, leaving the log walls and bousillage infill exposed. The gable end attic level walls are clad in wood lap siding with an approximate 5-inch board exposure. The enclosed gallery at the west wall is clad in slap siding of similar style at the first-floor level. The basement level at the west end of the house is clad in 11-inch tongue and groove wood siding.



Figure 67. Loose nails in weatherboard at east wall. (Source: RRJ 2023)

The existing weatherboard siding showed varied degrees of weathering throughout the house. Warped and cupping boards were noted on the east and west elevations at the attic level. The siding is secured with exposed nails which are spaced approximately 16-inches on center. Loose nails were noted in some areas, primarily on the east wall. Staining due to uncontrolled water drainage from the roof was noted on the weatherboard siding on the south wall and east wall within the south gallery. Installation of a gutter system along the south wall would help alleviate this issue. Staining due to rising damp was noted on the wood siding at the foundation level, primarily at the north wall.



Figure 68. Warped weatherboard at east wall. (Source: RRJ 2023)

The exterior bousillage has been exposed for roughly 20 years. Traditionally, log walls and associated infilling, or bousillage, would have been covered with a stucco finish layer for protection. Due to long-term exposure to the elements, the bousillage is fragile, deteriorated

or missing in many areas, particularly on the north and east elevations. There is also evidence of carpenter bee infestation within the bousillage at isolated locations on the south and east elevations. Variations in the texture and color of the bousillage on the south wall suggest that repairs were made to the bousillage between Door 4 and Window H. During a previous restoration project, a small window that existed between Windows I and K was removed and vertical logs and bousillage were installed in its place. The bousillage in this area matches the color and texture of the other assumed repair areas.

The exterior wood siding was in good to fair condition while the exposed bousillage was in fair to poor condition.



Figure 69. Staining at weatherboard due to uncontrolled water drainage from roof. (Source: RRJ 2023)



Figure 70. Rising damp at foundation level weatherboard. (Source: RRJ 2023)



Figure 71. Fragile, deteriorated bousillage with mason bee damage at north wall. (Source: RRJ 2023)



Figure 72. Previously repaired bousillage. (Source: RRJ 2023)

A	SUBSTRUCTURE				
A10	STANDARD FOUNDATION				
	A1011	WALL FOUNDATION			
		Number	Description	Condition	Priority
		A101101	Stone Masonry Foundation Wall	Good	Long-Term

Date: c. 1790 Contributing: Contributing



Figure 75. Foundation wall at south wall showing previous repointing repairs and areas of missing mortar. (Source: RRJ 2023)



Figure 73. Missing mortar at south wall foundation wall. (Source: RRJ 2023)



Figure 74. Staining on foundation wall at east wall. (Source: RRJ 2023)

Description

Masonry foundation walls were present below the footprint of the house with the gallery perimeter extending beyond. The masonry walls were constructed with rough cut limestone set in irregular courses with mortar. Previous repointing repairs were evident along the south, east and north elevations.

Two masonry retaining walls flank the basement entrance on the south wall. These walls have been covered with a concrete parging.

The stone and mortar throughout the basement walls were generally in good condition. Areas of missing mortar were noted on the exterior walls, particularly on the south wall, and at the basement window surrounds. Ropointing repairs will be required in these areas. Some staining, likely from previous whitewashing, was noted on the foundation wall at the east wall. The concrete parging covering the masonry retaining walls was in fair condition. The parging was spalled and missing in several areas.

B	SHELL				
B20	EXTERIOR ENCLOSURE				
	B2021	EXTERIOR WINDOWS			
		Number	Description	Condition	Priority
			Windows Overall	Fair	Short-Term
		B202101	WA	Fair	Long-Term
		B202102	WB	Fair	Long-Term
		B202103	WC	Fair	Long-Term
		B202104	WD	Fair	Long-Term
		B202105	WE	Fair	Long-Term
		B202106	WF	Fair	Long-Term
		B202107	WG	Fair	Long-Term
		B202108	WH	Fair	Long-Term
		B202109	WI	Fair	Long-Term
		B202110	WJ	N/A	N/A
		B202111	WK	Poor	Short-Term
		B202112	WL	Poor	Short-Term
		B202113	WM	Poor	Short-Term
		B202114	WN	Poor	Short-Term
		B202115	WO	Fair	Long-Term
		B202116	WP	Fair	Long-Term
		B202117	WQ	Fair	Long-Term
		B202118	WR	Fair	Long-Term
		B202119	WS	Fair	Long-Term
		B202120	WT	Fair	Long-Term
		B202121	WU	Fair	Long-Term

Date: c. 1790 with later alterations Contributing: Contributing

Description, General

Fenestration consists primarily of 12-over-12, single hung sash windows. Louvered shutters flank the first floor windows on the original elevations of the house. Three smaller 12-over-12 windows exist on the west wall and southwest corner of the south wall where the gallery was enclosed. No shutters were present at these three windows. Several window openings are located on the north, south, and east elevations of foundation level. No glazing was present at these openings, but shutters were present at each opening and additional wire mesh screens were noted in some locations. A singular hinged shutter composed of vertical wood boards was installed at each attic level opening.

Basement Windows

WO through WS are wood framed openings with wood peg connections set within the masonry foundation walls. These openings primarily serve to ventilate the basement level, therefore none of the openings contained glass windows. A singular vertical board shutter with metal strap hinges was installed at each basement level opening. Wire mesh screens were also installed within some basement level openings.

The wood frames and shutters were weathered but were generally in good condition for their age. Minor corrosion was noted at the metal strap hinges for the shutters. Missing mortar was noted at several of the



Figure 76. Typical basement level opening with wood shutter and strap hinges. (Source: RRJ 2023)



Figure 78. Exterior view of typical fenestration found at original elevations of the house. (Source: RRJ 2023)



Figure 77. Louvered screen at basement level opening. (Source: RRJ 2023)



Figure 79. Interior view of typical fenestration found at original elevations of the house. (Source: RRJ 2023)

basement level masonry sills.

Replacement wire mesh screens should be installed where missing at basement level window openings.

First Floor Windows

WA through WI and WK are 12-over-12, wooden single hung sash windows. These windows are located within the original vertical log walls of the home. Approximate dimensions for these openings are 3-ft by 5.5-ft. Raised-panel wooden shutters attached with metal strap hinges were present at each location. Exterior casing, windowsills and shutters were painted black.

All windows had some separation and water staining at the sash exteriors. The upper and lower sashes were in fair condition at all original window locations. The glazing putty was failed at all window locations. Windows WE and WF were reglazed at some unknown year; however, the glazing is too thick and is not historically accurate. This glazing should be replaced when reglazing work for other windows is conducted. No interior hardware or sash locks were present at any windows within the original areas of the house. While the windows resemble a single sash configuration they appear to be fixed. The current windows are likely to be replacement sash windows that were installed during the c. 1990s restoration. The windows WG and WH and accompanying shutters are different from the rest of the windows present within the original sections of the house. Overall, these windows are in good to fair condition, but general maintenance and repairs should be considered.

WJ no longer exists, but was formerly located on the south wall between windows WI and WK. This window was removed during the 1990's restoration work and the



Figure 80. View of typical window with shutters closed showing strap hinges (Source: RRJ 2023)



Figure 81. Failed glazing putty. (Source: RRJ 2023)



Figure 82. Previous location of Window J with infilled logs and bousillage repairs. (Source: RRJ 2023)



Figure 83. Window L showing weathered casing and sill. (Source: RRJ 2023)

area was infilled with vertical logs and bousillage.

WL through WN are 12-over-12, wooden single hung sash windows. These windows are located on the south and west elevations where the gallery was enclosed. Approximate dimensions for these openings are 2-ft 8-in by 3-ft 10-in. The wooden sills at these windows have failed, the left and right jambs are in poor condition, and the upper and lower sashes have failed. Overall, these windows are in poor condition and should be considered for replacement.

Second Floor Windows

WT and WU are openings at the attic level that do not contain windows. The openings can be secured shut with a singular, vertical-board shutter with metal strap hinges. The wood shutters are unpainted and the wood is weathered, but are overall in good condition. Minor corrosion was noted at the strap hinges at both locations. Currently, these openings are not fully sealed leading to wasp and other pest infestations at the attic level.



Figure 84. Attic level window opening with shutter in closed position. (Source: RRJ 2023)

B	SHELL				
B20	EXTERIOR ENCLOSURE				
	B2030	EXTERIOR DOORS			
		Number	Description	Condition	Priority
			Doors Overall	Fair	Short-Term
		B203001	D1	Good	Long-Term
		B203002	D2	Good	Long-Term
		B203003	D3	Fair	Short-Term
		B203004	D4	Fair	Short-Term
		B203005	D5	Fair	Short-Term
		B203006	D15	Good	Long-Term
		B203007	D16	Poor	Immediate
		B203008	D17	Poor	Immediate

Date: c. 1790 with later alterations Contributing: Contributing

Description

D1 – D1 is located at the northwest corner of the house. It is one of three doors on the north wall and provides access to Room 108. The six-panel wood door is constructed of flat panels with a beaded edge on the interior. The door and surrounding casing and trim were painted black. The door was not operable due to being fixed shut, and no knob or lock hardware was present. The interior jambs were replaced at an unknown time. A two-lite transom was located above the door. Water damage was noted at the raised wood threshold. Overall, the door was in good condition.

D2 – D2, the middle door on the north wall, was a six-panel wood door with flat panels. The panels on the interior side had a beaded edge. A metal rim lock was noted on the interior, but the locking mechanism was missing pieces. Brass butt-style hinges were noted on the exterior. Holes from previous old hardware were noted on the exterior of the door. The four-lite transom located above the door appeared to be a later age replacement. Water damage was noted at the raised wood threshold. The door was fully operable and was in good condition.

D3 - D3 is the main exterior door on the north wall. The lower portion of the wood door contained two raised panels, and the upper portion contained a single lite partitioned with faux muntins to resemble five vertical rectangular lites. An ornamental brass knob was present. A thumb-turn deadbolt lock was present at the interior



Figure 85. Exterior of main entrance (D4) on south wall. (Source: RRJ 2023)

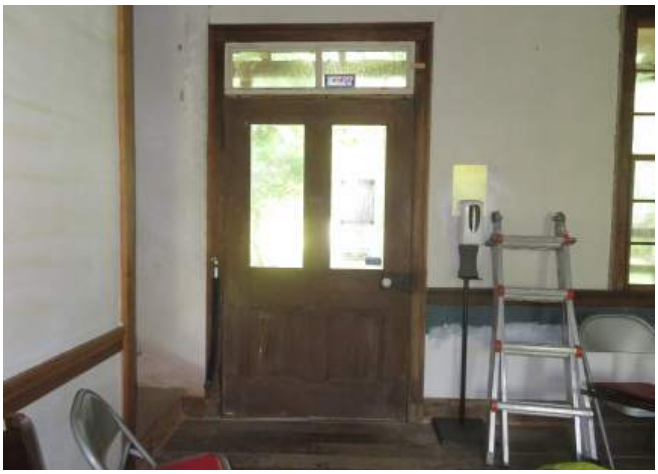


Figure 86. Interior of main entrance (D4) on south wall. (Source: RRJ 2023)



Figure 87. Exterior black porcelain knob and lock at D4. (Source: RRJ 2023)t



Figure 88. Interior white porcelain knob and rim lock at D4. (Source: RRJ 2023)

and a modern padlock was present at the exterior. Brass butt-style hinges were noted on the interior. The door was fixed shut and was not operable. The two-lite transom located above the door appeared to be a later age replacement. Damage was noted at the exterior trim at both jambs. Water damage was noted at the raised wood threshold. The door is in fair condition and in need of maintenance.

D4 – D4 is the main entrance on the south wall. The lower portion of the wood door contained two flat panels with a beaded edge, and the upper portion contained two rectangular lites. The exterior of the door was painted black and the interior wood was stained. The two-lite transom located above the door appeared to be a later age replacement. A white porcelain door knob was located at the interior and a black porcelain knob was present at the exterior. The exterior sides of the panels were cracked, and animal damage, possibly from a squirrel, was noted on the interior. The door is in fair condition and in need of maintenance.

D5 – D5 is a six-panel wood door that provides access to Room 110 from the south gallery. The interior lock was broken. Metal strap hinges were present at the interior side of the door. The interior trim and door are not original to the house. Overall, the door was in fair condition.

D15 – D15 provides access to the crawl space below the enclosed gallery rooms on the west wall of the house. The door itself is located on the east wall of the enclosed basement space. The door is a very small, vertical board and batten wood door with a raised, wood threshold. Forge-style metal strap hinges were present, and the door was fully operable. Some animal damage was noted at the left jamb, likely caused by squirrels. No lock or knob was present. Overall, the door is in good condition.

D16 – D16 is a batten-style wood door with forged nails, and forge-style metal strap hinges. The door is operable with a wood peg handle. This door provides primary access to the basement and is possibly original to the house. A modern padlock was in place at the exterior to secure the basement. The door jambs and head were in fair to poor condition. Overall , the door is in poor condition and in need of general maintenance.

D17 – D17 is a batten-style wood door with forged nails, and forge-style metal strap hinges. The door had no knob but was operable. This door is located on the south



Figure 89. – Exterior of D5 at south gallery. (Source: RRJ 2023)



Figure 90. Interior of D5 at Room 110. (Source: RRJ 2023)



Figure 91. Metal strap hinges at interior of D5. (Source: RRJ 2023)t



Figure 92. Broken lock at interior of D5. (Source: RRJ 2023)

wall, provides access to the basement and is possibly original to the house. A modern padlock was in place at the exterior to secure the basement. The door jambs and head were in fair condition, and the threshold had failed. Overall, the door is in poor condition and in need of general maintenance.

B	SHELL				
B10	ROOF CONSTRUCTION				
	B1029	OTHER ROOF SYSTEMS			
		Number	Description	Condition	Priority
			Chimneys Overall	Good	Low
		B102901	East Chimney	Good	Long-Term
		B102902	West Chimney	Good	Long-Term

Date: c. 1790 with later alterations Contributing: Contributing

Description

Two brick chimneys project through the roof at the east and west sides of the house. The East Chimney connects to an original triangular shaped fireplace that is accessible from Rooms 101, 102, and 103. The West Chimney connects to a reconstructed triangular fireplace that is accessible from Rooms 106 and 107. During the 1990s restoration work, two later addition chimneys and fireplaces were removed from Rooms 105 and 106, and the West Chimney and fireplaces were reconstructed to match framing remaining in the basement. Both chimneys were plumb and solid. No major defects or structural issues were noted.



Figure 93. View of east chimney from south lawn. (Source: RRJ 2023)



Figure 94. View of west chimney from St. Marys Road. (Source: RRJ 2023)

B	SHELL				
B10	SUPERSTRUCTURE				
	B1013	BALCONY CONSTRUCTION			
		Number	Description	Condition	Priority
		B101301	North, East & South Gallery Decking	Fair	Immediate
		B101302	South Gallery Stairs and Handrails	Good	Long-Term
		B101303	Horizontal Railing at Galleries	Fair	Immediate

Date: c. 1790 with later alterations Contributing: Contributing

Description

An interrupted French colonial gallery surrounds the house on all four sides. The west end of the gallery was enclosed prior to 1937 per HABS documentation. The north, south, and east sides of the gallery remain open and the gallery framing is exposed.

Stairs, Railing, and Decking

One set of stairs was present at the south wall of the House providing access to the galleries and house. Anti-slip metal stair nosing was present on all treads and the stairs were generally in good condition.

Handrails were present along the full perimeter of the remaining segments of the gallery which is present on the north, east and south elevations. The railing along the north, east and south elevations consists of a 4 x 5.5-inch mid-rail and nominal 2x top rails. The railing sections are connected to the gallery roof columns. The lower rail appears to be the height of the original railing. Top rails were not present at the railing sections between post 7-8 and 11-12 on the east wall.

Several loose railings were identified on all elevations and were likely insufficient to withstand code-required loads for safety railings. The railing configuration is likely historically appropriate but does not comply with the International Building Code provisions for safety railings for changes in height above thirty inches, regarding railing height above the walking surface, height, and placement of midrails, and maximum allowable spacing between railings, pickets, or posts. Consideration should be made whether a sympathetic modern safety railing should be installed. At a minimum, the rails should be repaired or replaced as required to withstand code-required loading of safety rails, which the 2018 IBC is a minimum of 50 pounds per linear foot for uniform loading, 200 pounds for a concentrated load on the top rail, and 50 pounds for concentrated loads on intermediate members or infill panels. Wood decay and fungal growth were noted at isolated locations. Railings were generally in good to fair condition.



Figure 95. General view of gallery decking at south wall. (Source: RRJ 2023)



Figure 96. Railing and joinery at southwest corner of the house. (Source: RRJ 2023)

Wood decking is located throughout the open gallery.



Figure 97. Biological growth at gallery decking. (Source: RRJ 2023)



Figure 99. Overview of stairs at south wall. (Source: RRJ 2023)



Figure 98. View of gallery railing at south wall. (Source: RRJ 2023)



Figure 100. Stairs with metal stair traction strips at south wall. (Source: RRJ 2023)

The decking consists of eight to nine wood planks per wall. Generally, the decking planks at the outer perimeter of the gallery have failed or were in poor condition. The decking planks nearest to the house were generally in good condition. Several trip hazards were noted at the south wall between the stairs and the main entrance. Additional trip hazards due to wood rot or warped wood planks were noted on the east and north elevations. Significant biological growth was observed along the perimeter of the gallery decking at all elevations. Overall, the decking is in fair condition.

Structural Systems

DESCRIPTION OF STRUCTURAL SYSTEMS

A poured cementitious flooring material is present throughout most of the House's interior footprint at basement level. Soil is visible at isolated areas of deterioration within the flooring material. Limestone masonry walls of varying construction are present at basement level supporting the first-floor rooms and the interior perimeter of the galleries.

At an unknown date but likely early in the house's history, north and northwest portions of the first-floor gallery were enclosed to provide additional interior space. Walls enclosing the gallery rooms at west are believed to have been constructed with conventional framing. First-floor gallery framing members – including posts, perimeter floor beams, floor joists, perimeter attic beams, attic joists, and decking – are typically exposed to the elements at the building exterior with the exception of those below enclosed gallery spaces. Generally, gallery joist framing is oriented perpendicular to adjacent exterior walls. The gallery framing below the enclosed rooms is visible within a crawl space accessible from a door located beneath the gallery decking at the south wall. The gallery posts are known to be replacement members, and the original posts are stored in the basement rooms. Gallery floor framing is believed to reflect at least two repair programs in which deteriorated members were replaced.

The exterior walls of the central six rooms of the house are constructed of vertical logs resting atop a wood sill (poteaux-sur-sole construction), above limestone masonry foundation walls. The vertical log walls are typically exposed at the exterior but covered by interior finishes, with only a small area at the north wall visible from within the enclosed gallery. The scope of the HSR did not include removal of interior finishes, and portions of the vertical log could not be observed by the HSR team.

The voids between vertical logs are filled in with a combination of plant fiber and clay, called bousillage. The wall bottom plate was typically visible both at basement level and from the exterior beneath gallery decking. The wall top plate, like the vertical logs, was typically exposed at the exterior but covered by interior finishes. Notches are visible in the top plate that are consistent with top plate bracing members typical of other log wall structures in Ste. Genevieve. However, no top plate bracing members are present. The top plate bracing members appear to have been removed at an unknown date prior to the 1935 HABS survey.

At one location, vertical wood members at interior walls were observed to be mortised into the attic-supporting beams above. The connection of interior wall members to the basement-level beams below could not be determined without removing interior finishes.

The first-floor framing belonging to the building interior is generally visible from basement spaces. The basement footprint is identical to that of the vertical log perimeter. The first floor is supported by timber joists spanning in the east-west direction that vary in size and condition. Wood joists are typically hand-hewn logs and timbers, with isolated instances of circular-sawn dimensional lumber observed near fireplace hearth framing. The variation of lumber types at the fireplaces is attributed to know alterations at the fireplace and chimneys. Two timber members aligned with interior walls spanning in the east-west direction serve as sill plates for partition walls at the first floor.

First-floor interior decking was observed to be of two different construction, as distinguished by the color of decking members: an older system below the south and central rooms, and a newer system below the north rooms and enclosed additions.

The exterior attic floor framing above gallery spaces – including attic-supporting gallery joists and perimeter attic beams – is visible from the exterior and from within the enclosed gallery room. The exterior attic framing above the enclosed gallery was obscured by interior finishes. Similar to the first-floor gallery framing, joists are typically oriented perpendicular to the exterior walls.

The interior attic floor framing is supported by lumber beams spanning in the east-west direction, many of which are exposed to view within the four central rooms at the first floor. Isolated side and bottom faces of timber beams are obscured from view where they align with interior walls and their finishes. The attic-supporting framing finely finished, featuring smooth side surfaces and a beaded detail at either edge of the bottom face.

Attic floor decking generally spanned in the north-south direction, with the exception of decking over the east and west galleries. Attic floor decking was obscured

from view at the topside within the west portion of the attic due to the presence of rigid insulation board.

The underside of attic decking was typically exposed to view from the first floor.

The broken-pitch roof is framed paired rafters. Steeply-sloped primary rafters span between from the roof ridge to the top plate. Secondary rafters forming the gallery roof meet in a half-lap joint at the roof ridge. Collar ties are present spanning between each pair of primary rafters, positioned just above the rafter midpoint. A lateral purlin member is present at approximately the midpoint of the secondary rafters. Near-vertical kicker posts support the purlin at inconsistent spacing.

Known alterations, many of which are of an undetermined time frame, include the following:

- Enclosure of the north gallery rooms.
- Removal of the original triangular north-central fireplace and the addition of two smaller chimneys.
- Removal of original attic stair framing in the central room and construction of a new attic stair on the other side of the room.
- Possible alterations of gallery attic framing, which may include removal of the lateral corner braces at the top plate.
- Addition of collar ties at each paired rafter.

WOOD SPECIES IDENTIFICATION

Identifying wood species in building components makes it possible to select compatible materials for repair and replacement interventions. Additionally, knowing the wood species, the structural grade, and the wood condition of structural members allows for determining design properties for conducting engineering analysis.

Samples for wood species identification were removed from the first-floor framing members, exterior wall vertical logs, porch framing, and roof framing. The acquired sample size corresponds to the smallest amount of wood required for analysis. Wood species were identified using standard microscopic and macroscopic wood identification techniques.

White oak was the only wood species group identified in samples collected from the basement joists, exterior wall vertical logs, a diagonal corner brace, bottom sill, porch joist, and the porch top beam. White oaks are designated as a group of different white oak species (species group) since the individual species cannot be separated based on the wood anatomy. The white oak group includes all species of white oaks listed in the 'White Oak' species group under the National Design Specification for Wood Design. *Quercus alba* is the most common white oak species in Missouri.

Southern pine species group was identified in all samples collected from roof framing components, including a gallery rafter, a principal rafter, and a collar tie. The first-floor ceiling beams are also the Southern pine species group. Southern pine species group includes several economically important species such as loblolly (*Pinus taeda L.*), longleaf (*P. palustris Mill*.), shortleaf (*P. echinata Mill*.), and slash pine (P. elliottii Engelm.), which cannot be separated into individual species based on the wood anatomy. The lumber (and timber) of southern pines is marketed and known in the trade as Southern Yellow Pine (SYP), designated as the 'Southern Pine species group' under the National Design Specifications for Wood Design.

White oaks and southern yellow pines are native to North America. Lumber (and timber) of these species is readily available if required to repair or replace the original materials.

Findings of wood species identification for the Janis-Ziegler House are shown in the following table, and the "Wood Condition Assessment Reports" are attached as an appendix.

WOOD IDENTIFICATION RESULTS FOR THE SAMPLES FROM JANIS-ZIEGLER HOUSE			
Sample	**Component**	**Location**	**Wood Species/Species Group**
1	Floor joist J10	Basement	White oak group (*Quercus spp*.)
2	Floor joist J15	Basement	White oak group (*Quercus spp*.)
3	Vertical log N19	North exterior wall	White oak group (*Quercus spp*.)
4	Vertical log E10	East exterior wall	White oak group (*Quercus spp*.)
5	Diagonal brace ESD	East exterior wall	White oak group (*Quercus spp*.)
6	Sill plate (between S17-S18)	Basement	White oak group (*Quercus spp*.)
7	Porch joist	Porch, south elevation	White oak group (*Quercus spp*.)
8	Porch top beam	Porch, south elevation, at the door	White oak group (*Quercus spp*.)
9	1st floor ceiling beam	Interior, over the stairs	Southern pine group *(Pinus spp.)*
10	Gallery rafter GS16	Roof framing	Southern pine group *(Pinus spp.)*
11	Principal rafter RS15	Roof framing	Southern pine group *(Pinus spp.)*
12	Collar tie (at RN30)	Roof framing	Southern pine group *(Pinus spp.)*

RESISTANCE DRILLING ASSESSMENT

Resistance drilling is a quasi-nondestructive technique for determining the relative density of wood. The resistance drill measures the torque applied to a 3 mm diameter needle as it penetrates wood at a constant speed. The relative density profile is plotted against the depth of needle penetration. Resistance drilling is best suited for determining internal problems in large wood cross-sections that do not show obvious signs of deterioration on the surface. Any internal void or early stage of decay at the drilled location can be detected by determining the relative density of the wood.

Limited resistance drilling was used to verify the internal condition of structural members in the Janis Ziegler house. Resistance drilling was done using a Rinntech Resistograph R650-PR Resistance Drill.

The condition of wood seen on the resistance drilling profiles is termed as solid, punky, or void. Solid wood has a resistance drilling (relative density) profile typical for healthy sound wood (free of decay or insect damage). Punky wood is soft and easy to penetrate but has not yet deteriorated to the point where there is a void; its resistance drilling profile has a lower relative density range than sound wood and lacks a sharp definition of wood features such as growth rings. Voids develop when the deterioration of the wood fibers is complete, and the relative density drops to the baseline of the resistance drilling profile.

Resistance drilling profiles are classified as having less or more than 50% of the profile loss relative to the depth of the drill path (element dimension). The distinction between less than or greater than 50% of profile loss is arbitrary and adopted only to sort the more severely deteriorated members. An engineering analysis would allow for determining whether 50% of the remaining solid wood in the members subjected to resistance drilling is sufficient based on anticipated loads, wood species, and structural grade.

First-Floor Framing

Based on the visual assessment and resistance drilling results, the condition of individual floor joists and diagonal framing members ranges from poor-to-good. The principal deterioration mechanisms are fungal decay and wood-boring insect damage.

Resistance drilling was done on the south- and north-facing ends of each floor joist unless the access was obstructed. The first drilling was done at the joist end, as close to the sill plate as possible. If a sizeable internal void was detected in the member, subsequent

resistance drilling was done to determine the size of the void. Resistance drilling was done upward through the middle of the width for floor joists and diagonal framing members (unless noted otherwise) and horizontally (from the exterior toward the interior) or upward for the sill plate.

Most resistance drilling locations for first floor framing members had less that 50% profile loss. Isolated locations where resistance drilling indicated more than 50% profile lost were primarily noted at the south and east sill plate. The entire east sill plate and a section of the south sill plate between joist J8 and the east corner are severely deteriorated, having large internal voids and external decay. North sill plate is sound, with minor cross-section losses, except for a large internal void between joists J7 and J8. Structural capacities of sill plates should be evaluated further, and appropriate interventions should be recommended by a structural engineer.

Exterior Vertical Logs

Based on visual assessment and limited resistance drilling, the condition of the exterior wall logs is generally good, particularly given the age of the building. Only one vertical log (S1) was classified as having more than 50% profile loss via resistance drilling. Deterioration is primarily caused by fungal decay and beetle damage. Wood decay visible on the surface is typically confined to white oak sapwood, while the internal voids, detected with resistance drilling, are located in the central log sections. There are signs of wood-boring insect damage, namely powder post beetle pinholes, and large wood-boring beetle emergence holes, on many exterior vertical logs. The insect damage appears of minor significance for the overall conditions of wall logs. Apparent signs of an active infestation, such as fresh frass or adult insects, were not found at the time of assessment, suggesting past insect damage.

Roof Framing

The investigation of roof framing of the Janis Ziegler house included visual assessment and limited resistance drilling of principal rafters, gallery rafters, collar ties, horizontal rails, and gable end framing, and in situ visual wood grading of the principal roof rafters. Roof framing elements are generally in good condition, with minor damage by powder post beetle and free of internal or external decay.

The full findings of all resistance drilling and other wood investigations are attached as an appendix.

B	SHELL				
B10	EXTERIOR ENCLOSURE				
	B1010	FLOOR CONSTRUCTION			
		Number	Description	Condition	Priority
		B101001	First-Floor Framing	Fair to Poor	Immediate

Date: c. 1790 Contributing: Contributing



Figure 101. Overview of first-floor framing looking west at partition wall. (Source: RRJ 2023)



Figure 102. Overview of hearth framing at the south fireplace. (Source: RRJ 2023)

Description

The first-floor framing, observed from within the basement, spans in the north-south direction and supports the central six rooms within the perimeter of the vertical log wall framing. First-floor joists are notched at their bearing ends and frame into the north and south log wall sill plates at either end. Typically, the interior face of the sill plate is set back relative to the interior of the masonry wall by six to eight inches. Wood and stone blocking is present between the topside of the masonry wall and the underside of joist ends at inconsistent locations within the basement.

Joists either consisted of puncheon logs with flat-planed top surfaces or hand-hewn timber members. The five round log members were generally located at the north end of the structure, measuring nominally 8-9 inches deep and 8-12 inches wide. The hand-hewn members measured nominally 7 to 10-1/2 inches deep and 5-9 inches wide. Hearth framing consisted of hand-hewn members.

Dendrochronological research performed by Richard Guyette of the University of Missouri at Columbia



Figure 103. Overview of first-floor framing looking south. (Source: RRJ 2023)

dated four first-floor beams to c. 1790, and one beam to c. 1791.

A wood plank measuring 2-inches deep and 11.25-inches, laid horizontally, was present supporting the mid-span of basement joists spanning the full distance from the east wall to the west wall. The member was supported by posts spaced at every other full-length joist. The posts consisted of either hand hewn or round log



Figure 104. Overview of hearth framing at the west fireplace. (Source: RRJ 2023)



Figure 105. First-floor framing at basement northwest. (Source: RRJ 2023)



Figure 106. Typical hand-hewn joist end at sill plate. (Source: RRJ 2023)



Figure 107. Post supporting joist number 10 from the east. (Source: RRJ 2023)

members measuring nominally 5 inches by 8 inches for rectangular sections or 6 to 8 inches in diameter at round sections.

The post located directly below joist number 8 from the east was short and did not provide structural support to the flooring system.

Joists and beams were observed to be in varying condition. Although most of the first-floor members remain intact, insect damage has caused significant loss of member section at several members.

Floor Level Survey

A level survey was performed on the first floor to understand the deflections and differential settlements within the first-floor structure and establish a benchmark for long-term monitoring. Visual assessment determined



Figure 108. Insect damage observed at the post supporting the plank. (Source: RRJ 2023)

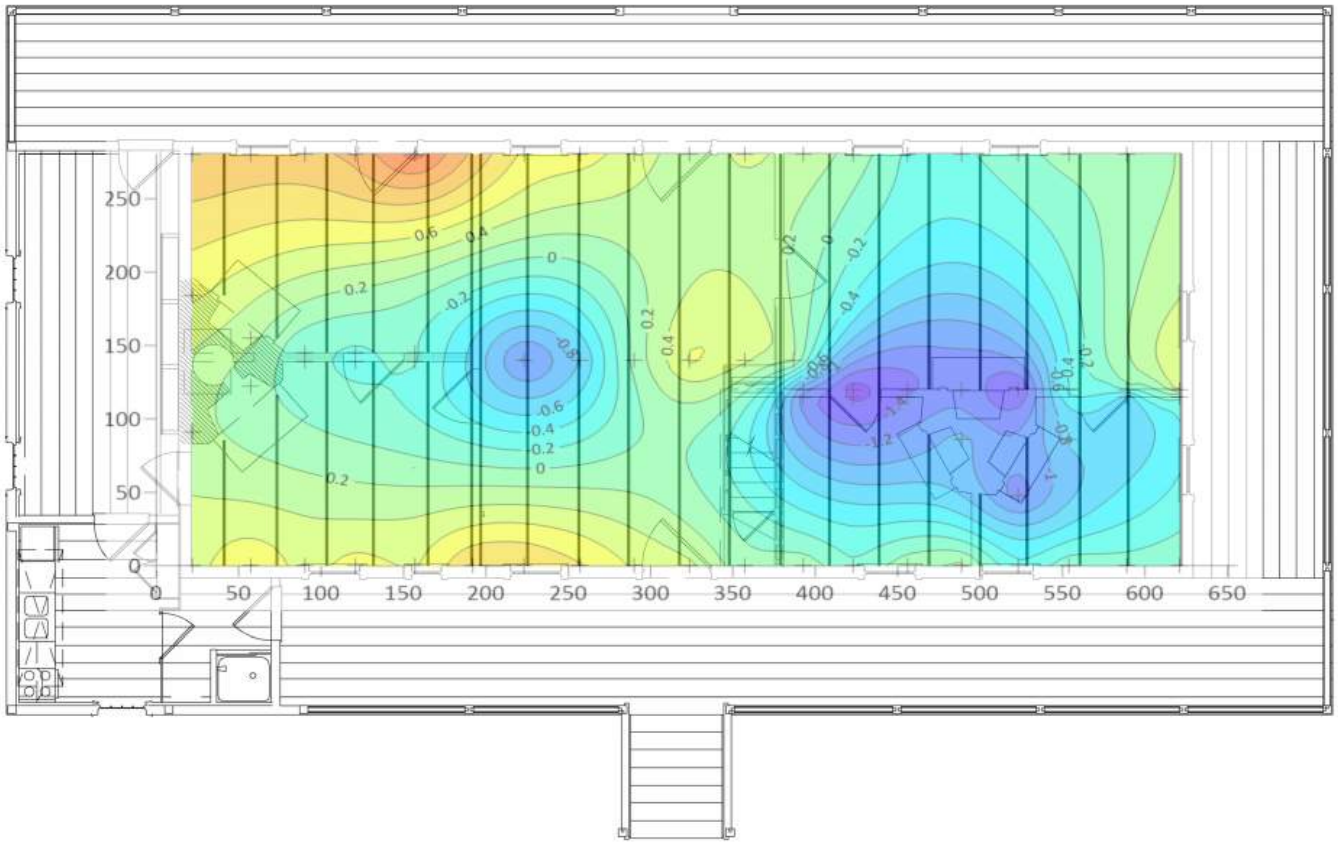


Figure 109. Floor level survey taken at the bottom of the floor beams from the basement level. (Source: RRJ 2023)

that the first floor structure was significantly deflected in Room 103 around the fireplace, which appeared to affect the flooring in Rooms 101 and 102 as well. Measurements were taken from the bottom of the beams in basement level and from the top of the hardwood flooring on the first level.

The northwest corner of Room 103 was selected as the "zero" point for benchmarking purposes because this corner appeared to be relatively level with the flooring in Room 105. Floor and beam elevation measures are relative to this point.

For the readings taken at the bottom of the beams, the existing timber beams may taper, increasing in thickness near the middle of the member. The readings on this diagram can be used as reference for future floor level surveys to determine if any movement has occured in the future.

For the readings taken at the top of the hardwood flooring on level, the readings can be interpreted as the general deflection of the flooring relative to the benchmark. In historic structures, floor elevations are often unlevel; again, these readings are best used to establish baseline conditions in 2023 against which future monitoring can be compared.

- The level survey indicates that the flooring around the east triangular fireplace is approximately 2 to 2.75 inches lower than the benchmark in the corner of the room. This may indicate that the masonry chimney has settled relative to the exterior walls, causing the floor beams and flooring to sink around the fireplace.
- A smaller area of flooring deflection was found on the west wall of Room 105. This is approximately the location of a previous fireplace that was removed in the 1990s restoration.
- The flooring level in Rooms 106 and 107 was generally 0.25 to 0.5-inches higher than Room 105. This is likely due to the restoration work that was

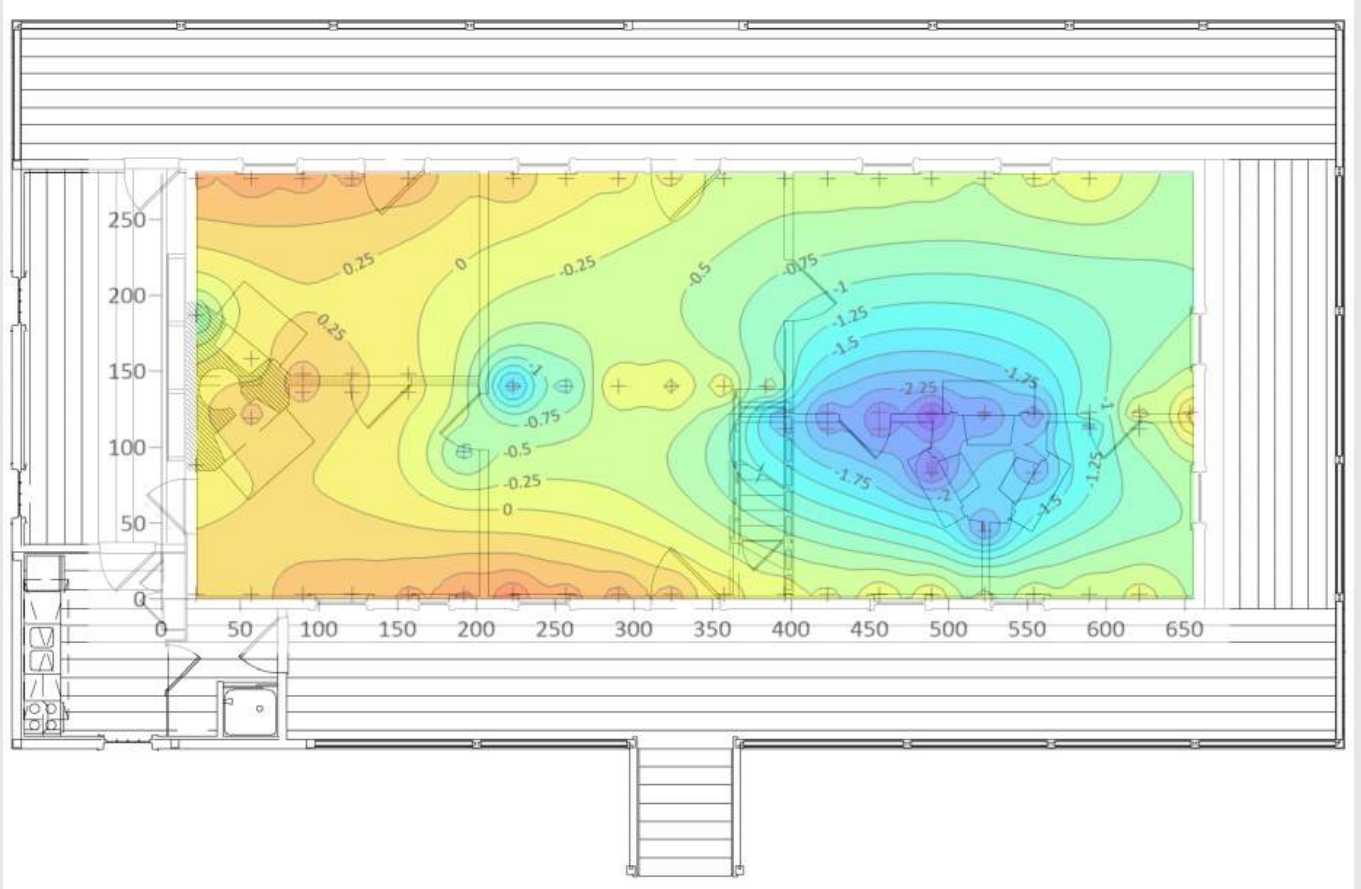


Figure 110. Floor level survey taken at the top of the hardwood flooring on the first level. (Source: RRJ 2023)

performed in these rooms in the 1990s, including reconstruction of the triangular chimney.

It was unclear from available photographs how much of the deflection observed in Rooms 101, 102, and 103 may be attributable to the Great Flood of 1993, but doubtless that disaster event exacerbated any settlement issues, given that depth of water at the height of the flooding reached about a foot above the flooring.

B	SHELL				
B10	EXTERIOR ENCLOSURE				
	B1010	FLOOR CONSTRUCTION			
		Number	Description	Condition	Priority
		B101002	Attic Floor Framing	Good	Long-Term

Date: c. 1790 Contributing: Contributing

Description

The attic floor framing, observed from the first floor level, spans in the north-south direction and supports decking in the attic. A decorative bead detail is carved into the bottom of each joist. The joist surfaces were smooth, without any saw markings that might point to their vintage. Joists typically measured nominally 9-1/2 inches deep and 4 inches wide. The joists are notched at bearing ends, where they frame into the north and south wall top plates. The end faces of beams were visible from the building exterior. The majority of beam ends were observed to be flush with the exterior face of the vertical log wall. Where they are interrupted by fireplaces at the east and west of the home, joists bear upon the fireplace masonry.



Figure 111. Overview of attic floor joists looking east. (Source: RRJ 2023)

Attic floor framing was observed to be in good condition. At the east end of the north wall, beam ends were recessed inward relative to the exterior face of the vertical log wall. This points to outward movement of the log wall at this location, which is consistent with conditions observed from the exterior. Isolated joists were rotated at ends. Gapping was observed between attic joists and interior wall finishes where attic joists meet the interior north-south wall at the east wing of the home.



Figure 112. Attic floor joists looking north. (Source: RRJ 2023)

B	SHELL				
B10	EXTERIOR ENCLOSURE				
	B1020	ROOF CONSTRUCTION			
		Number	Description	Condition	Priority
		B102001	Primary Rafter Framing	Fair to Poor	Short-Term

Date: c. 1790, with later alterations Contributing: Contributing

Description

Hand-hewn attic rafters span between the roof ridge and a top plate above the vertical log construction, at a slope of 38 to 40 degrees from horizontal. Attic rafters measured nominally 4 inches deep and 6 inches wide. Pairs of rafters meet in a half-lap joint at the roof ridge. One wood trenail is present within each ridge half-lap joint. Attic rafters are toe-nailed at their lower ends to a saw-cut attic rafter top plate measuring 1-1/2 inches deep and 4-3/4 inches wide. The rafter top plate is in turn nailed at its topside into the attic joists below.

Attic rafter members were generally observed to be in fair condition. Of the 70 attic rafters present within the structure, approximately 47 of the attic rafters exhibited light to heavy checking, and another 9 rafters exhibited splitting. While the checked members were distributed throughout the roof footprint, eight of the nine rafters exhibiting splitting were located at the north side of the roof. If not addressed, rafter splits that pass through collar tie joints could compromise the structural performance of the roof.



Figure 113. Overview of attic rafters, looking north. (Source: RRJ 2023)



Figure 114. Overview of attic rafters, looking south. (Source: RRJ 2023)



Figure 115. Half-lap ridge joint and wooden trenail viewed from the side. (Source: RRJ 2023)



Figure 116. Half-lap ridge joint and wooden trenail viewed from below. (Source: RRJ 2023)



Figure 117. Attic rafter exhibiting checking in its lower half within the south side of the attic. (Source: RRJ 2023)



Figure 118. Attic rafter exhibiting checking near ridge within the west side of attic. (Source: RRJ 2023)



Figure 119. Attic rafter exhibiting splitting near a collar tie joint. (Source: RRJ 2023)

B	SHELL				
B10	EXTERIOR ENCLOSURE				
	B1020	ROOF CONSTRUCTION			
		Number	Description	Condition	Priority
		B102002	Gallery Rafter Framing	Fair to Poor	Short-Term

Date: c. 1790 Contributing: Contributing

Description

Gallery rafters spanned between a top plate located above the gallery perimeter attic beam and just above mid-point of attic rafters at a slope of approximately 22 degrees from horizontal. The gallery rafters consisted of round logs planed flat at the topside and measuring nominally 4 inches deep and 5 inches wide. The gallery rafters were fastened to the upper face of each attic rafters with two nails. The attachment of the bottom end of gallery rafters to the gallery top plate could not be directly observed. A wood trenail was observed at the intersection of gallery rafters and purlins at intervals of every two to five gallery rafters. Dendrochronological research performed by Richard Guyette of the University of Missouri at Columbia described the gallery rafters as "young pine poles."



Figure 120. Overview of gallery rafters present behind attic rafters, looking south. (Source: RRJ 2023)

Gallery rafter members were generally observed to be in fair condition. Isolated instances of water-related deterioration was observed at the bottom ends of gallery rafter members. Of the 70 gallery rafters present within the structure, approximately 28 of the gallery rafters exhibited light to heavy checking, and no gallery rafters exhibited splitting. Of the 28 checked members, 20 checked members were located at the south side of the roof.



Figure 121. Overview of gallery rafters behind attic rafters, looking southeast. (Source: RRJ 2023)



Figure 122. Deterioration at end of gallery rafter. (Source: RRJ 2023)



Figure 123. Upper end of gallery rafter at attachment to attic rafter member. (Source: RRJ 2023)



Figure 124. Trenail connection between gallery rafter and purlin. (Source: RRJ 2023)



Figure 125. Dimensional lumber post supporting south gallery rafter. (Source: RRJ 2023)

B	SHELL				
B10	EXTERIOR ENCLOSURE				
	B1020	ROOF CONSTRUCTION			
		Number	Description	Condition	Priority
		B102003	Collar Ties	Fair to Poor	Short-Term

Date: c. 1808 Contributing: Contributing

Description

Collar ties typically span between pairs of attic rafters, typically serving as tension members within the greater roof framing system to keep the ridge connection together and resist wind uplift. Due to the presence of the gallery rafters loading the attic rafters, these collar ties are also acting in compression to assist supporting the gallery rafter point loads.

Collar ties measure 3-3/4 inches tall by 3 inches wide. Collar ties meet attic rafters in an angled half-dovetail lap joint. Each lap joint is pinned with a one-inch diameter wooden trenail. Collar ties are typically saw-cut and appear to have been added after the original roof construction. Dendrochronological research performed by Richard Guyette of the University of Missouri at Columbia dated two samples of wood from collar ties to c. 1808, but this date has not yet been correlated with historic documents to support a possible alteration date. It is undetermined whether these members were added to the structure or if they were replacements for earlier members.

Collar ties were generally observed to be in good condition. One collar tie connection was observed to have been displaced and was not restrained from moving in the east-west direction at south attic rafter number 28 from the east.



Figure 126. Typical collar tie connection with trenail at east face. (Source: RRJ 2023)



Figure 127. Displaced collar tie at split south attic rafter. (Source: RRJ 2023)

B	SHELL				
B10	EXTERIOR ENCLOSURE				
	B1020	ROOF CONSTRUCTION			
		Number	Description	Condition	Priority
		B102004	Gable End Wall Framing	Fair to Poor	Short-Term

Date: c. 1808 / Undetermined Contributing: Contributing



Figure 128. Overview of end wall between attic rafters at east. (Source: RRJ 2023)



Figure 129. End wall at west, above window. (Source: RRJ 2023)

Description

Gable end walls are present at the east and west elevations of the building, following the shape of the broken-pitched roof. Framing is similar at both ends. The framing at end walls is saw-cut and therefore may be a later alteration to the roof. It is unknown if this condition represents a change in the overall roof massing or if gables were originally present.

Vertical members measuring four inches square are spaced at two feet on center typically and at four feet on center where they frame either side of the central window. Diagonally-oriented end wall members measuring four inches square follow the geometry of attic rafters and end rafters and interrupt the vertical members. A nominally four-by-four square header member is present above the central window. Two vertical members are present above the header member, the centerline of each offset four inches inward toward the roof ridge relative to the centerline of each window-framing vertical member. Both the upper vertical members and the window sill member measure four inches deep by three inches wide. End wall framing members were observed to be in good condition.



Figure 130. West end wall at location of the roof slope change. (Source: RRJ 2023)

B	SHELL				
B10	EXTERIOR ENCLOSURE				
	B1020	ROOF CONSTRUCTION			
		Number	Description	Condition	Priority
		B102005	Lateral Purlins and Kickers	Good to Fair	Long-Term

Date: c. 1790 Contributing: Contributing

Description

Lateral purlin members are present below secondary gallery rafters spanning the length of the roof from east to west. These members were either round or saw-cut, measuring 3-1/2 inches deep by 4 inches wide. Four purlin members are present at the north side of the roof and an additional four members were present at the south side of the roof.

Kicker posts lean slightly outward of vertical, support the gallery rafter lateral purlins, and bear upon the attic rafter plate. Kicker posts measured nominally 3 by 4 inches and were spaced at a range of every two to every five rafters. Eleven kickers are present at the north side of the roof, while 12 kickers are present at the south side of the roof.

Purlins and kickers were generally observed to be in good condition, with isolated instances of checking in both member types. Two of the kickers at the south side of the roof were notched at mid-height, implying that these members were likely salvaged from other structures.

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Figure 131. Overview of under purlins and kickers along north side of roof. (Source: RRJ 2023)



Figure 132. Notched kicker near south attic rafter. (Source: RRJ 2023)

B	SHELL				
B10	EXTERIOR ENCLOSURE				
	B1013	BALCONY CONSTRUCTION			
		Number	Description	Condition	Priority
		B101301	Gallery Framing - Posts	Good to Poor	Short-Term

Date: c. 1790 / 1990s

Contributing: Contributing and Non-Contributing, but Compatible

Description

The existing gallery posts are carved from full logs and span between foundations at ground level and the underside of the gallery perimeter attic beam. Posts are preset at the gallery perimeter: 21 of these are visible from the exterior and the remainder are enclosed within walls at the north building end and northwest building corner. At least six posts are believed to be enclosed in the north walls. The gallery posts varied in both condition and in apparent age. Of the 21 posts visible from the building exterior, approximately seven posts at the south and east elevations appeared to be newer than the remaining posts.

The bases of posts were round in section, apparently shaped only by the removal of exterior bark from whole logs. Above the bases, posts were shaped in square section. Five of the posts visible at the exterior were observed to be hand-hewn full height, the remainder of posts at the building exterior were apparently saw-cut above the round bases. Gallery floor perimeter beams met each post with mortise-and-tenon connections above the round bases. Blocking was present below the ends of gallery floor perimeter beams at seven posts along the building east wall, providing additional support for beam ends with decayed connections. Dendrochronological research identified the poles as red cedar.

Post foundations consisted of a stone block either resting atop the ground (10 of 21 posts visible at the exterior) or resting atop a concrete pad (11 of 21 posts visible at the exterior).

Posts varied in condition from good condition to poor condition. Those posts in fair condition typically exhibited minor checking, minor decay, or insect damage. The posts in poor condition exhibited decay at the gallery floor perimeter beams mortise-and-tenon joint or decay at the post base due to contact with soil.



Figure 133. Typical gallery post at east wall. (Source: RRJ 2023)

Post replacements occurred during a restoration program starting in the late 1990s. It is currently undetermined if any of the existing posts are original construction. Many of the original posts were salvaged and are stored in the basement of the house. One post is also on display at the Ste. Genevieve Museum Learning Center.



Figure 134. Beam-post connection with beam support blocking. (Source: RRJ 2023)



Figure 137. Deterioration and organic growth at beam-post connection. (Source: RRJ 2023)



Figure 135. Carpenter bee damage near mortise-and-tenon connection. (Source: RRJ 2023)



Figure 139. The post base is positioned off-center relative to its stone base. (Source: RRJ 2023)



Figure 136. Missing pins and deterioration at beam-post connection. (Source: RRJ 2023)



Figure 138. Original posts stored in the basement at northwest. (Source: RRJ 2023)

B	SHELL				
B10	EXTERIOR ENCLOSURE				
	B1013	GALLERY FRAMING			
		Number	Description	Condition	Priority
		B101302	Gallery Floor Framing	Good to Poor	Short-Term

Date: c. 1790 / 1990s

Contributing: Contributing and Non-Contributing, but Compatible

Description

Gallery floor framing members include gallery floor joists, which span perpendicular to exterior log walls, and gallery perimeter floor beams. The gallery perimeter floor beams connect to the gallery posts at either side in mortise-and-tenon joints, with one wood trenail present within each tenon. Both gallery floor joists and gallery perimeter beams typically measured 4-1/2 inches wide and 6-1/2 inches deep. Gallery joists were typically notched one and a half inches at either end to bear upon gallery perimeter beams at their exterior end and upon blocking fastened with screws into the sill plate at the interior end. The gallery floor joists were not directly connected to the exterior wall sill plates.



Figure 140. North gallery floor framing, looking north. (Source: RRJ 2023)

The gallery floor perimeter beams varied from good to poor condition. Generally, the gallery joists were in better condition at their interior end relative to the exterior end, a condition explained by differential exposure to the elements. The gallery floor joists in poor condition exhibited wood decay at ends. At seven locations at the east wall, two-inch wide blocks were nailed to either side of gallery posts immediately below the gallery perimeter beam, providing a support ledge for the ends of the decayed gallery floor perimeter beams. The gallery floor beam at the south stairs exhibited epoxy patch repairs likely performed during the 1990s repairs.



Figure 141. The gallery perimeter beam carries load from gallery joists to gallery posts. (Source: RRJ 2023)

The enclosed west gallery framing is visible within a crawlspace accessible from below the south gallery. Gallery floor framing members within the crawlspace are arranged similarly to those at the exterior gallery, including gallery floor joists and gallery perimeter floor beams. The gallery perimeter floor beams were obscured from view at the exterior by wood siding board, and from the interior by oriented strand board. Gallery joists were visible from below. However, gallery decking and the top portions of the joist sides were obscured from view by rigid insulation panels. Gallery floor joists, where visible, were observed to be in good condition. Gallery floor joists spanning in the east-west direction were supported by two nominal 2x6 members spanning



Figure 142. Gallery floor joist exterior end below the west gallery. (Source: RRJ 2023)



Figure 144. The gallery floor perimeter beam south of the west stair exhibited both checking and rotation. (Source: RRJ 2023)



Figure 143. The gallery floor perimeter beam at the west stair exhibited heavy decay. Epoxy patching present on exterior gallery beam face. (Source: RRJ 2023)



Figure 145. Wood decay at the west end of the south perimeter beam. (Source: RRJ 2023)

in the north-south direction. Every other gallery joist spanning in the east-west direction was supported by a wooden post, resting on a stone foundation. The posts ranged in shape and in apparent age, from older round log members to newer circular-sawn rectangular posts.



Figure 146. Enclosed gallery floor framing, looking south. (Source: RRJ 2023)

B	SHELL				
B10	EXTERIOR ENCLOSURE				
	B1013	GALLERY FRAMING			
		Number	Description	Condition	Priority
		B101303	Gallery Ceiling Framing	Fair to Poor	Short-Term

Date: c. 1790 Contributing: Contributing

Description

Gallery ceiling framing joists span perpendicular to exterior log walls. Ceiling attic joists typically bear upon the log wall top plate and the gallery perimeter attic beam. The gallery perimeter beam is continuous atop above the gallery posts. Tenons at the top of the gallery posts are slotted into the bottom face of the perimeter beam and secured with one wooden trenail.

At building corners, the gallery beams meet in half-lap corner joints directly above corner post members. Where visible, the gallery perimeter beam is spliced at four locations at south, at one location at east, and at three locations at north. Perimeter beam splices were typically half-lap splice joints with angled ends and pinned with two to three vertical pins. The vertical pins within the splice joints ranged from galvanized steel lag screws to wooden trenails. Isolated pins were not visible due to the presence of either a wooden plug or epoxy plug.

Gallery joists typically measured 3-1/2 inches wide and 4-1/2 to 5inches deep, and gallery perimeter beams measured 4-1/2 to 5 inches wide and 6 to 6-1/2 inches deep. At the east and west sides, vertical members belonging to the roof end wall framing bear directly atop the gallery perimeter beam.

Gallery joists were observed to be in fair to poor condition. At least seven joists at the north gallery and 12 joists at the south gallery were observed not to bear on the perimeter beam. Similar to the gallery flooring joists, gallery joists were observed to be in better condition at their interior end than at the exterior end, due to the relative level of exposure to the elements. Gallery perimeter beams were observed to be in fair to poor condition. The topside of the gallery beams at north and south were typically worn and uneven, likely attributed to water sitting atop these horizontal members for relatively longer than water at the bottom and sides of these members during rain events.



Figure 147. Gallery ceiling framing at east, looking south. (Source: RRJ 2023)



Figure 148. West gallery ceiling framing, looking south. (Source: RRJ 2023)

The gallery perimeter beam was split at the east gallery



Figure 149. Deteriorated gallery attic joist at west does not bear on the perimeter beam. (Source: RRJ 2023)



Figure 150. The half-lap corner joint has come apart at the building northwest corner. (Source: RRJ 2023)



Figure 151. deteriorated beam joist end at east exhibiting insect exit holes. (Source: RRJ 2023)

at its south end. A hole was visible in this member at the bearing location of a vertical member belonging to the roof end wall at east. This member is recommended for replacement in kind. Multiple splice joints within the perimeter beam were not tight, exhibited gapping, or had missing pins. The eastern-most splice joint at the south gallery perimeter beam was split through the locations of pins within the lower member. The half-lap corner joint at the building southwest corner has failed. Powder-post beetle exit holes were visible at the exterior ends of multiple gallery attic joists.

As shown in HABS photographs dating to 1938 and to 1985, gallery framing and decking at the east had been painted white. t

Ceiling framing within the enclosed gallery rooms was visible within the west room (Room 108), but the framing within the kitchen and bathroom were obscured by ceiling finishes below and by attic decking above. The framing in Room 108 spanned in the north-south direction and appeared to be of the same member size, spacing, and vintage as the exposed framing members visible from the exterior at the building's east gallery. These members likely bear atop the west log wall top plate and atop the gallery perimeter beam. Wall paper, now largely removed, was applied to these members at an undetermined date time.



Figure 152. West enclosed gallery room, looking north. (Source: RRJ 2023)

B	SHELL				
B10	EXTERIOR ENCLOSURE				
	B1013	GALLERY FRAMING			
		Number	Description	Condition	Priority
		B101304	Gallery Ceiling Planks/Attic Decking	Good to Fair	Long-Term

Date: c. 1790 / 1990s

Contributing: Contributing and Non-Contributing, but Compatible

Description

Nominal 1x10-inch tongue-and-groove decking members were observed at the attic level. These members also serve as ceiling finishes for the first-floor rooms. Decking was generally observed to be in good condition.

Decking typically spans in the east-west direction perpendicular to the ceiling beams, with the exception of center-east and center-west decking over the galleries.

Isolated instances of water staining and daylight were visible at and between decking members over the galleries, but the boards where visible generally appeared to be serviceable.



Figure 154. Tongue-and-groove decking section in attic. (Source: RRJ 2023)



Figure 153. Attic decking over the east gallery. (Source: RRJ 2023)



Figure 155. 0035 Attic decking changes span direction over the south gallery, parallel to east exterior wall. (Source: RRJ 2023)

B	SHELL				
B20	EXTERIOR ENCLOSURE				
	B2011	EXTERIOR WALL CONSTRUCTION			
		Number	Description	Condition	Priority
		B201104	Vertical and Diagonal Log Members	Fair to Good	Immediate

Date: 1790s Contributing: Contributing

Description

The exterior walls of the central six rooms of the house are constructed of vertical logs bearing on a sill plate member (poteaux-sur-sol construction), above limestone masonry foundation walls. A top plate is present, spanning atop the vertical logs within the plane of each wall. Vertical log members typically measured 7 to 10 inches wide and 5 inches deep. Diagonal log members and vertical logs at building corners were generally wider than their counterparts within the plane of each wall. Corner members were typically 12 inches wide.

The vertical log walls are typically exposed at the exterior but concealed by interior finishes. The vertical logs belonging to the west wall were generally obscured from view by interior millwork in the west gallery addition, but a small area of logs with lath was exposed to view.

Diagonal logs were observed at the ends of each wall, providing bracing against lateral movement of logs. The diagonal logs typically spanned a horizontal distance of 30 to 35-inches on center. The diagonal log at the west end of the north wall was sloped more steeply than the other diagonal members, with a horizontal span of only 15 inches.

The spaces between vertical logs and between the log wall top plate and the roofing framing plate are filled in with a combination of plant fiber and clay called bousillage.

At locations of missing or deteriorated bousillage, the vertical logs were observed to have mortar and tenon connections to the top and bottom plate members. One one-inch wood dowels (trenails) were present within the mortise-and-tenon connections. Two 1-inch wood trenails were present within the mortise-and-tenon connection at each diagonal log member.



Figure 156. Exposed vertical logs and diagonal log framing at the south end of the east wall. (Source: RRJ 2023)

The vertical logs, where visible at the building exterior, were generally in fair to good condition, with only isolated locations of deterioration due to water or insect damage. At the south wall, spliced vertical logs identified the location of a previous non-original window that was infilled during the 1990s restoration.



Figure 157. Vertical logs and bousillage at the east wall. (Source: RRJ 2023)



Figure 158. Vertical logs and bousillage at the north wall. (Source: RRJ 2023)



Figure 159. Vertical log mortise and tenon joint visible at deteriorated bousillage at the south wall. (Source: RRJ 2023)



Figure 160. Window sill member connection. (Source: RRJ 2023)



Figure 161. Detail of bousillage exposed in bathroom. (Source: RRJ 2023)



Figure 162. Vertical log and top plate at the southeast corner, showing remnants of paint or limewash. (Source: RRJ 2023)

B	SHELL				
B20	EXTERIOR ENCLOSURE				
	B2011	EXTERIOR WALL CONSTRUCTION			
		Number	Description	Condition	Priority
		B201105	Vertical Log Wall Sill Plate	Fair to Poor	Immediate

Date: 1790s Contributing: Contributing

Description

The sill plate belonging to the vertical log typically measured 12-1/2 inches thick and 9 inches tall. The sill plate was typically visible at its interior face within the basement, and at its exterior face below the gallery decking. Sill plate thickness was measured at a basement window within the south masonry wall, and at the east end of the north wall, an abandoned section of PVC pipe was removed from the sill plate, allowing for a direct measurement of the sill plate thickness.

The vertical logs are mortised into to the sill plate with a trenail, the sill plate is notched to support the floor joists at the east and west walls. The sill plate corners were observed to be connected in a mortise and tenon joint. The sill plate at the south was observed to be one continuous member, while the sill plates at east and west were each spliced with a half-lap joint at their mid-length.

The exterior surface of the sill plate was generally observed to be in good condition, with isolated locations of "punkiness" or deterioration. A set of drawings dating to 1999 recommended that the south 17'-4" of the north sill plate be "solidified" with epoxy; if this repair was performed, no evidence of the work was observed at this location.

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Figure 163. The log wall sill plate is visible below gallery decking on the south wall. (Source: RRJ 2023)



Figure 164. Sill plate joint at building southwest corner as viewed from basement. (Source: RRJ 2023)

B	SHELL				
B20	EXTERIOR ENCLOSURE				
	B2011	EXTERIOR WALL CONSTRUCTION			
		Number	Description	Condition	Priority
		B201106	Vertical Log Wall Top Plate	Fair to Poor	Immediate

Date: Likely circa 1790 Contributing: Contributing

Description

The top plate of the vertical log wall typically measured 5 inches thick and 8-1/2 to 8-5/8 inches tall. The top plate was visible at its exterior face from the gallery but was concealed by interior finishes; the top plate of the north wall concealed by interior finishes and millwork on both sides.

The top plate at east was observed to be one continuous member, while the top plate at south was spliced twice at approximate third points and the top plate at north was spliced once at its approximate southern third-point. The splices at north and one of the south splices were half-lap splices, while the second splice at south was angled in the form of a scarf joint.

The north and south top plates are mortised to connect to the vertical logs, and the top face of the plates are notched to receive the primarily ceiling beams members. Gallery ceiling joists typically bear directly on top of the top plate and may be attached to the top plate with trenails.

Empty notches in the top face of the plate were observed at each building corner. It is likely that these notches, now filled with bousillage, once received a horizontal corner bracing member. These framing members, when present, would have been visible within the building's interior. It is unknown if these framing members were never installed or were removed at an undetermined date.

The exterior surface of the top plate was generally observed to be in fair condition, but distress to this member was observed at several locations. Splitting and out-of-plane movement were observed in the top plate at both sides of the southeast building corner. The top plate on the east wall had been treated with epoxy in an attempt to address voiding, likely during the 1990s restoration. Isolated instances of localized epoxy injection were also visible above the west entry door.



Figure 165. The south log wall top plate is visible from the gallery. Note the empty notch for the missing bracing member. (Source: RRJ 2023)



Figure 166. The south log wall top plate is notched to receive attic joists. (Source: RRJ 2023)



Figure 167. Half-lap joint at south top plate. (Source: RRJ 2023)



Figure 169. The north end of the east plate exhibits splitting and out-of-plane movement. An empty notch for a bracing member is visible. (Source: RRJ 2023)



Figure 168. Epoxy injection repair at the east top plate. (Source: RRJ 2023)



Figure 170. Juncture where interior ceiling framing and gallery ceiling framing meet the top plate. (Source: RRJ 2023)

B	SHELL				
B20	EXTERIOR ENCLOSURE				
	B2011	EXTERIOR WALL CONSTRUCTION			
		Number	Description	Condition	Priority
		B201107	Enclosed Gallery Wall Framing	Fair to Good	Long-Term

Date: 1990s Contributing: Contributing

Description

The west gallery has been enclosed since early in the house's history and appears to have been enclosed in two phases. Small area was enclosed at the southwest corner of the gallery first, and this enclosure was later enlarged to the current size.

The walls enclosing the west end of the house were hewn timbers with brick nogging, which was uncovered and partially reconstructed with the original materials during the 1990s restoration. During the assessment, these walls were covered on the exterior by weatherboard siding and on the interior by plaster and could not be assessed.

At the north corner of the west gallery, a small portion of a very early handrail can be seen enclosed between the wall and the siding, giving some indication of the style and height of the early railings.

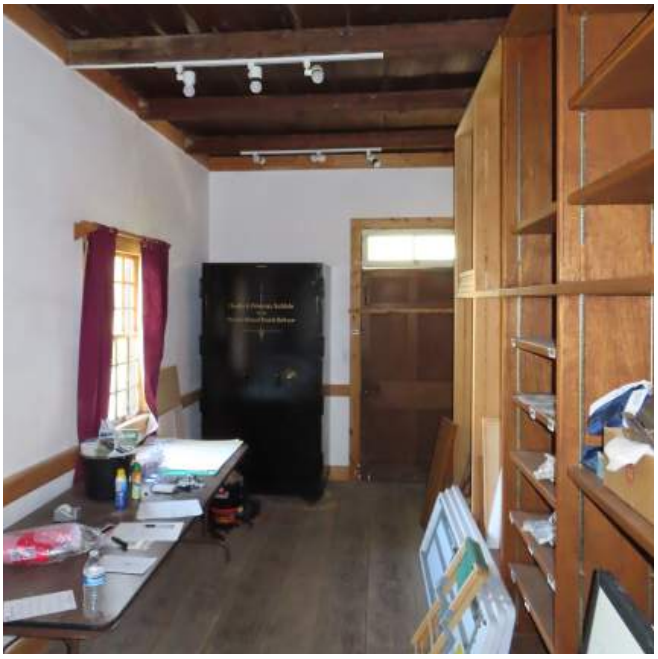


Figure 171. Interior overview of north and east enclosed gallery walls. (Source: RRJ 2023)



Figure 172. Hewn railing member trapped behind the siding at the northwest corner. (Source: RRJ 2023)

Interiors

DESCRIPTION OF INTERIORS

The Janis-Ziegler house is the oldest verified house in Missouri by dendrochronology. It has served many functions since its construction in c. 1790. More recently, the house was operated as a house museum until the Great Flood of 1993. An extensive restoration of the house was conducted in the late 1990s to repair areas damaged by the flood.

The interiors of the Janis-Ziegler house are finished and unfurnished. The current first-floor plan is divided into nine rooms and a three-sided gallery. The west side of the original gallery was enclosed prior to 1937. A partition wall separates the basement into two storage areas, and a separate crawl space exists below the enclosed gallery on the west side of the house. The attic level is unfinished but is accessible via stairway from the first floor.

Rooms 101 through 107 represent the floorplan of the vertical log structure. These six rooms are finished with wood flooring, painted plastered walls, and wood plank ceilings. Exposed hand-hewn wood beams are also present in these rooms. Later additions include rooms 108, 109, and 110 which are enclosed portions of the original wrap-around porch.

INTERIOR FINISHES SURVEY

A limited survey and sampling of interior finishes was performed by Historic Surfaces. The assessment and sampling was performed in an effort to determine the earliest extant finishes and the character of the finish materials. The full report is attached as Appendix F.

Methodology

A visual survey documenting conditions with notes and photographs was performed in each of the rooms on the first floor, with primary focus given to those rooms where remnants of historic finishes were likely to remain in place (Rooms 101, 102, 103, 105, 106, and 107); Rooms 104, 108, 109, and 110 were substantially disturbed or reconstructed during the 1990s restoration.

Discrete samples of finish materials were also taken for microscopy analysis in the laboratory and reviewed for evidence of the lowest (earliest) extant finishes and analyzed for the character, material, and color of the finish where possible. When possible, colors were matched to the Munsell Color System.

Summary of Findings

Historic finishes were identified in multiple rooms, with Rooms 101, 102, and 103 retaining the most historic material, with evidence of early finishes. At other locations, large areas of interior moulding and trim, as well as plaster wall finishes, were found to be modern materials, likely dating the 1970s, 1990s restoration, and other 20th century alterations, with Rooms 107 and 108 most affected. Evidence of earlier alterations dating from the mid to late 19th century were also observed, primarily in Rooms 103 and 105. In Rooms 109 and 100, nearly all finishes appeared to date to the 1990s restoration, save some remnants of paint and wallpaper on the ceiling joists of an undetermined date.

Previous repairs that have salvaged and reused historic materials complicates identifying potentially original material. Evidence of faux wood graining on some wood trim, along with the use of milled (not hewn and planed) elements, suggest that some features, including some of the ceiling beams, may date to the 19th century, well after the original construction of the house.

A detailed report of the finishes analysis is included in the appendices.

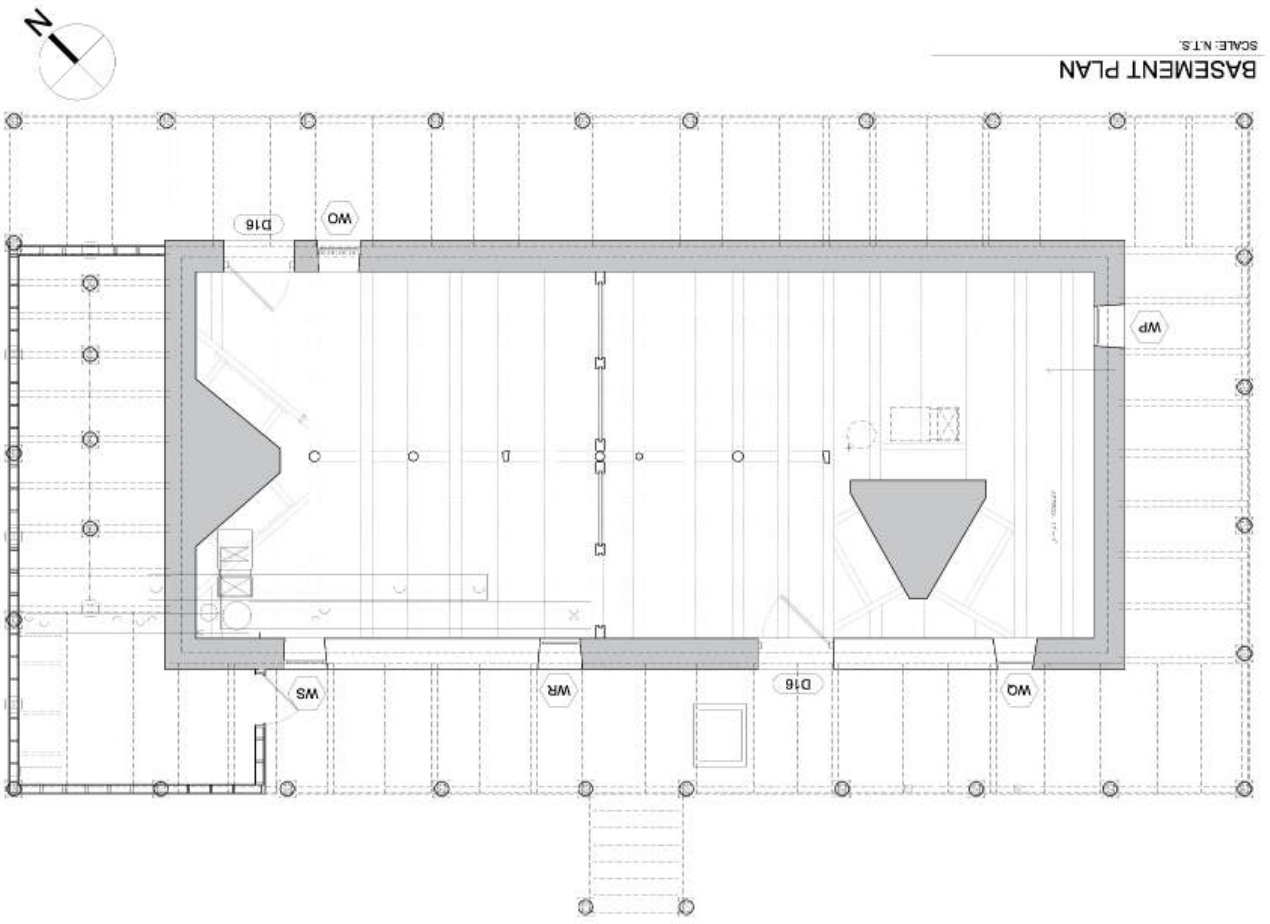


Figure 173. Diagrammatic basement floor plan of the Janis-Ziegler House.

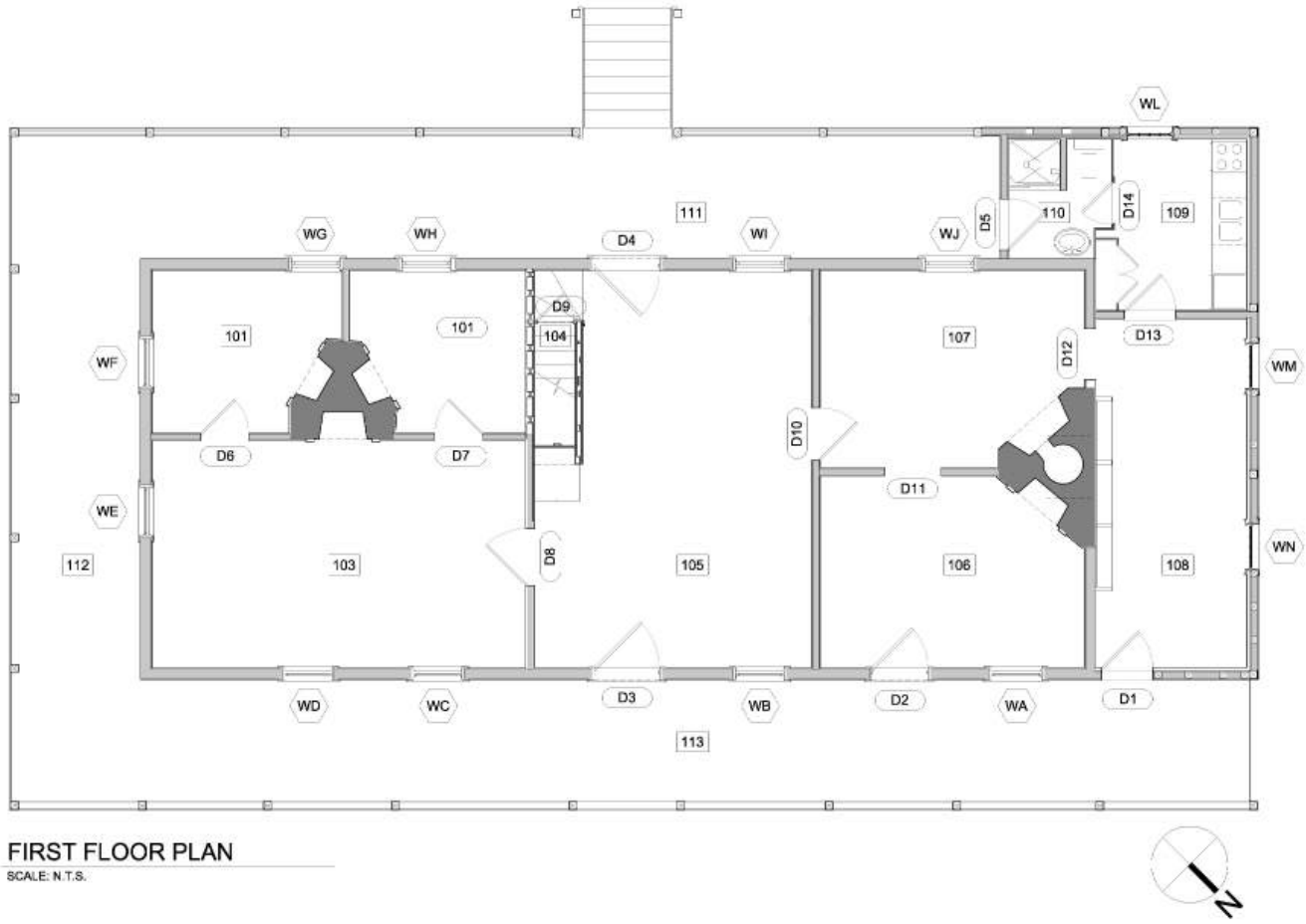


Figure 174. Diagrammatic first floor plan of the Janis-Ziegler House.

C	INTERIORS				
C10	INTERIOR CONSTRUCTION				
	C1011	FIXED PARTITIONS			
		Number	Description	Condition	Priority
		C101101	First-Floor Partition Walls	Fair	Long-Term

Date: c. 1790, with later alterations Contributing: Contributing

Description

Interior partition wall framing was observed at locations of deteriorated plaster finishes within the wall separating Rooms 105 and 107. At this location, wall studs were observed to be 3-inch-square members mortised into the beam above and floor joist below.

The interior partition wall dividing Room 102 and Room 103 is suspected to be framed similarly, with top and bottom plates within the wall running perpendicular to the joists.

The framing of other interior walls could not be determined at every location due to the presence of interior wall finishes; where visible via borescope fiberoptic camera, the walls were framed with sqaure, hewn timber studs attached to the top plate with a mortise and tenon connection. Photos taken during the 1990s restoration suggest that some of the partition walls in the northern rooms may be been partially reframed with dimension lumber and plaster on lath.



Figure 175. Interior partition wall separating rooms 105 & 107. (Source: RRJ 2023)



Figure 176. Interior partition wall separating Rooms 102 & 103. (Source: RRJ 2023)



Figure 177. Photograph taken in 1999, showing partial re-framing of a partition wall with dimension lumber. (Source: Felix Vallé House State Historic Site, vertical file for the Janis-Ziegler House

C	INTERIORS				
C10	INTERIOR CONSTRUCTION				
	C1011	FIXED PARTITIONS			
		Number	Description	Condition	Priority
		C101102	Pièce-sur-Pièce Partition Wall	Fair	Short-Term

Date: c. 1790 Contributing: Contributing

Description

A *pièce-sur-pièce à coulisse* partition wall is present in the basement, one of very few surviving pieces of pièce-sur-pièce construction in Ste. Genevieve. The wall is constructed with vertical posts set at regular intervals into which have been carved channels (à coulisse) so that planks can be dropped into the channels to form a solid wall between the posts. The wall was likely formed, then tilted into place and secured to a floor beam at the top. The wall was originally constructed in three bays, running the full width of the basement; currently, the planks are missing from the southern bay to allow interior access to the full basement. This wall likely did not originally have a door to allow the basement to be used for separate uses – the eastern half private to the Janis family and the western half possibly associated with the tavern, both having dedicated exterior doors.



Figure 178. *Pièce-sur-pièce à coulisse partition wall in the basement*. (Source: RRJ 2023)

Some speculation has been made that the Janis family housed enslaved people in the basement. This is currently undetermined, but it was more common in Ste. Genevieve for separate structures to be present for housing the enslaved workers than for enslaved workers to live within the main house.

The basement partition wall was observed to be in fair condition, with the exception of some insect damage to the central post. Given the historic value of this partition wall, efforts should be made to determine if the missing planks are still present in the basement and to consider restoring the open bay to its original closed condition.

C	INTERIORS				
C30	INTERIOR FINISHES				
	C30XX	MULTIPLE			
		Number	Description	Condition	Priority
			Basement 001, 002, 003 Interior Overall	Fair	Long-Term
		C300000	001-003 Flooring	Fair	Long-Term
		C301000	001-003 Wall Finishes	N/A	N/A
		C301000	001-003 Wall Mouldings	N/A	None
		C303000	001-003 Ceiling Finishes	N/A	N/A

Date: c. 1790, with later alterations Contributing: Contributing

Description

A partition wall divides the basement roughly in half to create two storage rooms. A separate crawl space is located at the west side of the house. The basement is accessed from doors located on the south and north elevations of the house. The crawl space can be accessed by a door at the southwest corner of the house. The basement is unfinished with a dirt floor. Gravel base was placed over the dirt within the crawl space.

The basement walls are exposed stone masonry. Areas of missing mortar were noted on the north and south elevations. Aside from necessary repointing repairs, the masonry walls were in good condition. The fireplace foundations are located in rooms 002 and 003. Both foundations were sound and in good condition. The structural framing for the first floor is exposed throughout the basement, and there are no ceiling finishes.

There are two partition walls in the basement, and both appear to date to within the period of significance: the c. 1790 piece-sur-piece plank wall and a 19th century sawn lumber wall around the south fireplace foundation.

Currently, the basement is full of miscellaneous materials, debris, and salvaged historic artifacts from the Janis-Ziegler House and other structures.



Figure 179. 19th century partion wall around the east fireplace foundation. (Source: RRJ 2023)



Figure 180. Historic materials and other items stored in the basement. (Source: RRJ 2023)

C	INTERIORS				
C30	INTERIOR FINISHES				
	C30XX	MULTIPLE			
		Number	Description	Condition	Priority
		C300001	Room 101 Interior Overall	Fair	Short-Term
		C302001	101 Flooring	Fair	Short-Term
		C301001	101 Wall Finishes	Fair	Short-Term
		C301001	101 Wall Mouldings	Good	Long-Term
		C303001	101 Ceiling Finishes	Good	Long-Term
		C303001	101 Exposed Ceiling Beams	Good	Long-Term
E	FURNISHINGS				
E20	FURNISHINGS				
	E2010	FIXED FURNISHINGS			
		Number	Description	Condition	Priority
		E201001	Fireplace Mantel	Good	Long-Term

Date: c. 1790 with 20th century alterations

Contributing: Contributing and Non-Contributing but Compatible

Description

Room 101 is a small bedroom on the south side of the house that can be accessed from Room 103. The fireplace in Room 101 is part of the east triangular fireplace that serves Rooms 101, 102 and 103. There is one window (WH) in this room that provides a view of the south gallery and beyond.



Figure 181. Room 101, looking northeast at the triangular fire place. (Source: RRJ 2023)

Flooring

The existing floor is finished with tongue-and-groove wood planks of varying widths running east to west. The flooring is in fair condition, due to warping of the boards, likely from the 1993 flood.

Wall Finishes

All walls in Room 101 have a plaster finish that has been painted in a cream/off white color above and below the chair rail. The walls are in fair condition; cracking was noted in the plaster, primarily at the south due to settlement around the fireplace. Evidence of previous plaster repairs was noted around the fireplace.

Ceiling Finishes

The ceiling was finished with wide wood planks installed above the ceiling beams, running east to west. The ceiling boards were tongue and groove with a beaded edge and were unpainted. The ceiling boards are in good condition, but some gaps are present between boards throughout the room.

Wall Mouldings

The room had simple baseboards. The moulding present at the doorways, windows and chair rail utilized an



Figure 182. Room 101 looking west. (Source: RRJ 2023)



Figure 184. Floor planks in Room 101. (Source: RRJ 2023)



Figure 183. Ceiling planks and beams in Room 101, looking west. (Source: RRJ 2023)



Figure 185. Separation of the chair rail and cracking of the plaster. (Source: RRJ 2023)

Adams profile which was typical of the Federal Style. All moulding in the room was unpainted. The mouldings are in good condition, but a waterline from the 1993 flood is visible on all woodwork up to 11-inches from the flooring. All moulding in this room appears to be early 19th century and are attached to the walls with cut nails. Per the finishes analysis, all earlier finishes were removed in the 20th century.

Exposed Ceiling Beams

Exposed ceiling beams running east to west were present in Room 101. The beams were unpainted and were in good condition.

Fireplace Mantel

The fireplace is placed at an angle at the northeast corner of the room. The mantel was attached to the wall with cut nails, but is off-center, due to the splay of the triangular fireplace. This may indicate that the mantel was not custom-made for this fireplace, but was purchased and installed at a later date. Like the mouldings, the mantel is in the Federal style.

C	INTERIORS				
C30	INTERIOR FINISHES				
	C30XX	MULTIPLE			
		Number	Description	Condition	Priority
		C300002	Room 102 Interior Overall	Fair	Short-Term
		C302002	102 Flooring	Fair	Short-Term
		C301002	102 Wall Finishes	Fair	Short-Term
		C301002	102 Wall Mouldings	Fair	Short-Term
		C303002	102 Ceiling Finishes	Good	Long-Term
		C303002	102 Exposed Ceiling Beams	Good	Long-Term
E	FURNISHINGS				
E20	FURNISHINGS				
	E2010	FIXED FURNISHINGS			
		Number	Description	Condition	Priority
		E201002	Fireplace Mantel	Good	Long-Term

Date: c. 1790 with 20th century alterations

Contributing: Contributing and Non-Contributing but Compatible

Description

Room 102 is a small bedroom at the southeast corner of the house that can be accessed from Room 103. The fireplace in Room 101 is part of the east triangular fireplace that serves rooms 101, 102 and 103. There is one window (WG) in this room that provides a view of the south gallery and beyond.

Flooring

The existing floor is finished with tongue-and-groove wood planks of varying widths running east to west. The flooring is in fair condition, due to warping of the boards, likely from the 1993 flood.

Wall Finishes

All walls in Room 102 have a plaster finish that was painted in a cream/off white color above the chair rail and light blue below. The walls are in fair condition; cracking was noted in the plaster, primarily above the doorway and below the chair rail on the west wall. Full separation of the plaster was noted in the northwest corner of the room at the fireplace perimeter, due to settlement of the house. Peeling paint was also noted above the mantel, and discoloration of the plaster may indicate that water is entering the chimney flue.



Figure 186. Roof 102, looking west. (Source: RR 2023)

Ceiling Finishes

The ceiling was finished with wide wood planks installed above the ceiling beams, running east to west. The ceiling boards were tongue and groove with a beaded edge and were painted light blue. The ceiling boards are in good condition, but some gaps are present between boards throughout the room.



Figure 187. Room 102, looking south. (Source: RRJ 2023)



Figure 189. Wood plank flooring in Room 102. (Source: RRJ 2023)



Figure 188. Missing chair rail near the fireplace. (Source: RRJ 2023)



Figure 190. Detail of chair rail and door molding in room 102. (Source: RRJ 2023)

Wall Mouldings

The room had simple baseboards. The moulding present at the doorways, windows and chair rail utilized an Adams profile which was typical of the Federal Style. All moulding in the room was unpainted and were attached to the walls with cut nails. Portions of the chair rail were missing on the left side of the fireplace. The present mouldings are in fair condition, but a waterline from the 1993 flood is visible on all woodwork up to 11-inches. All moulding in this room appears to early 19th century, but all early finishes were removed in the 20th century.

Exposed Ceiling Beams

Exposed ceiling beams running north to south were present in Room 101. The beams were painted light blue and were in good condition.

Fireplace Mantel

The fireplace is placed at an angle at the northeast corner of the room. A brick firebox and plaster surround were present. A Federal style wood mantle was present, and a plaster finished fire surround encased a brick firebox. The hearth was beveled stone. Some cracking and possible settlement was noted at the hearth . Overall the mantle and fireplace were in good condition. Similar to Room 101, the mantel is centered on the firebox but sits off-center on the wall, due to the asymmetrical splay of the triangular fireplace.

C	INTERIORS				
C30	INTERIOR FINISHES				
	C30XX	MULTIPLE			
		Number	Description	Condition	Priority
		C300003	Room 103 Interior Overall	Fair	Short-Term
		C302003	103 Flooring	Fair	Short-Term
		C301003	103 Wall Finishes	Fair	Short-Term
		C301003	103 Wall Mouldings	Fair	Short-Term
		C303003	103 Ceiling Finishes	Good	Long-Term
		C303003	103 Exposed Ceiling Beams	Good	Long-Term
E	FURNISHINGS				
E20	FURNISHINGS				
	E2010	FIXED FURNISHINGS			
		Number	Description	Condition	Priority
		E201003	Fireplace Mantel	Good	Long-Term

Date: c. 1790 with 20th century alterations

Contributing: Contributing and Non-Contributing but Compatible

Description

Room 103 is a large room at the northeast corner of the house that can be accessed from Room 105 and provides access to the two smaller bedrooms, Rooms 101 and 102. This room likely served as the private living space of the Janis family. The fireplace in Room 103 is part of the east triangular fireplace that serves Rooms 101, 102 and 103. There are three windows in this room, two on the north wall (WC and WD) and one on the east wall (WE) that provide views of the north and east galleries and beyond.



Figure 191. Room 103, looking south. (Source: RRJ 2023)

Flooring

The existing floor is finished with tongue-and-groove wood planks of varying widths running east to west. The flooring is in fair condition, due to warping of the boards, likely from the 1993 flood and from settlement around the fireplace.

Wall Finishes

All walls in Room 103 have a plaster finish that was painted in a cream/off white color above the chair rail and green below. The walls are in fair condition; cracking was noted in the plaster, primarily on the south wall. Large cracks were noted above the chair rail on the left side of the fireplace, and full wall separation was noted below the chair rail at the left side of the fireplace. Some spalled plaster was noted near the baseboard to the right of interior Door 7. Previous plaster repairs were evident below the chair rail on the north wall.

Ceiling Finishes

The ceiling was finished with wide wood planks installed above the ceiling beams, running east to west. The ceiling boards were tongue and groove with a beaded edge and were unpainted. The ceiling boards are



Figure 192. Room 103, looking north. (Source: RRJ 2023)



Figure 194. Wood plank flooring in Room 103, looking northwest. (Source: RRJ 2023)



Figure 193. Room 103, looking east. (Source: RRJ 2023)



Figure 195. Exposed beams and plank ceiling in Room 103, looking northwest. (Source: RRJ 2023)

in good condition, but some gaps are present between boards throughout the room.

Wall Mouldings

The room had simple baseboards. The moulding present at the doorways, windows and chair rail utilized an Adams profile which was typical of the Federal Style. All moulding in the room was unpainted. Portions of the chair rail were missing on the left side of the fireplace. The present mouldings are in good condition, but a waterline from the 1993 flood is visible on all woodwork up to 11-inches. All moulding in this room appears to be original.

Exposed Ceiling Beams

Exposed ceiling beams running north to south were present in Room 103. The beams were unpainted and were in good condition.

Fireplace Mantel

The fireplace was located on the south wall of the room. A brick firebox and paster surround were present. A Federal style wood mantle was present, and a plaster finished fire surround encased a brick firebox. The hearth was beveled stone. Previous repair drawings suggest the hearth is a replacement from the 1990s restoration. The mantle and hearth were in good condition.

C	INTERIORS				
C30	INTERIOR FINISHES				
	C30XX	MULTIPLE			
		Number	Description	Condition	Priority
		C300004	Room 104 Interior Overall	Good	Long-Term

Date: 1990s Contributing: Non-Contributing but Compatible

Description

Room 104 is the stairwell to the attic level of the house. These stairs were constructed during the 1990s restoration to match the house's original stair configuration. At the same time a later addition stairwell was removed from the southwest corner of Room 105.



Figure 196. Stair enclosure that was reconstructed during the 1990s restoration. (Source: RRJ 2023)



Figure 197. Infill at the ceiling in Room 105 where the previous stairway was removed during the 1990s restoration (Source: RRJ 2023)

C	INTERIORS				
C30	INTERIOR FINISHES				
	C30XX	MULTIPLE			
		Number	Description	Condition	Priority
		C300005	Room 105 Interior Overall	Fair	Short-Term
		C302005	105 Flooring	Fair	Short-Term
		C301005	105 Wall Finishes	Fair	Short-Term
		C301005	105 Wall Mouldings	Fair	Short-Term
		C303005	105 Ceiling Finishes	Good	Long-Term
		C303005	105 Exposed Ceiling Beams	Good	Long-Term

Date: c. 1790 with 20th century alterations

Contributing: Contributing and Non-Contributing but Compatible

Description

Room 105 serves as the main room and central hall of the house. This room contains both north and south main entrances and provides access to the east rooms (Rooms 101, 102, and 103) and west side of the house through Room 107. Room 105 also provides access to the stairway to the attic. There are two windows (WB and WI) in this room, one on the north wall and the other on the south.

Flooring

The existing flooring was tongue-and-groove wood planks of varying widths running east to west. The flooring was in fair condition, due to warping of the boards, likely from the 1993 flood. There was a patch in the flooring west of Door 4 that was installed after the stair removal in this area. The flooring was discolored in an area along the wall between Rooms 105 and 106. This was the location of a latter addition fireplace that was removed during the 1900s restoration.

Wall Finishes

All walls in Room 105 have a plaster finish that has been painted white. The walls below the chair rail were likely previously painted dark turquoise to match the ceiling, but most plaster in those areas was previously repaired and repainted white. The walls are in fair condition with cracking present in the plaster at all walls, primarily the north and south walls around the openings.



Figure 198. Room 105, looking south to the primary visitors entrance. (Source: RRJ 2023)

Ceiling Finishes

The ceiling was wide wood planks installed above the ceiling beams, running north to south. The ceiling boards were tongue and groove and were painted dark turquoise. New, unfinished ceiling boards were installed as infill when the stair and fireplace were removed during the 1990s restoration. The ceiling boards are in good condition, but some gaps are present between boards throughout the room.

Wall Mouldings

The room had simple baseboards. The moulding present at the doorways, windows and chair rail utilized an Adams profile which was typical of the Federal Style. All moulding in the room was unpainted. Portions of the



Figure 199. Room 105, looking west, showing traces of the stairwell and fireplace removed during the 1990s restoration. (Source: RRJ 2023)



Figure 201. Wood plank flooring in Room 105. (Source: RRJ 2023)



Figure 200. Room 105, looking. (Source: RRJ 2023)



Figure 202. Ceiling beams and planks in Room 105, showing marks where an electrical conduit was removed. (Source: RRJ 2023)

chair rail were replaced where the fireplace was removed and north of the current stairwell. The present mouldings are in good condition, but a waterline from the 1993 flood is visible on all woodwork up to 11-inches.

Exposed Ceiling Beams

Exposed ceiling beams running north to south were present in Room 105. The beams were painted dark turquoise to match the ceiling and were in good condition. On one ceiling beam were marks from the location of an old electrical conduit that is no longer in place.

C	INTERIORS				
C30	INTERIOR FINISHES				
	C30XX	MULTIPLE			
		Number	Description	Condition	Priority
		C300006	Room 106 Interior Overall	Good	Long-Term
		C302006	106 Flooring	Good	Long-Term
		C301006	106 Wall Finishes	Fair	Short-Term
		C301006	106 Wall Mouldings	Good	None
		C303006	106 Ceiling Finishes	Good	Long-Term
		C303006	106 Exposed Ceiling Beams	Good	Long-Term
E	FURNISHINGS				
E20	FURNISHINGS				
	E2010	FIXED FURNISHINGS			
		Number	Description	Condition	Priority
		E201004	Fireplace Mantel	Good	Long-Term

Date: c. 1790 with 20th century alterations

Contributing: Contributing and Non-Contributing but Compatible

Description

Room 106 is referred to as the Dining Room on the HABS plans from 1985. This room is located on the north side of the house and can be accessed from the exterior through Door 4 or from the interior through Room 107. There is one window (WH) in this room on the north wall.

Flooring

The existing flooring finish consisted of tongue-and-groove wood planks running east to west. The current flooring is not original and appears to have been installed over older wood flooring, possibly during the 1990s restoration. The flooring is in good condition.

Wall Finishes

All walls in Room 106 have a plaster finish that has been painted white. The walls are in fair condition with cracking present in the plaster, primarily at either side of the fireplace. Much of the plaster on the south and west walls in this room was replaced during the 1990s restoration due to reconstruction of the fireplace. A small blue wallpaper border is present on the north and east walls, along with some evidence of stenciling on the north wall.



Figure 203. Room 106, looking south. (Source: RRJ 2023)

Ceiling Finishes

The ceiling was wide wood planks installed above the ceiling beams, running north to south. The ceiling boards were tongue and groove and were painted green. The ceiling boards are in good condition, but some gaps are present between boards throughout the room.



Figure 204. Room 106, looking north. (Source: RRJ 2023)



Figure 206. Replacement wood flooring in Room 106. (Source: RRJ 2023)



Figure 205. Ceiling beams and planks in Room 106, looking southeast, with the blue wallpaper board on the east wall. (Source: RRJ 2023)



Figure 207. Fireplace and mantel in Room 106, reconstructed in the 1990s. (Source: RRJ 2023)

Wall Mouldings

The room had simple baseboards. The moulding present at the doorways, windows and chair rail utilized an Adams profile which was typical of the Federal Style. All moulding in the room was unpainted. Original chair rail was present along the east wall of the room, but all other chair rail appeared to be new and likely dates to the 1990s restoration. The existing mouldings were in good condition.

Exposed Ceiling Beams

Exposed ceiling beams running north to south were present in Room 106. The beams were painted green to match the ceiling and were in good condition.

Fireplace

The fireplace was constructed on a diagonal at the southwest corner of the room. This fireplace is part of the west triangular fireplace that serves Rooms 106 and 107. The current fireplace is a 1990s reconstruction of the original fireplace that was previously removed at an unknown date. A brick firebox and paster surround were present. A Federal style wood mantle was present, and a plaster finished fire surround encased a brick firebox; the mantel is not original to the house. The hearth was constructed of several pieces of stone. The mantle and hearth were in good condition, but some settlement of the hearth may have occurred based on the relative height of the wood floor compared to the stone hearth.

C	INTERIORS				
C30	INTERIOR FINISHES				
	C30XX	MULTIPLE			
		Number	Description	Condition	Priority
		C300007	Room 107 Interior Overall	Good	Long-Term
		C302007	107 Flooring	Good	Long-Term
		C301007	107 Wall Finishes	Fair	Short-Term
		C301007	107 Wall Mouldings	Good	None
		C303007	107 Ceiling Finishes	Good	Long-Term
		C303007	107 Exposed Ceiling Beams	Good	Long-Term
E	FURNISHINGS				
E20	FURNISHINGS				
	E2010	FIXED FURNISHINGS			
		Number	Description	Condition	Priority
		E201005	Fireplace Mantel	Good	Long-Term

Date: c. 1790 with 20th century alterations

Contributing: Contributing and Non-Contributing but Compatible

Description

Room 107 is located in the southwest corner of the original footprint of the house. This room can be accessed from Rooms 105, 106 or 108. Room 107 contained one window (WK) on the south wall.

The existing flooring finish consisted of tongue-and-groove wood planks running east to west. The current flooring is not original and appears to have been installed over older wood flooring. The flooring is in good condition.



Figure 208. Room 107, looking north. (Source: RRJ 2023)

Wall Finishes

All walls in Room 107 have a plaster finish that has been painted white. Much of the plaster on the north and west walls was replaced during the 1990s restoration, due to reconstruction of the chimney and fireplaces. The walls are in fair condition with cracking present in the plaster, primarily on the south wall. Remnants of a wallpaper board were present on the south wall.

Ceiling Finishes

The ceiling was wide wood planks installed above the ceiling beams, running north to south. The ceiling boards were tongue and groove and were unpainted. New, unfinished ceiling boards were in place above the doorway to Room 108. The ceiling boards are in good condition, but some gaps are present between boards throughout the room.

Wall Mouldings

The room had simple baseboards. The moulding present at the doorways, windows and chair rail utilized an Adams profile which was typical of the Federal Style. All moulding in the room was unpainted. Some original chair rail was present along the south wall of the room,



Figure 209. Room 107, looking south. (Source: RRJ 2023)



Figure 211. Wood flooring in Room 107. (Source: RRJ 2023)



Figure 210. Room 107, looking east. (Source: RRJ 2023)



Figure 212. Ceiling beams and planks in Room 107. (Source: RRJ 2023)

but all other chair rail appeared to be new. The existing mouldings were in good condition.

Exposed Ceiling Beams

Exposed ceiling beams running north to south were present in Room 107. The beams were unpainted and were in good condition.

Fireplace

The fireplace was constructed on a diagonal at the northwest corner of the room. This fireplace is part of the west triangular fireplace that serves Rooms 106 and 107. The current fireplace is a 1990s reconstruction of the original fireplace that was previously removed at an unknown date. A large brick firebox and flush hewn wood lintel were present. No mantle was present. The hearth was constructed of several pieces of stone. The fireplace was in good condition.

C	INTERIORS				
C30	INTERIOR FINISHES				
	C30XX	MULTIPLE			
		Number	Description	Condition	Priority
		C300008	Room 108 Interior Overall	Good	None
		C302008	108 Flooring	Good	None
		C301008	108 Wall Finishes	Good	None
		C301008	108 Wall Mouldings	Good	None
		C303008	108 Ceiling Finishes	Good	None

Date: 1990s Contributing: Non-Contributing

Description

Room 108 was originally a part of the full wrap-around porch but was enclosed at an unknown date prior to 1937.

Room 108 contains two windows (WM and WN) on the west wall. Exterior access is provided by Door 1. This room can also be accessed by Rooms 107 and 109. A large old vault labeled "Charles E. Peterson Institute for the Preservation of French Heritage" was located in this room.

Flooring

The existing flooring is wide wood planks that were likely replaced during the 1990s restoration; the planks may be reclaimed wood The flooring was in good condition.

Wall Finishes

The north and west walls of this room had a plaster finish that was painted white. Underlying construction of the walls is unknown. The wall was removed during the 1990s restoration; it may have been rebuilt with much of the original material.

Old lath and bousillage from the original exterior finishes were present in the northeast corner of the room. The plaster finish in this room was in good condition.

Ceiling Finishes

The ceiling was wide wood planks installed above the ceiling beams, running north to south. The ceiling boards were tongue and groove and were unpainted. The ceiling boards are in good condition, but some gaps are present between boards throughout the room.



Figure 213. Room 108, looking northwest. (Source: RRJ 2023)

Wall Mouldings

The room had simple baseboards, chair rain and crown moulding. All moulding appeared to be new and was in good condition.



Figure 214. Room 108, looking southwest, with teh exposed log wall and lath on the left. (Source: RRJ 2023)



Figure 216. Ceiling planks and dimension lumber joist in Room 108. (Source: RRJ 2023)



Figure 215. Wide wood plank flooring in Room 108, likely dating to the 1990s restoration. (Source: RRJ 2023)



Figure 217. Peterson safe in Room 108. (Source: RRJ 2023)

C	INTERIORS				
C30	INTERIOR FINISHES				
	C30XX	MULTIPLE			
		Number	Description	Condition	Priority
		C300009	Room 109 Interior Overall	Good	Long-Term
		C302009	109 Flooring	Good	Long-Term
		C301009	109 Wall Finishes	Good	Long-Term
		C301009	109 Wall Mouldings	Good	Long-Term
		C303009	109 Ceiling Finishes	Good	Long-Term
		C303009	109 Exposed Ceiling Beams	Good	Long-Term
E	FURNISHINGS				
E20	FURNISHINGS				
	E2010	FIXED FURNISHINGS			
		Number	Description	Condition	Priority
		E201006	Built-in Cabinet	Good	None

Date: 1990s Contributing: Non-Contributing

Description

Room 109 is the kitchen and can be accessed from Room 108 or from Room 110 which has the exterior access at the south gallery. This room was originally a part of the full wrap-around porch but was enclosed prior to 1937. There is one window (WL) on the south wall of this room. A large built-in cabinet was present in the northeast corner of the room. The cabinet predates the enclosure of the gallery and appears to have been built from materials salvaged from elsewhere in the house. The hinges in the cabinet match those found in Rooms 101 and 102.



Figure 218. Room 109, looking west. (Source: RRJ 2023)

Flooring

The existing flooring is wide wood planks that were likely replaced during the 1990s restoration; the planks may be reclaimed wood The flooring was in good condition.

Wall Finishes

The walls in Room 109 had a plaster finish that was painted white. Underlying construction of the walls is unknown. The wall was removed during the 1990s restoration; it may have been rebuilt with much of the original material.

Ceiling Finishes

The ceiling had a plaster finish that was painted white and was in good condition.

Wall Mouldings

The room had simple baseboards, but no ceiling molding or chair rail was present. The moulding in this room is not original to the house.



Figure 219. Room 109, looking south. (Source: RRJ 2023)



Figure 220. Room 109, looking north into Room 108. (Source: RRJ 2023)

Cabinetry

Modern kitchen cabinetry dating to the 1990s is located on the west wall of the room. The cabinets were painted blue and the countertops were laminate. The sink was centered on the wall and an oven was located at the southwest corner of the room.

In the southeast corner of the kitchen, a full-height, built-in pantry cabinet is present. The cabinet appears to be mid to late-19th century and was cut down to form the built-in pantry.

C	INTERIORS				
C30	INTERIOR FINISHES				
	C30XX	MULTIPLE			
		Number	Description	Condition	Priority
		C300010	Room 110 Interior Overall	Good	Long-Term
		C302010	110 Flooring	Good	Long-Term
		C301010	110 Wall Finishes	Good	Long-Term

Date: 1990s Contributing: Non-Contributing

Description

Room 110 is a modern bathroom with sink, toilet and shower located at the southwest corner of the house. This room was originally a part of the full wrap-around porch but was enclosed prior to 1937. This room can be accessed from an exterior door on the east wall. The water utility was disconnected from the house making the bathroom facility unusable.

Flooring

The existing flooring is tile over wood decking.

Wall Finishes

The east and south walls in Room 110 had a plaster finish that was painted white. Old lath and bousillage from the original exterior finishes were present on the north wall of the room. The plaster finish in this room was in good condition.

Ceiling Finishes

The ceiling had a plaster finish that was painted white and was in good condition.



Figure 221. Room 110, looking south. Note the exposed vertical log wall at left. (Source: RRJ 2023)



Figure 222. Room 110, looking northwest. (Source: RRJ 2023)

C	INTERIORS				
C10	INTERIOR CONSTRUCTION				
	C1020	INTERIOR DOORS			
		Number	Description	Condition	Priority
		C102001	D6	Fair	Short-Term
		C102002	D7	Fair	Short-Term
		C102003	D8	Good	Long-Term
		C102004	D9	N/A	Long-Term
		C102005	D10	Good	Long-Term
		C102006	D11	N/A	None
		C102007	D12	N/A	None
		C102008	D13	Good	Long-Term
		C102009	D14	Good	Long-Term

Date: c. 1790, with later alterations

Contributing: Contributing and Non-Contributing, but Compatible

Description

D6 – D6 is a stained six-panel wood door. The panels are flat on the exterior swing of the door and raised on the interior side. This door is located between rooms 102 and 103 and swings into Room 102. The inside panels of the door are discolored and were in fair condition, but the Room 103 side was in good condition. An 11-inch high watermark from the 1993 flood was present on both sides of the door. The door frame and trim appeared to be original. The top hinge of the door was embossed with ornate scroll work. Ghost marks from a previous lock and knob were evident, but no lock or knob was present. The door was operable with an easy swing.



Figure 223. Door D6, note the water staining at the base of the wall from the 1993 flood. (Source: RRJ 2023)

D7 – D7 is a stained six-panel wood door. The panels are flat on the exterior swing of the door and raised on the interior side. This door is located between rooms 101 and 103 and swings into Room 101. The inside panels of the door are discolored and were in fair condition, but the Room 103 side was in good condition. A 12-inch high watermark from the 1993 flood was present on both sides of the door. The door frame and trim appeared to be original. Both door hinges were embossed with ornate scroll work. Ghost marks from a previous lock and knob were evident, but no lock or knob was present. The door was operable with an easy swing.

D8 – D8 is a stained six-panel wood door. The panels have a beaded edge detail and are flat on the exterior swing of the door and raised on the interior side. This door is located between rooms 103 and 105 and swings into Room 103. The hardware present on the door included an iron thumb latch and key hole on the exterior

side of the door and an iron latch bar above a rim lock on the other side. The door was separated between the panels and the stiles. An 11-inch high watermark from the 1993 flood was present on both sides of the door. The door frame and trim appeared to be original. The trim was split and cracked above the door inside Room 103. The door was operable and in generally good condition.

D9 – D9 is a simple plywood barrier between the first floor and attic level. The plywood is attached to the wall with hinges and is fully operable.

D10 – D10 is a stained six-panel wood door. The panels are flat on the exterior swing of the door and raised on the interior side. This door is located between rooms 105 and 107 and swings into Room 107. An 11-inch high watermark from the 1993 flood was present on both sides of the door. The door frame and trim appeared to be original. The hinges were modern in style but were corroded. Ghost marks from a previous doorknob were present on both sides of the door. A black porcelain knob and brass keyhole were present on the exterior side and an iron knob with a raised snowflake detail and metal rim lock were present on the interior side. The door was operable but could not fully open before sticking at floor level. New trim was present above the door within Room 107. Generally the door was in good condition.

D11 – No door or hinges were present at the doorway between Rooms 106 and 107. The existing door frame is a replica to match other existing trim.

D12 - No door or hinges were present at the doorway between Rooms 107 and 108. The existing door frame is a replica to match other existing trim.

D13 – D13 is a modern raised six-panel wood door. All associated framing and trim were also modern. The door was fully operable and in good condition.

D14 – D14 is a modern raised six-panel wood door. All associated framing and trim were also modern. The door was fully operable and in good condition.



Figure 224. Door D7. (Source: RRJ 2023)



Figure 225. Hardware on Door D8. (Source: RRJ 2023)



Figure 226. Door D10. (Source: RRJ 2023)



Figure 228. Door D13, a modern replacement door. (Source: RRJ 2023)



Figure 227. Doorway for D12 viewed from Room 107. (Source: RRJ 2023)



Figure 229. Interior face of D14, a modern placement door. (Source: RRJ 2023)

Mechanical and Plumbing Systems

MECHANICAL ASSESSMENT

Plumbing - General

The use of indoor plumbing was not available when the Janis-Ziegler House was constructed back in the late 1700s. A brief history of plumbing systems in the United States, reveals that plumbing systems were not developed until the 1840s. During this time period indoor plumbing was a luxury and only installed for use by wealthy individuals who could afford it.

Most cities did not have comprehensive sewer systems, and public awareness about the association between dirty sewage and illness increased. It was not until the 1930s that lawmakers and medical professionals in the United States recognized that sanitary plumbing was essential for public health. The outbreak of diseases such as cholera and typhoid led to the invention of better sewerage systems.

In 1920, only about 1% of U.S. homes had electricity and any type of indoor plumbing. It was not until the 1930s and 1940s when studies were performed to form the basis of modern plumbing codes, which have changed surprisingly little since that time. By 1950, the number of households lacking complete plumbing facilities had declined, but nearly half of houses still lacked hot piped water, a bathtub or shower, or even a flush toilet. In 1960, over 25% of the houses in 16 states did not have complete plumbing facilities.

The use of the exterior well and cistern would have made water available for the house, even without indoor running water. Hot water used for bathing would have been provided by heating water in a container over a fireplace or exterior wood fire where hot water could then fill a bath by using buckets to transport it. A person's personal sanitary needs would have likely been handled by use of an exterior outhouse of some type, as the original Janis-Ziegler House room configuration did not included an indoor bathroom.

It is unknown what plumbing system materials were used in the Janis-Ziegler House when plumbing systems were first introduced to the house. In the early 1950s, ductile iron was the most widely used piping material for sanitary waste systems, while galvanized steel was predominately used for most water supply systems. It is unknown whether the Janis-Zeigler House used any of these materials when the plumbing systems were incorporated as there is no evidence today which would indicate what any of the original plumbing systems materials were.

Water and Sanitary Utility Service Provider

Alliance Water Resources provides water service, sewer collection, and treatment services for the City of Ste. Genevieve and its more than 2000 customers, both in and around the municipality. Alliance Water resources has a total maximum water pumping capacity of 1.5 million gallons per day. Alliance Water Resources maintains the water pressure for the city at approximately 50 pounds per square inch.

Water Utility System

Much of the piping visible in the Basement Level of the Janis-Ziegler House is Type L rigid copper with soldered joints or Type M soft copper tubing. There is some PEX (cross-linked polyethylene) piping which is connected to the copper piping in the Basement Level which then is routed up through the floor to the First Level restroom. Some of the piping is insulated with black elastomeric closed cell insulation. This insulation covers approximately 40-50 % of the piping exposed in the Basement Level.

The water service entrance is located at the northwest corner of the Basement Level. The water line size entering the house appears to be 3/4-inch or 1-inch in size. It is not apparent where the water service originates from on the site. NPS operational staff indicated that the water service was from a shared main serving an adjacent property. The extension to the Janis-Ziegler House has since been cut off, and the house currently is not served by water service.

The condition of the water piping systems seems to be reasonably good shape with no signs of leakage or undue wear. The size of the water service is appropriate for the number and type of plumbing fixtures present within the house.

Potable hot water for the Janis-Ziegler House is produced by a single, 40-gallon storage, Rheem model PROE40 M2 RH95, electric water heater located at the Basement

Level of the house. The water heater has a manufacturer date of May 31, 2018 therefore it is only 6-years old. The water heater has an electric element with a heating capacity of 4300 watts at 240-volt power. This heating capacity is reduced to 3380 watts if the electric service is reduced to 208-volt power. The heat provided by the heater's electric element can provide a water heating recovery rate of approximately 36-gallons per hour. It appears that this water heater is adequately sized for the plumbing fixtures utilized in the Janis-Ziegler House.

With the water heater being less than 10-years old, it appears to be in good condition with no signs of tank deterioration or leakage. Based on this assessment, it is estimated that it could continue to serve the house for another 10-years before it would be considered for replacement. Electric water heaters have a 20-year life expectancy under normal use so it has only reached half of its expected lifespan.

Sanitary Waste Utility System

The underground sanitary piping serving the Janis-Ziegler House is assumed to be original to when the First Level restrooms were added to the house. Plans of the house indicate that he sanitary sewer outside the house is comprised of polyvinyl chloride (PVC) drain waste and vent (DWV) piping. A determination of its condition may be able to be determined by utilizing a piping camera or providing more evasive and extensive exploratory measures.

The interior above floor sanitary waste and vent piping in the Janis-Ziegler House today, is likely polyvinyl chloride (PVC) pipe matching the sanitary piping outside the building below grade. Much of the sanitary piping cannot be seen as it is below a portion of the house which is not visible from the Basement Level. There is only a small portion of exposed piping at the First Level and that piping material is PVC so it is assumed much of the unseen sanitary piping may be PVC as well.

The existing sanitary sewer is believed to exit the Janis-Ziegler House near the northwest side of the property as that is where the plumbing fixtures are currently located at the First Level. The sanitary main likely routes around the building to the north where it then heads to an existing sanitary sewer main located at St. Mary's Road.

There are two sump pump basin each with a pump. One of these sump pump basins resides next to the Basement furnace and the other resides southeast of the furnace area near the middle of the Basement space. The sump pump and basin out in the middle of the Basement space appears to have been provided to handle ground water that seeps up out of the ground in the Basement. The sump pump discharge piping routes to the northwest corner of the Basement where it exits the Basement near the furnace location.

The second pump basin is located immediately adjacent to the furnace. This second sump pump basin is used to collect condensate from the furnace cooling coil. Where the pump discharge pipe then routes out of the Basement Level adjacent to the furnace.

Storm Drainage System Assessment

The Janis-Ziegler House does not have any exterior storm system. No gutters or downspouts are present. Storm water simply runs off of the roof to the surrounding grounds.

Plumbing Fixtures

The plumbing fixtures present in the Janis-Ziegler House are assumed to be original to the house when the restrooms were provided as the fixtures appear to be of a modern design. The age of the fixtures is assumed to be less than 30-years old. Most of the fixtures are made of vitreous china. While vitreous china plumbing fixtures have been around since as early as the early 1900s, none of the fixtures in the house are this old.

The First Level restroom has a floor-set, bottom outlet, tank-style, manual water closet with closed seat and lid. This type of water closet would be typical of residential construction. The lavatory in this restroom is a pedestal lavatory. The lavatory faucet is vintage looking, chrome plated dual handle faucet, manually operated, with pop-up drain assembly.

The First Level restroom has a 3-foot by 3-foot shower stall. This shower is non-ADA compliant as it has no grab bars, adjustable shower wand which can be used by someone in a wheelchair, no seat and is not of a physical size to allow a wheelchair. It has a single shower head and manual shower valve.

The First Level kitchen has a drop-in, single bowl sink and single lever, swivel, gooseneck spout with separate

water spray hose. The kitchen sink does not incorporate a garbage disposal.

Gas Utility

The existing gas utility serving the Janis-Ziegler House is believed to e of ample size (3/4-inch) and appears to be of ample size and capacity based on the house's current gas requirement. As the gas-fired heating equipment served by the gas utility was installed in circa 1995 and is likely based on the current capacity of the heating equipment, any increase in heating capacity needed to accommodate additional heating needed for the house may necessitate increasing the size of the gas piping to accommodate an increased gas load.

Fire Protection

The existing Janis-Ziegler House currently has no commercial or residential fire suppression system.

Heating, Ventilating, and Air-Conditioning (HVAC)

The Janis-Ziegler House is currently served by a single, gas-fired furnace located in the Basement Level of the house. The furnace is a 1995 WeatherKing, model WGRA-12ERAJS gas fired furnace providing 120,000 Btuh of heating annual fuel utilization efficiency of 90%. The furnace is fed by 120-volt, single phase power.

The furnace system being 30-years old, has reached the end of its service life. While the furnace still operates, consideration should be made to provide replacement equipment.

Cooling System

The furnace located in the Basement Level is provided with an A-frame refrigerant coil which provides cooling. The coil is coupled with air-cooled condensing units which is located on grade immediately below the south rear porch of the house. The condensing units is manufactured by Lennox. The model number is a HS29-036-1P which indicates that the capacity is 3-tons. The condensing unit and indoor furnace cooling coils are served by HFC-22 refrigerant which is no longer produced.

Air Distribution (Ductwork)

Sheet metal ductwork is present at the Basement Level of the Janis-Ziegler House. The supply air ductwork routes throughout the basement where branch offsets route up through the First level floor to floor registers serving the various rooms at the west half of the First Level. Multiple return air grilles at the First Level are ducted back to the furnace located at the Basement Level.

The east side of the house does not have any heat or air conditioning so no ductwork exits serve this end of the house.

None of the main supply and return air ductwork located at the Basement Level is insulated either externally or internally. As the Basement Level is not served by a dedicated unit, it is assumed that basement stays cool during the summer months. Air leakage caused by non-sealed duct joints also contributes to the basement staying cooler. Keeping the Basement Level warmer in the winter would be more of a concern, as there are few air outlets present at any of the ductwork running throughout the Basement Level.

The ductwork appears to be in reasonably good shape and is not recommended to be modified or replaced at this time. Sheet metal ductwork can last for 50-years or more and only needs to be replaced if it is damaged hindering its ability to move air. Damage to ductwork does not seem to be an issue at the Janis-Ziegler House.

D	PLUMBING				
D20	SITE UTILITIES				
	D2010	WATER UTILITY			
		Number	Description	Condition	Priority
		D201001	Water Service	Poor	Immediate

Date: c. 1999 Contributing: Non-Contributing

Description

The water service serving the Janis-Ziegler House originated from the north and west of the property through a shared private supply line that was connected to the potable water main. Currently, there is no water supply to the property. Due to damage to the shared private line, the line extending to the house was decommissioned.

Water supply lines enter at the southwest corner of the basement level. No water stop valve was located on the site. A small Neptune turbine meter is installed on the water service piping where it enters the Basement.



Figure 230. Existing potable water entrance at southwest corner of Basement level.. (Source: Alvine 2023)



Figure 231. Existing water meter located in vertical water service piping near southwest corner of Basement level. (Source: Alvine 2023)

D	PLUMBING				
D20	SITE UTILITIES				
	D2010	WATER UTILITY			
		Number	Description	Condition	Priority
		D201002	Abandoned Cistern	Undetermined	Immediate

Date: 19th century Contributing: Contributing

Description

The Janis-Ziegler House was once served by a cistern which is located southwest of the house some 60-70 feet away. The cistern has been abandoned.



Figure 232. Old cistern location at southwest portion of site. (Source: Alvine 2023)

D	PLUMBING				
D20	SITE UTILITIES				
	D2020	GAS UTILITY			
		Number	Description	Condition	Priority
		D202010	Gas utility at south side of house	Good	Long-Term

Date: c. 1999 Contributing: Non-Contributing

Description

The gas service serving the Janis-Ziegler House is believed to originate from Old St. Mary's Road. The gas service main is believed to route around the house from the north and west where it then offsets to above grade at the south side of the house.

A gas utility shut-off valve is located directly below the meter. A gas pressure regulator is present which suggests that the gas pressure from the street is at a higher pressure than what is delivered to the house. The gas pressure in the house is low pressure with an assume pressure of 7" W.C



Figure 233. Existing gas utility meter location at south side of the building. Note the gas pressure regulator indicating that high pressure gas is being delivered from the site gas main where the pressure is reduced prior enter the building . (Source: Alvine 2023)

D	PLUMBING				
D20	WATER DISTRIBUTION				
	D2011	WATER DISTRIBUTION			
		Number	Description	Condition	Priority
		D201101	Water piping in house	Fair	Short-Term

Date: c. 1999 Contributing: Non-Contributing

Description

Water distribution piping in the house at the meter location located in the southwest corner of the Basement level is comprised of a combination of Type L copper and PEX (cross-linked polyethylene) piping. Most of the copper piping is insulated with 1/2" thick black, closed cell insulation. There is very little of the water piping visible as much of the piping runs below the southwest corner of the First level which is where the restroom and kitchen are located. These two rooms were added at the house taking place of a portion of the exterior gallery at the First level..



Figure 235. Existing furnace, water heater, and water meter location at the Basement Level of the house.(Source: Alvine 2023)



Figure 234. Existing water piping at the Basement Level of the house. (Source: Alvine 2023)

D	PLUMBING				
D20	GAS DISTRIBUTION				
	D2091	GAS DISTRIBUTION			
		Number	Description	Condition	Priority
		D209101	Gas piping in house	Good	Long-Term

Date: c. 1999 Contributing: Non-Contributing

Description

The natural gas utility at the Janis-Ziegler House is confined to the southwest corner of the basement level. Where it enters the house, it routes directly to a gas-fired furnace. The gas piping is 3/4" in size and is comprised of black steel pipe with threaded malleable steel fittings. The piping shows sings of surface rust likely caused by moisture caused by humidity in the basement caused by screened openings in the walls used in lieu of windows.



Figure 236. Existing gas piping located adjacent to gas-fired furnace at Basement level. (Source: Alvine 2023)

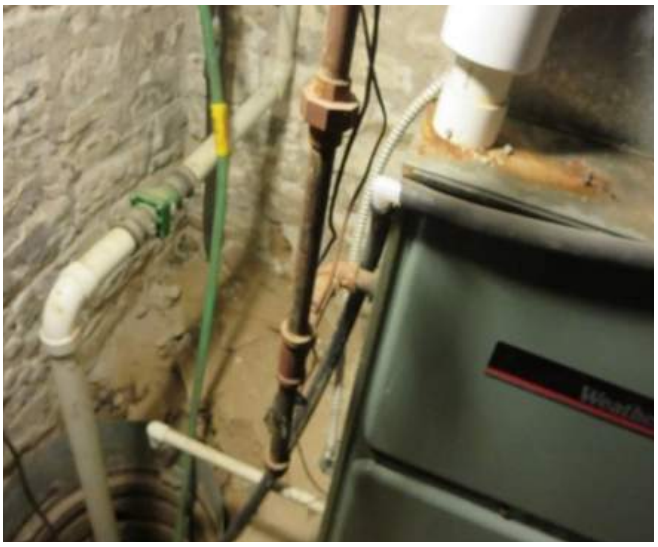


Figure 237. Existing gas piping located adjacent to existing gas-fired furnace at Basement level. (Source: Alvine 2023)

D	PLUMBING				
D20	WATER DISTRIBUTION				
	D2023	PLUMBING FIXTURES			
		Number	Description	Condition	Priority
		D202301	Water closet and lavatory	Fair	Immediate

Date: c. 1999 Contributing: Non-Contributing

Description

The Janis-Ziegler House has a single restroom which has a water closet and pedestal lavatory. Both of these fixtures are manufactured from vitreous china.

The water closet is a floor-mounted, floor-outlet configuration. The lavatory is a floor-supported pedestal unit without any type of counter below.

The water line serving the water closet is PEX (polyethylene cross-linked) pipe. The lavatory is served by stainless-steel braided, flexible water lines and PVC (polyvinyl chloride) DWV (drain waste & vent) piping.

The water lines to the lavatory are currently provided with in-line water shut-off valves.

Currently there is no water supply to the house, so the water closet and lavatory were not functional.



Figure 238. Existing floor-mounted, floor-outlet, water closet at First level restroom. (Source: Alvine 2023)



Figure 239. Existing floor supported, pedestal lavatory at First Level level restroom. (Source: Alvine 2023)

D	PLUMBING				
D20	WATER DISTRIBUTION				
	D2023	PLUMBING FIXTURES			
		Number	Description	Condition	Priority
		D202302	Restroom shower	Good	Long-Term

Date: c. 1999 Contributing: Non-Contributing

Description

The First level restroom has a one-piece acrylic shower stall with manual shower valve and a single shower head. The shower stall also has a ceiling mounted exhaust fan in it.

Currently there is no water supply to the house, so the shower was not functional.



Figure 240. Existing one-piece acrylic shower stall with manual shower valve. (Source: Alvine 2023)



Figure 241. xxx. (Source: Alvine 2023)

D	PLUMBING				
D20	WATER DISTRIBUTION				
	D2023	PLUMBING FIXTURES			
		Number	Description	Condition	Priority
		D202303	Kitchen sink	Good	Long-Term

Date: c. 1999 Contributing: Non-Contributing

Description

In the First level kitchen resides a stainless-steel, drop-in, single-bowl sink. The sink utilizes a deck-mounted, single-lever faucet and spout. Adjacent to the faucet is a single-lever spray rinse hose.

The sink is served by stainless-steel braided, flexible water lines and a mix of cast brass and PVC (polyvinyl chloride) DWV (drain waste & vent) piping. The water lines to the sink are currently provided with in-line water shut-off valves.

Currently there is no water supply to the house, so the sink was not functional.



Figure 242. Existing stainless-steel, drop-in sink with single lever swing spout and deck-mounted spray rinse hose. (Source: Alvine 2023)



Figure 243. PVC drain waste piping and braided stainless steel water lines serving kitchen sink. (Source: Alvine 2023)

D	HEATING, VENTILATING AND AIR CONDITIONING				
D30	HEATING, VENTILATING AND AIR CONDITIONING (HVAC)				
	D3040	HVAC EQUIPMENT			
		Number	Description	Condition	Priority
		D304001	Gas-Fired Furnace	Poor	Immediate

Date: c. 1999 Contributing: Non-Contributing

Description

The Janis-Ziegler House is heated and cooled by means gas-fired furnace located in the Basement level. The furnace is a Weatherking, model WGRA-12ERAJS manufactured by Rheem with a manufacture date of 1995. The furnace has a heating capacity of 120,000 Btuh input with a 113,000 Btuh output resulting in a 94% thermal efficiency. The furnace operates on 7" W.C. gas pressure. The furnace is coupled with a Lennox Industries model C23-41W-1 refrigerant coil that operates on HCFC-22 (R-22). The coil has a cooling capacity of 3-tons (36,000 Btuh). Located outside is a air cooled condensing unit which provide heat rejection for the refrigerant coil indoors. The condensing unit is located under the rear deck of the house.



Figure 244. Existing gas-fired furnace located in the south-west corner of the Basement Level. (Source: Alvine 2023)



Figure 245. Manufacturers equipment information at inside of furnace indicating furnace model number, serial number, heating capacity, operating gas pressure and electrical information. (Source: Alvine 2023)



Figure 246. Air-cooled condensing unit below rear deck of house (south side of house). (Source: Alvine 2023)

D	HEATING, VENTILATING AND AIR CONDITIONING				
D30	HEATING, VENTILATING AND AIR CONDITIONING (HVAC)				
	D3041	HVAC DISTRIBUTION SYSTEMS			
		Number	Description	Condition	Priority
		D3040101	Air distribution ductwork and insulation	Good	Long-Term

Date: c. 1999 Contributing: Non-Contributing

Description

Air distribution for the Janis-Ziegler House is handled through rigid sheet metal duct mains located in the Basement level. Branch ductwork comprised of insulated flexible ductwork which serves floor mounted registers located at the First level floor providing air discharge to the spaces.



Figure 247. Basement Level with rigid ductwork. (Source: Alvine 2023)



Figure 248. Insulated ductwork inside the basement, serving the first floor. (Source: Alvine 2023)



Figure 249. Insulated ductwork inside the basement, serving the first floor.. (Source: Alvine 2023)

D	HEATING, VENTILATING AND AIR CONDITIONING				
D30	HEATING, VENTILATING AND AIR CONDITIONING (HVAC)				
	D3041	HVAC DISTRIBUTION SYSTEMS			
		Number	Description	Condition	Priority
		D304102	Supply air registers	Good	Long-Term

Date: c. 1999 Contributing: Non-Contributing

Description

Air distribution for the Janis-Ziegler House Basement level is accomplished by registers located at the ductwork which routes through the Basement Level. The registers and grilles have steel construction and are of a louver face design..



Figure 250. Basement Level air distribution register.. (Source: Alvine 2023)



Figure 251. Steel supply air register at underside of ductwork in Basement.. (Source: Alvine 2023)

D	HEATING, VENTILATING AND AIR CONDITIONING				
D30	HEATING, VENTILATING AND AIR CONDITIONING (HVAC)				
	D3041	HVAC DISTRIBUTION SYSTEMS			
		Number	Description	Condition	Priority
		D304103	Floor registers and grilles	Good	Long-Term

Date: c. 1999 Contributing: Non-Contributing

Description

Air distribution for the Janis-Ziegler House is accomplished by floor registers and grilles connected to ductwork running below at the Basement Level. The registers and grilles have steel construction and are of a rigid bar design.

As part of the 1999 restoration work, the ductwork and registers were removed from Rooms 101, 102, and 103 to preserve the historic integrity of these rooms. These rooms are conditioned by overflow from Room 105.



Figure 252. Steel floor supply air register. (Source: Alvine 2023)



Figure 253. Steel floor return air grille. (Source: Alvine 2023)



Figure 254. Steel floor return air register (Source: Alvine 2023)

Electrical Assessment

The Janis-Ziegler House constructed in 1790 did not originally have any electrical wiring. It is not known when electrical wiring was first installed in the house, but it was probably in the 1940s.

Electric cooperatives began to crop up nationwide after President Franklin D. Roosevelt signed the Rural Electrification Administration (REA) into law in 1935. The REA provided low-interest loans to cooperatives in order to electrify rural America.

Genevieve Electrical Cooperative was formed in 1941 under the direction of the REA to extend powerlines to rural southern Missouri. In 1945, at the end of World War II, the first 202 miles of line were energized, and Genevie Electric started active operation as a rural elective cooperative.

Later the same year, Genevieve Electric Cooperative acquired the assets of Missouri General Utilities company located in Perry Genevieve, eastern St. Francois, and northern Cape Girardeau counties.

With the acquisition of Missouri General Utilities, Genevieve Electric Cooperative began serving the cities of Ste. Genevieve and Perryville; each having a population of more than 1,500 customers. Since cooperatives are prohibited from serving any municipality with a population of more than 1,500, it was necessary to reorganize Genevieve Electric Cooperative.

To accomplish this reorganization, Citizens Electric Corporation was organized, incorporated, and the charter was issued on November 17, 1947. Citizens Electric Corporation is the current electric utility company serving Saint Genevieve. The original 1940s electrical wiring was mostly replaced later on; possibly in the 1970s or later. The exact date is unknown.

A Brief History of Home Electrical Wiring

Electrical service to American homes began in the late 1890s and blossomed from 1920 to 1935, by which time 70% of American homes were connected to the electrical utility grid. In the following 100-some years, the methods for installing wiring in those homes have seen several important innovations aimed at improving safety of electrical systems.

Knob-and-Tube Wiring

Between 1890 and 1910, a wiring system known as knob-and-tube was the principal system of installation. It was quite a dependable system.

In knob-and-tube wiring, individually conducted wires protected by rubberized cloth fabric are installed in stud and joint cavities, held in place by porcelain knob insulators attached to the sides of framing members, and protected by porcelain tube insulators where the wires run through framing members. In this wiring system, hot wires and neutral wires were run separately for safety. The system also allowed long circuit runs to be constructed by splicing together lengths of wire. To do this, the insulation was stripped back, a new wire was wrapped around the exposed bare wire, and the splice was soldered together, then taped to cover the splice. The downfall was that the wire was also exposed, and there was no ground wire used. The rubber would also dry out and start to crack, so the insulation could fall off when disturbed.

Flexible Armored Cable (Greenfield Or Bx)

In the 1920s to 1940s, electrical installations took a turn to a more protective wiring scheme; flexible armored cable. Flex, also known as Greenfield or BX, was a welcome addition to home wiring because the flexible metal walls helped to protect the wires from damage, and offered a metal pathway that could ground the system when properly installed. Although it was an improvement, this wiring method had its troubles. Although the individual wire conductors are protected, the flexible outer metal jacket served as a proper ground only when the metal pathway was complete all the way to the service entrance and grounding rod. There was still no separate ground wire in these installations.

In the early years of BX wiring, the rubberized fabric coating sheath was still being used (similar to that used in knob-and-tube wiring). This would dry out and crack over time.

In the 1930s, a quicker installation method was developed. Nonmetallic-sheathed (NC) cable was born, which incorporated a rubberized fabric coating sheath, much like knob-and-tube wiring, but here the hot and neutral wire were run together in this one sheathing. It also had its drawbacks due to the lack of ground wire, but its development would eventually lead to major

innovation. Early sheathed cable, however, also had an expected lifespan of about 25 years.

A ground wire was added in the mid-1940s to early 1950s, but it was only about a quarter of the size of the hot and neutral wires. This was also when the modern plastic-coated inner wire was introduced. This cable type was sometimes called “Rat Wire” because the coating was developed to have a bad taste to keep mice and rats away.

Metal Conduit

The 1940s brought the age of metal conduit. This innovation allowed users to pull many individual conducting wires in the same rigid metal tube enclosure. The conduit itself was considered a viable grounding method, and the system also allowed another separate grounding wire (usually an insulated green wire) to be pulled through the conduit. Conduit has been in use ever since those days and is still the recommended method for wiring on certain applications, such as when wiring needs to the run along the face of basement masonry walls or in exposed locations. Most homes have some areas where conduit is used, though it is now sometimes made with rigid plastic PVC conduit rather than metal.

Modern Nonmetallic-Sheathed Cable

The non-metallic-sheathed-type cable (NM) cable was introduced in around 1965. This form of NM cable was an update to older NC cable, incorporating the use of bare copper grounding wire that joined insulated hot and neutral wires contained within the sheathing. Instead of rubberized sheathing, modern NM cable uses a very tough and durable vinyl sheathing. This update made the NM cable inexpensive and very easy to install. It is a very flexible product and is used extensively in virtually every new home built.

The NM cable in various forms is the current wiring method present in the Janis-Ziegler House. The NM cable is visible in the basement.

D	ELECTRICAL				
D50	ELECTRICAL				
	D5010	ELECTRICAL UTILITY			
		Number	Description	Condition	Priority
		D501001	Outdoor Electrical Service to House	Fair	Long-Term

Date: N/A Contributing: Non-Contributing

Description

The electrical utility company serving the building is Citizens Electric Corporation. Primary power is routed overhead to an oil-filled, pole-mounted transformer. This transformer is located to the southeast from the Janis-Ziegler House. This transformer also supplies power to other buildings in the area. From the transformer, a 240/120-volt, single-phase, 3-wire feeder is routed overhead to a wooden pole with the electrical 200-amp meter socket with meter and a 200-amp service disconnect and then routed underground to a load center in the building.



Figure 255. Utility company pole-mounted transformer. (Source: Alvine 2023)



Figure 256. Electrical meter, electrical service disconnect switch, and communication pedestal. (Source: Alvine 2023)

D	ELECTRICAL				
D5010	ELECTRICAL				
	D5011	ELECTRICAL POWER DISTRIBUTION			
		Number	Description	Condition	Priority
		D501101	Electrical Meter Socket Grounding	Fair	Long-Term

Date: c. 1999 Contributing: Non-Contributing

Description

From the 200-amp meter socket, a bare #6 American Wire Gauge (A.W.G), copper grounding conductor is routed down to a driven ground rod. The grounding conductor is not installed in conduit.

D	ELECTRICAL				
D50	ELECTRICAL				
	D5011	ELECTRICAL POWER DISTRIBUTION			
		Number	Description	Condition	Priority
		D501102	Electrical Panel In House	Poor	Short-Term

Date: c. 1999 Contributing: Non-Contributing

Description

From the outdoor 200-amp service disconnect, the 240/120-volt, single-phase, 3-wire feeder is routed to a 200-amp load center in the break room on first floor of the Janis-Ziegler House.

The 240/120-volt, 200-amp load center is manufactured by Square D. It has a main 200-amp, 2-pole breaker; two, 40-amp, 2-pole; two, 30-amp, 2-pole, and 12, 20-amp, 1-pole branch breakers. The branch breakers are manufactured by Square D with a 10,000 AIC rating. There are 20 blank spaces for future breakers.

The circuit directory for the load center is marked on the panel door. Some labels are difficult to read.



Figure 257. Electrical panel. . (Source: Alvine 2023)



Figure 258. Electrical panel. . (Source: Alvine 2023)



Figure 259. Electrical panel circuit directory. . (Source: Alvine 2023)

D	ELECTRICAL				
D50	ELECTRICAL				
	D5091	ELECTRICAL SERVICE GROUNDING			
		Number	Description	Condition	Priority
		D509101	Ground Rod Connection	Fair	Long-Term

Date: c. 1999 Contributing: Non-Contributing

Description

There is a bare #6 AWG copper grounding electrode connection from the electrical load center to a ground rod.



Figure 260. Grounding conductor routed down to a driven ground rod.. (Source: Alvine 2023)

D	ELECTRICAL				
D50	ELECTRICAL				
	D5021	INTERIOR WIRING AND BRANCH CIRCUITS			
		Number	Description	Condition	Priority
		D502101	NM Cable	Poor	Short-Term

Date: 20th century Contributing: Non-Contributing

Description

Branch circuits are routed from the load center to receptacles and lighting fixtures using non-metallic-sheathed (NM) cable. The original knob-and-tube is partially removed or abandoned.



Figure 261. NM cable routed up to the panel in 2-inch conduit. (Source: Alvine 2023)



Figure 262. NM cable in basement. . (Source: Alvine 2023)



Figure 263. NM cable outdoors. (Source: Alvine 2023)



Figure 264. Abandoned knob-and-tube wiring in basement. . (Source: Alvine 2023)



Figure 265. Abandoned knob-and-tube wiring in basement. (Source: Alvine 2023)

D	ELECTRICAL				
D50	ELECTRICAL				
	D5022	INTERIOR LIGHTING			
		Number	Description	Condition	Priority
		D502201	Lighting Fixture Types	Fair	Long-Term

Date: c. 1999 Contributing: Non-Contributing

Description

There are a total of seven lighting fixtures in the basement, which are incandescent, lamp-holder type

The lighting fixtures on the first floor are track lighting in the break room and kitchen and a floor lamp in the living room. There is a total of three, 4-foot tracks with three track heads each in the break room. There is one, 4-foot track with three heads in the kitchen. The restroom has one surface-mounted light.



Figure 266. Pendant lamp holder in attic. (Source: Alvine 2023)



Figure 267. Porcelain amp holder in basement. (Source: Alvine 2023)



Figure 268. Porcelain amp holder in basement. (Source: Alvine 2023)



Figure 270. Track lighting first floor. (Source: Alvine 2023)



Figure 269. Kitchen with no countertop lighting. (Source: Alvine 2023)



Figure 271. Floor lamp on first floor. (Source: Alvine 2023)

D	ELECTRICAL				
D50	ELECTRICAL				
	D5021	POWER DISTRIBUTION AND CONTROL DEVICES			
		Number	Description	Condition	Priority
		D502102	Wiring Devices, Receptacles, and Switches	Fair	Long-Term

Date: c. 1999 Contributing: Non-Contributing

Description

In general, the wiring devices and coverplates that are installed in the basement are ivory in color. There are a total of four.

In general, the wiring devices and coverplates that are installed on the first floor are white in color, except for the two receptacles installed in the baseboard, which are brown. The receptacles installed in the kitchen and restroom are the GFCI-type.



Figure 272. Basement receptacle. (Source: Alvine 2023)



Figure 273. Kitchen switch and GFCI receptacle. (Source: Alvine 2023)



Figure 274. Break room switches. (Source: Alvine 2023)

D	ELECTRICAL				
D50	ELECTRICAL				
	D5030	TELECOMMUNICATIONS UTILITY			
		Number	Description	Condition	Priority
		D503001	Fiber Optic Service to House	Fair	Long-Term

Date: c. 2020 Contributing: Non-Contributing

Description

The local utility communications company has routed an underground fiber optic cable to a termination pedestal box on the northeast side of the building.



Figure 275. Communication pedestal. (Source: Alvine 2023)



Figure 276. Fiber optic and network equipment in the basement. (Source: Alvine 2023)



Figure 277. Telephone jack in the kitchen. (Source: Alvine 2023)

D	ELECTRICAL				
D50	ELECTRICAL				
	D5092	EGRESS LIGHTING			
		Number	Description	Condition	Priority
		D509201	Exit Lighting and Emergency Lighting	N/A	Short-Term

Date: N/A Contributing: N/A

Description

The building does not have exit lighting or emergency lighting.

D	ELECTRICAL				
D50	ELECTRICAL				
	D5037	FIRE DETECTION			
		Number	Description	Condition	Priority
		D503701	Fire Alarm System	N/A	Short-Term

Date: N/A Contributing: N/A

Description

The building does not have a fire alarm system.

D	ELECTRICAL				
D50	ELECTRICAL				
	D5038	BUILDING PROTECTION			
		Number	Description	Condition	Priority
		D503801	Intrusion Alarm System	Fair	Long-Term

Date: c. 2022 Contributing: Non-Contributing

Description

The building does have an intrusion alarm system. There is one portable security camera .



Figure 278. Portable security camera. (Source: Alvine 2023)

D	ELECTRICAL				
D50	ELECTRICAL				
	D5094	LIGHTNING HAZARD REDUCTION			
		Number	Description	Condition	Priority
		D509401	Lightning Protection System	N/A	Short-Term

Date: N/A Contributing: N/A

Description

The building does not have a lightning protection system.

Description of Safety (Summary)

LIMITED PHASE 2 ENVIRONMENTAL ASSESSMENT

Methodology

A limited Phase 2 Environmental Assessment was performed to determine the presence or absence of asbestos-containing materials (ACM) and lead-based paint (LBP). No analysis of soil or groundwater was performed. Bulk samples for ACM identification were taken for laboratory analysis by Polarized Light Microscopy; sampling was performed where materials were already damaged. Testing for LBP was performed non-destructively in situ using direct readings from an X-Ray Fluorescence (XRF) spectrum analyzer. A survey was also performed to identify other potentially hazardous materials, including fluorescent light fixtures, ballast, and chemicals.

Asbestos-Containing Materials (ACM)

No locations of friable or non-friable ACM were identified at the interior of the house.

Lead-Based Paint (LBP)

Over 200 sample locations were tested using XRF and multiple locations were positively identified as containing LBP at both the interior and exterior of the house. LBP was generally identified at the following locations:

- Window frames, sashes, sills, shutters
- Doors, door frames, and transoms
- Exposed ceiling beams and the underside of the ceiling planks
- The pantry hutch in the kitchen.
- Interior moulding, casing, and thresholds
- Exterior gallery ceiling beams and planks
- Localized areas of plaster wall surfaces in Room 104

Based on this survey, LBP should be assumed to be present at all surfaces which are currently painted and many which have been previously painted but currently exhibit only remnants of paint. Until remediation can be performed, appropriate measures should be taken when performing repair work or disturbing finishes potentially containing LBP.

Universal Hazardous Materials

A survey was performed for other hazardous materials, called "universal waste," which are not regulated but may still represent a low to moderate risk to occupants, animals, or the environment. These materials may include improperly stored chemicals, paint and spray paint cans, some electronic devices that may contain mercury like CRT monitors and thermostats, batteries, fluorescent and other types of lamps, and similar objects.

At the time of the assessment, no universal hazardous materials were observed at the house.

Further information on the limited Phase 2 Environmental Assessment is provided in the *Environmental Survey of the Janis-Ziegler House* report, included as Appendix D.

Accessibility and ABAAS Compliance

The NPS has adopted the following Building Codes and Industry Standards which were used for the analysis of this report:

- IBC 2021 with Appendices
- IEBC 2021 with Appendices
- NFPA 101 Life Safety Code
- ABAAS

The building is currently used as a key element of Ste. Genevieve NHP. This occupancy would align with the occupancy definition of Group B in the 2021 IBC and per IEBC Special Occupancy exceptions for Museums (historic buildings). The recommendation is to allow the first floor to be assigned the B occupancy, with the basement and attic remaining unoccupied.

LANDSCAPE ACCESSIBILITY ASSESSMENT

An important goal of treatment for historic sites is the provision of an accessible experience for visitors, including those with physical challenges. Treatment recommendations pertaining to enhancing accessibility and meeting current Americans with Disabilities Act Accessibility Standards (ABAAS) are informed by historical analysis of historic buildings and landscapes in



Figure 279. Looking south towards the house from Jour de Fête Park, with the pedestrian bridge over South Gabouri Creek at right. (Source: LSHLA 2023)



Figure 281. Concrete steps at the west approach to the house. (Source: RRJ 2023)



Figure 280. Pedestrian bridge over South Gabouri Creek, looking southeast. There is no marked pedestrian crossing for St. Marys Road at this location. (Source: RRJ 2023)



Figure 282. Unimproved driveway trace at the east approach to the house. (Source: RRJ 2023)

order to devise solutions that accommodate accessibility without diminishing the integrity of significant historic features.

In order to achieve National Park Service (NPS) goals for accessibility and interpretation at the Janis-Ziegler House and landscape, existing circulation and interpretive features are assessed below to identify any deficiencies in terms of ABAAS that can be considered for improvement as part of treatment recommendations to be provided in later sections of this HSR, intended to provide a safe and rewarding experience for all visitors. The accessibility assessment that follows considers both circulation features and signage. Circulation features considered below include parking, routes connecting parking with site access, paths and walks located on the site, entry into the building, and circulation within the building.

Visitor Parking and Site Access

The building is located just south of the urban core of Ste. Genevieve. There is no parking on the site. Some visitor parking along the unimproved shoulder of St. Marys Road is available, but this unmarked parking along a busy roadway and may present safety and accessibility challenges for visitors. Currently, visitors also park across the street at the Jour de Fête Park and cross to the historic site via unpaved walkways and a pedestrian bridge over South Gabouri Creek; from there, visitors

must traverse St. Marys Road at an unmarked crossing



Figure 283. South gallery stairs without ABAAS compliant handrail and uneven riser heights. (Source: RRJ 2023)

to the unimproved shoulder on the south side of the roadway. Jour de Fête Park is not owned or managed by NPS.

Once on the south side of St. Marys Road, there is no accessible path or walkway to the house. Visitors currently must navigate a flight of concrete steps through the stone retaining wall on the west side of the house or walk along St. Marys Road to approach the house from the more level driveway trace on the east side of the property. The easterly approach is currently not ABAAS compliant but presents a more gentle change in grade than the west approach.

Accessible Entry to the House

Currently, the house is not accessible to visitors with mobility challenges. The first floor of the house is elevated from grade by approximately 4 to 5-feet and requires ascending a flight of steps to reach the level of the gallery decking. Currently, the primary entry for visitors is located at the south (rear) wall.

Visitors typically experience the house through guided docent tours, which may help define an accessible path through the house. However, there is no accessible compliant signage throughout the site or building which should be provided to define the accessible route both on the site and through the building.

Gallery Accessibility

The south door to the house is used as the primary entry point for visitors. Multiple points of non-compliance with ABAAS and IBC requirements are encountered for this entry.

- There is no ramp or lift present for access to the gallery. Visitors must ascend a flight of wood steps to reach the first floor. The wood stairs have presented slip concerns in the past, and metal traction strips have been applied to each tread. The top step is significantly higher than the other steps, presenting a tripping hazard.
- The wood handrail does not meet ABAAS requirements for graspability.
- The railing along the perimeter of the house is deteriorated and requires repair. The top rail does not meet IBC requirements (minimum 42 inches) for walking surfaces elevated above grade. Given the condition of the railing, it likely does not meet IBC requirements for loading on handrails and guardrails.
- Some of the decking boards are warped or split and present tripping hazards.

First Floor Circulation and Accessibility

Once visitors have reached the first floor, few barriers to accessibility are present within the primary rooms on the first floor.

- ABAAS requires that doorways have minimum 32-inch clearance along the accessible path. The main east door is 33-inches wide. The interior doors connecting Rooms 101 through 106 are all greater than 32-inches wide.
- There are no thresholds or flooring transitions in the interior door openings which may present trip hazards.
- Floor slopes within Rooms 105 through 107 are generally compliant with required slopes and cross slopes for walking surfaces. The floor slopes in some areas of Room 101 through 103 exceed the maximum permissible cross-slope due to the settlement.

Second Floor Circulation and Accessibility

The only existing path to the second floor is the interior stair in Room 104. Currently, the second floor is not open to visitors.

Basement Circulation and Accessibility

The only existing path to the basement is the exterior stone steps on the south side of the building under the gallery. Currently, the basement is not open to visitors.

Part 2: Treatment and Use

Requirements for Treatment

LAWS, REGULATIONS, AND FUNCTIONAL REQUIREMENTS

Key laws, regulations, and functional requirements that apply to the recommended work include the following:

- National Park Service Cultural Resources Management Guideline (Director's Order 28), which requires planning for the protection of cultural resources on park property.
- Section 106 of the National Historic Preservation Act, which mandates that federal agencies, including the National Park Service, take into account the effects of their actions on properties listed or eligible for listing in the National Register of Historic Places and give the Advisory Council on Historic Preservation a reasonable opportunity to comment.

Treatment of the building and site are also to be guided by the following, listed as of the date of preparation of this report and subject to future amendment, revision, and adoption of updated editions:

- Secretary of Interior's Standards for the Treatment of Historic Properties
- National Park Service Management Policies, 2006 Edition
- National Park Service Guiding Principles of Sustainable Design
- Architectural Barriers Act Accessibility Standards (ABAAS)

As well as the current building codes, as adopted by the City of Ste. Genevieve, with local amendments:

- International Building Code (IBC), 2018 Edition
- International Existing Building Code (IEBC), 2018 Edition
- International Residential Building Code (IRC), 2018 Edition
- National Electrical Code (NEC), 2020 Edition
- International Plumbing Code (IPC), 2018 Edition
- International Mechanical Code (IMC), 2018 Edition
- International Fire Code (IFC), 2018 Edition
- International Fuel Gas Code (IFGC), 2018 Edition
- International Property Maintenance Code (IPMC), 2018 Edition

The State of Missouri currently has also adopted the International Energy Conservation Code (IECC), 2018 Edition, but the City of Genevieve has not adopted this code. The State of Missouri allows individual municipalities to adopt any combination of codes and may even forego code adoption. The City of Genevieve currently has not adopted any form of the IECC nor has it adopted the NFPA 101 Life Safety Code.

The NPS is self-regulating in terms of enacting and enforcing building code standards. The Janis-Ziegler House is therefore not legally subject to local or state building code requirements. When undertaking repairs to buildings and structures, NPS endeavors to have the work comply with model building code standards.

With historic structures, attempts to achieve strict conformance with model building code standards that are intended for new buildings can lead to destruction of the historic fabric. Alternative compliance procedures, such as Chapter 12 of the IEBC relating to historic buildings, should be referenced in determining code compliance.

NPS currently recognizes the following as the model building codes for design and construction projects:

- International Building Code (IBC), 2021 Edition
- International Energy Conservation Code (IECC), 2021 Edition
- International Existing Building Code (IEBC), 2021 Edition
- NFPA 101 Life Safety Code (where IBC is silent)

Where conflicts exist between the 2021 ICC Codes and the currently adopted Missouri Building Codes, compliance with the more stringent of the two, as determined by a licensed design professional or code official, should be followed.

Additionally, the NPS Authority Having Jurisdiction

(AHJ) for Interior Regions 3, 4, and 5 will have input on determining code-related treatments, including the Regional Chief of Design and Construction and Regional Structural Fire Manager / Fire Control Officer.

Code Analysis

The following specific building code and life safety deficiencies based on the 2021 IBC and NFPA 101 have been identified.

OCCUPANCY

Multiple occupancy classifications are proposed for the preservation of the Janis-Ziegler House, potentially to include (as defined by the 2021 IBC, Chapter 3):

- Assembly Group A-3, Art Galleries/ Museums.
- Business Group B. Office.

Each occupancy classification has specific requirements for life-safety considerations such as fire protection and emergency egress that are also factored based on the occupancy load. Efficiencies may be also available by taking advantage of code-permitted exceptions for small assembly spaces with occupant loads below 50 persons, which can be considered as Business Group B under certain circumstances.

EMERGENCY EGRESS

Visitors are currently permitted to enter the Janis-Ziegler House for daily guided tours and for self-lead tours on open house days and special events. This use is anticipated to continue for the foreseeable future. There are multiple egress points on the main level which can be appropriately signed and altered to comply with Group A occupancy egress requirements, including safe path of travel, clearances, and door swing direction, among other requirements. However, there are no accessible egress points from the gallery to grade and no areas of refuge currently, which will be required when the property is made accessible.

The basement and attic levels have only a single means of egress each, and the path of travel will be difficult to make accessible without adverse effects to the resource. Given these conditions, the basement and second floor should be closed to general public use and occupancy.

ACCESSIBILITY

The site and existing building will require modification to provide access to visitors with mobility challenges and to comply with ABAAS standards. Current accessibility challenges in summary include:

- There is no accessible parking on the site and no accessible walkways are present.
- The first-floor entrances are elevated from the grade level requiring the use of several steps to access the house. There are no lifts, ramps, or other accessible paths.

FIRE PROTECTION

The existing Janis-Ziegler House currently has no commercial or residential fire suppression or fire alarm system. The City of Ste. Genevieve municipal water supply is available at the property and is of sufficient pressure to support a wet or dry-pipe sprinkler system.

Treatment Objectives

The recommendations presented within this report have been developed in accordance with *The Secretary of the Interior's Standards for the Treatment of Historic Properties*. These standards define four treatment approaches that may be applied to historic properties with guidelines for the application of each approach.

Of the four treatment approaches, *Rehabilitation*, which involves making possible a compatible use through repair and alterations, is the most appropriate for the Janis-Ziegler House. This approach will permit the removal of non-contributing additions and alterations, any repairs that are necessary to stabilize the historic structure, and the improvements that will be required to meet the programmatic, interpretive, and management needs of NPS.

PERIOD OF INTERPRETATION

The period of significance identified for th Janis-Ziegler House is c. 1790 - 1939. The house has a high level of integrity of the historic fabric, including the most intact interior of any vertical log house in Ste. Genevieve, including Federal-style interior mouldings and trim. The period of interpretation should reflect this integrity. A recommended period of interpretation is c. 1790 - 1835,

Secretary of the Interior's Standards for the Treatment of Historic Properties – Definitions

Preservation

The act or process of applying measures necessary to sustain the existing form, integrity, and materials of an historic property. Work, including preliminary measures to protect and stabilize the property, generally focuses upon the ongoing maintenance and repair of historic materials and features rather than extensive replacement and new construction. New exterior additions are not within the scope of this treatment; however, the limited and sensitive upgrading of mechanical, electrical, and plumbing systems and other code-required work to make properties functional is appropriate within a preservation project.

Restoration

The act or process of accurately depicting the form, features, and character of a property as it appeared at a particular period of time by means of the removal of features from other periods in its history and reconstruction of missing features from the restoration period. The limited and sensitive upgrading of mechanical, electrical, and plumbing systems and other code-required work to make properties functional is appropriate within a restoration project.

Rehabilitation

The act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural, or architectural values.

Reconstruction

The act or process of depicting, by means of new construction, the form, features, and detailing of a non-surviving site, landscape, building, structure, or object for the purpose of replicating its appearance at a specific period of time and in its historic location.

The Secretary of the Interior's Standards for *Rehabilitation*

1. A property shall be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.
2. The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.
3. Each property shall be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or architectural elements from other buildings, shall not be undertaken.
4. Most properties change over time; those changes that have acquired historic significance in their own right shall be retained and preserved.
5. Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a historic property shall be preserved.
6. Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and other visual qualities and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.
7. Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.
8. Significant archeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.
9. New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.
10. New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

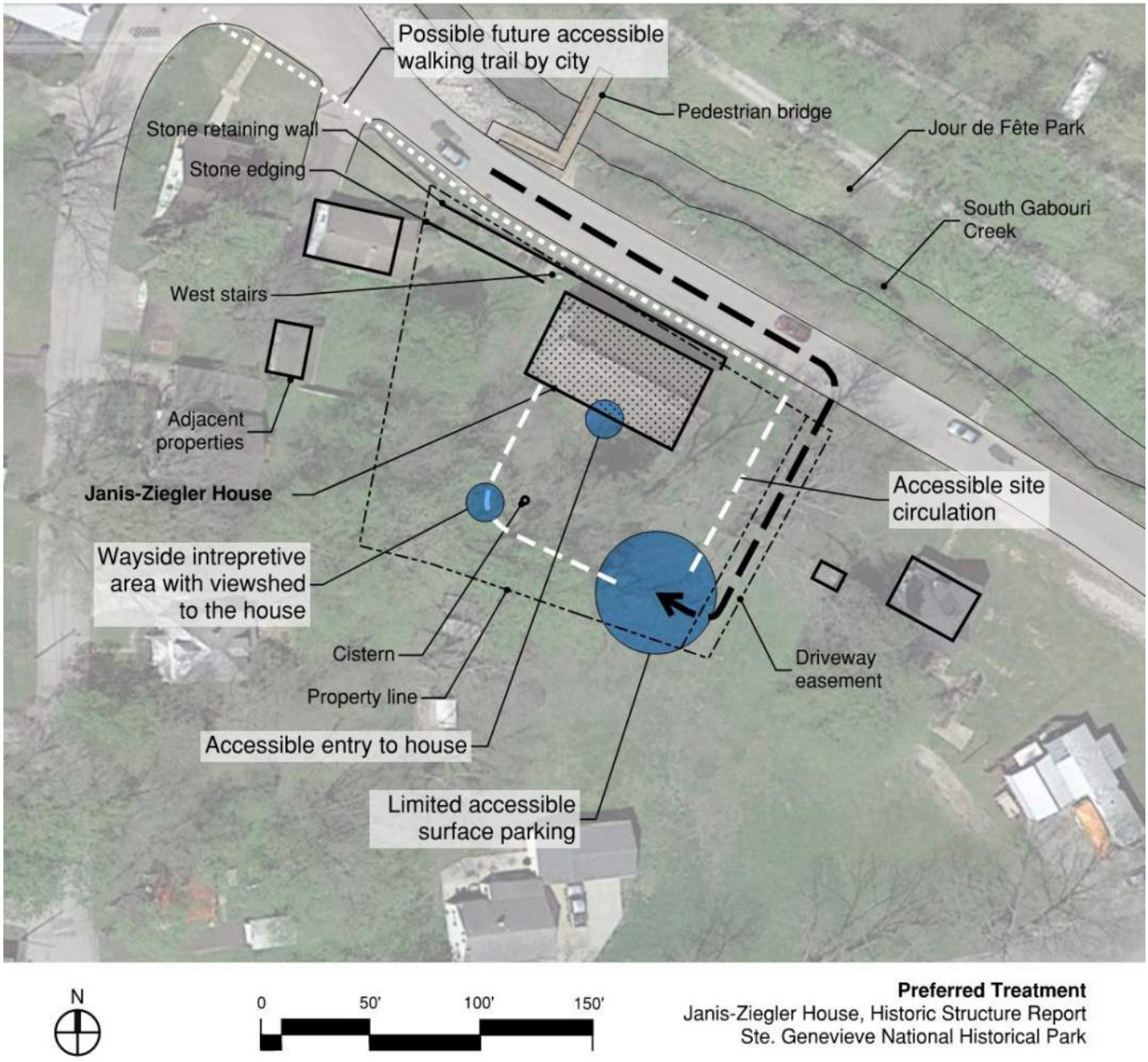


Figure 284. Preferred site and landscape treatment (draft).

which would encompass the significant historic uses of the house: the original construction under Nicolas Janis, the early years of the tavern under François Janis, the founding of the masonic lodge, and the years of Mathias Ziegler's tobacco business, which was run from the Property. This period of interpretation also allows for a nuanced interpretation of enslavement at the property.

Ultimate Treatment and Use

Following a participatory workshop which included NPS staff, the consultant team, partners, and other stakeholders, the following preferred treatments were distilled from discussions spurred by the options presented (see the appendix for "Other Treatment Options Considered").

The Janis-Ziegler House and site both offer a high level of flexibility for programming, circulation, and interpretation. The preferred treatment recommendations focus on actions to establish barrier-free access to the house and property in compliance with ABAAS, through compatible and appropriate interventions. Preference was also given to treatments which reduced the need for new construction and prioritized maintaining programmatic needs, for both administration and visitor purposes, within the footprint of the existing building, while restoring as much as possible the historic site character.

The preferred use of the house was determined to be visitor use and interpretive exhibits.

ULTIMATE TREATMENT – SITE AND LANDSCAPE

The Janis-Ziegler House retains a high level of integrity and can be improved to achieve universal access and public enjoyment of the grounds and house.

The preferred treatment approach entails the establishment of limited surface parking for accessible spaces on the southeastern quadrant of the parcel. Visitors will access the site along the driveway trace from St. Marys Road. The existing drive will need to be improved to provide access to a surface parking area paved with gravel or other permeable paving suitable for moderate vehicular use and ABAAS compliant. From the parking area, accessible site circulation consisting of paved walkways and landing areas will direct visitors to the new accessible entry to the house. Along the pathway are opportunities for interpretive waysides and viewsheds of the historic property.

Upon reaching the house, the site circulation will provide visitors access to the primary entry on the south (rear) wall of the house.

ULTIMATE TREATMENT – ACCESSIBILITY

Creating an accessible entry to the first floor is a desired intervention for the use and enjoyment of the resource. Several options for accessibility were considered; the recommended treatment is the addition of an ABAAS-compliant ramp on the south side of the building that will connect with accessible pathways and parking on the site.

The ramp can be a simple, post-and-rail design and constructed of wood, which would be visually compatible with the existing gallery railings and the historic character of the house. An unpainted, pressure treated wood ramp will require minimal maintenance. Other railing options such as metal pipe or wire cable are available but are not in keeping with the historic character of the property.

During the treatment discussion, concerns were raised about the ramp potentially interfering with access to the site via the west stairs. A scaled layout of the proposed ramp at the length required to meet the 5-ft rise to the gallery decking does not interfere with the walking path from the stairs. The orientation and layout of the ramp could be reconfigured in numerous options to adjust to site requirements; additional potential ramp layouts are included in the appendix.

The south stairs to the gallery are a 20th century replacement and are non-contributing but compatible. The stairs should be replaced with a new wood stair of equal riser heights in a sympathetic design that incorporates an ABAAS-compliant handrail.

Providing code compliant access to the basement and attic levels was considered but would require new construction for an elevator structure beyond the guidelines of the Rehabilitation standards. The park does not anticipate a programmatic need to access the basement or attic, therefore, this option was deemed too invasive and would result in adverse effects to the house. The basement will be unused to facilitate building monitoring and maintenance for HVAC systems; the attic will have limited access. See appendix for "Other Treatment Options Consider" for additional discussion.

Options for an on-site accessible restroom were discussed. Currently, there is no supply water to the property. The municipal supply was disconnected and the previous supply connection is no longer available.

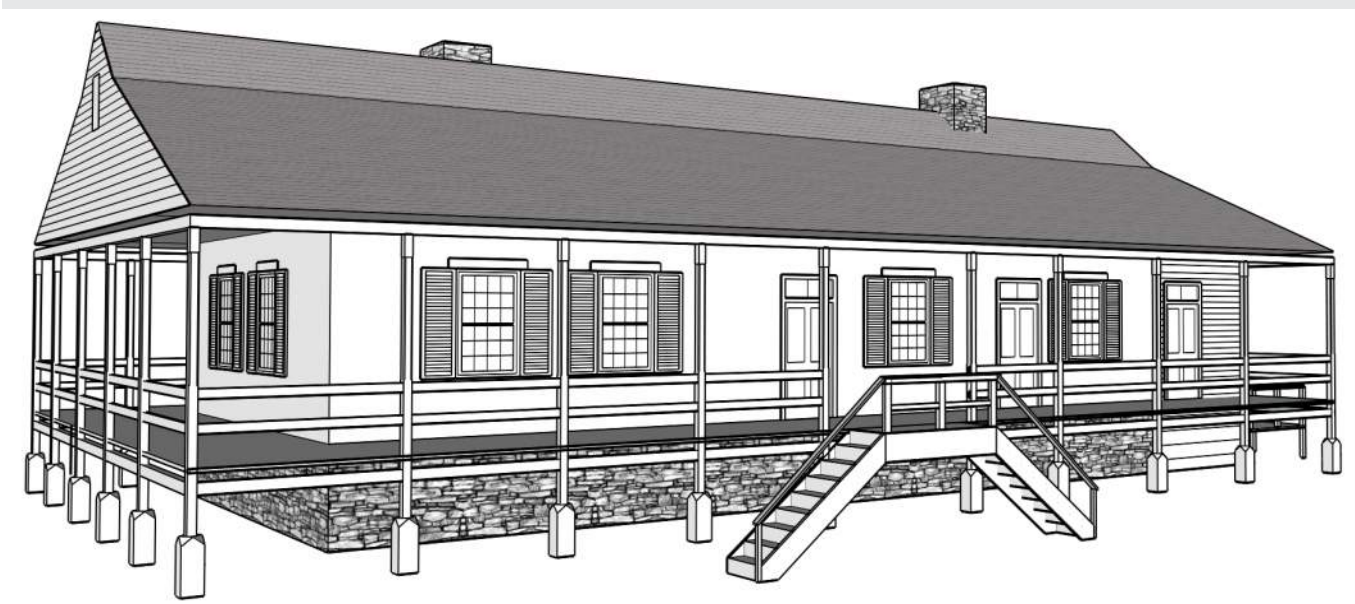


Figure 285. Conceptual rendering of the north elevation with the restored central stair and plastered exterior log walls.. (Source: RRJ 2024)

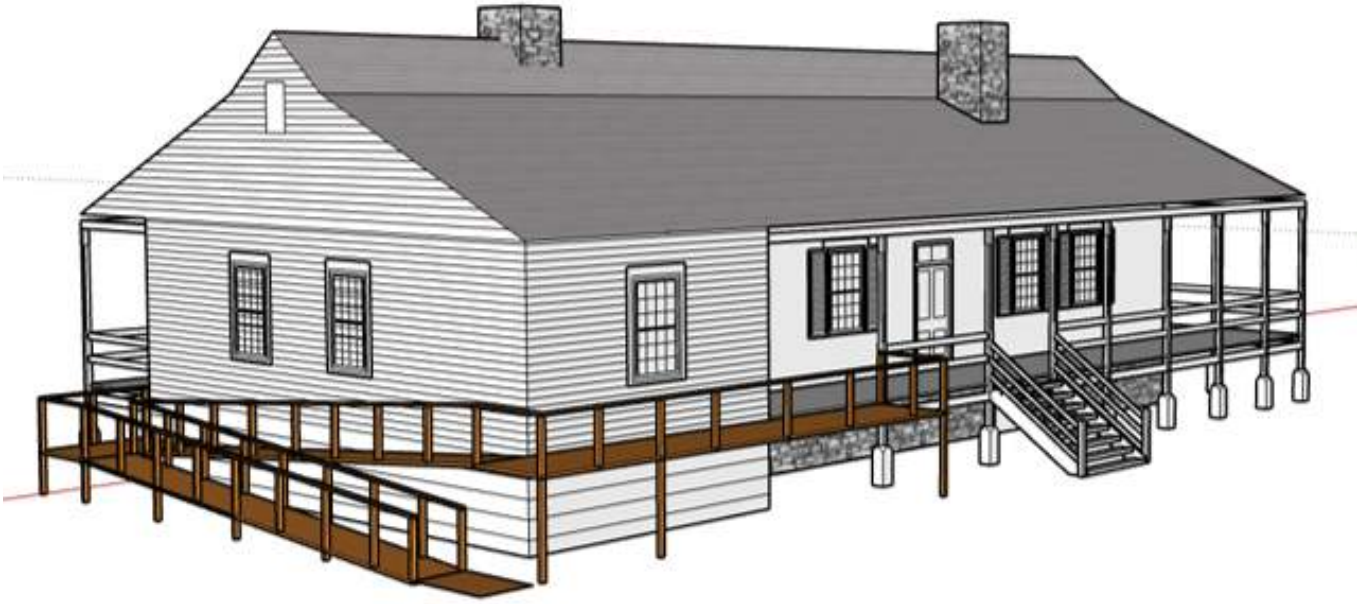


Figure 286. The addition of a ramp to the south wall provides an accessible path that is low impact to the resource and reversible. (Source: RRJ 2024)



Figure 287. Scaled diagram of the proposed ramp layout, showing a clear circulation path for the stairs at the northwest corner of the site. (Source: RRJ 2024)

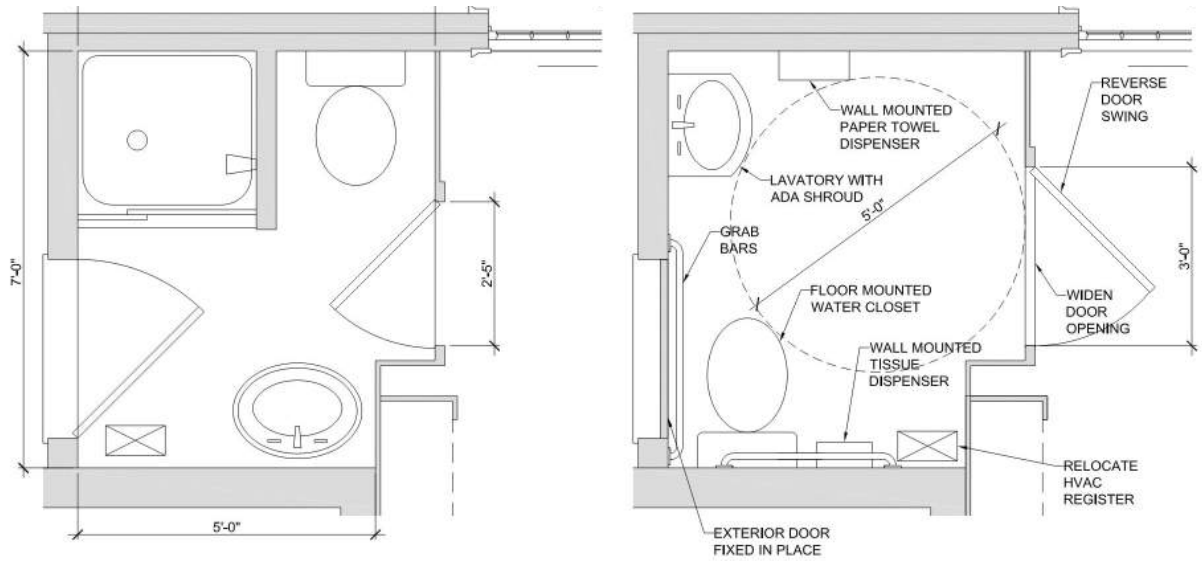


Figure 288. Conceptual renovations to the existing restroom (left) to meet accessibility requirements (right). (Source: RRJ 2024)

A new connection to the municipal water supply should be provided to accommodate domestic and maintenance water needs at the property. For the short term, visitors should be directed to alternate facilities, such as the Ste. Genevieve Welcome Center. As a long term solution, the existing restroom can be altered to meet accessibility requirements if the shower is removed.

ULTIMATE TREATMENT – EXTERIOR AND STRUCTURE

Given the generally good condition of the envelope components and the structural systems, only minimal repairs were identified as high priority items to address.

The following is a list of high priority repairs:

Galleries and Stairs

- Address warped, split, and deteriorated decking boards at the galleries to eliminate trip hazards and maintain a safe walking surface.
- Perform localized repairs or replacement of gallery railing members to secure loose railing members and install new members where missing.
- Perform repairs to basement Doors D16 and D17 to repair areas of deteriorated wood planks and to provide new hardware to properly secure doors.
- Replace the deteriorated gallery beam in kind.
- Remove soil where in contact with gallery post bases, and replace or splice the bearing ends of gallery posts where deteriorated.
- Replace the south exterior stairs with new stairs in a sympathetic style with even tread heights and a code-compliant handrail.
- Reconstruct a stair at the north elevation where the stair was originally located, central with the main entry. Due to the narrow space between the gallery and the stone retaining wall, this stair may have been a split stair, as was previously present at the Delassus-Kern House, similar in style to the stair constructed during the 1999 restoration work.

Exterior Walls

- Perform localized repairs to the bousillage where damaged by water or insects.
- At the east wall, replace the deteriorated top plate and sill plate. This work will require shoring of the roof framing, localized demolition/reinstallation of the gallery framing, localized demolition/reinstallation of the masonry foundation wall, and restoration of plaster interior finishes.
- Perform localized repairs and stabilization to first floor beams.

Site

- Have the cistern inspected and backfilled to properly decommission.

Detailed lists of recommended preservation maintenance treatments organized by building component are provided in the following section.

ULTIMATE TREATMENT – INTERIORS

The interiors are in serviceable condition and many of the finishes in Rooms 101 through 105 are generally representative of early 19th century finishes, with some 20th century alterations, such as in-kind replacement of the wall plaster and the reconstruction performed in Rooms 106 and 107.

Given that the desired use for the House will remain flexible interpretive use, the first-floor interiors represent an appropriate interpretation for the proposed period of significance. Non-contributing finishes such as modern wallpaper borders, can be removed as appropriate for the planned use of the space. Plaster wall surfaces can be repaired to address cracks and areas of small plaster loss. Consider repainting wall surfaces based on the findings of the finishes analysis to provide a more uniform appearance in historically significant spaces. Wood moulding, trim, doors, plaster, fireplace mantles, and other historic features should be preserved in place.

Rooms 108 through 110 are typically not opened to visitors and are used as "back of house" areas for storage. Minimal interior work is required in these spaces outside of alterations to create an accessible bathroom.

ULTIMATE TREATMENT – MEP/FP SYSTEMS

A high-level summary of recommended treatments for MEP/FP building systems is provided here, with additional information and detail included in the Treatment Recommendations section below.

- **Plumbing Systems and Fixtures**: Plumbing systems and the existing fixtures are in serviceable condition and do not require any immediate replacement or alterations, except those that may be required if lavatories are remodeled for accessibility. The Janis-Ziegler House currently does not have an active water service to the house. The water entrance piping would need to connected outside the house on site to a new water service. This water service could easily be installed outside if and when a fire service to the house was installed.
- **Sanitary Waste Systems:** As much of the waste piping is not visible except for what piping is above the first level floor, it is assumed to be in reasonably good condition. There would be no immediate recommendations for any piping replacement at this time
- **Gas Service:** The gas piping serving the Basement Level gas-fired furnace appears in good condition, so there is no immediate need to remove or replace any of the piping. The recommendation would be to leave the gas service piping in place and let it continue to serve the building in an as-is condition.
- **Water Heater:** The water heater is only 8 years old and has not been operating since the water service has not been active; there is no immediate need to remove and replace it.
- **Fire Suppression System and Fire Service:** Currently, the House has no fire suppression system. An early warning system, such as a VESDA system, along with a combination wet-pipe/dry-pipe system is recommended. Providing a fire suppression system will require fire water service to be installed in the basement, along with an exterior fire department connection at least 40-feet from the building. A fire pump is not anticipated to be required.
- **Heating System:** A ducted forced-air furnace currently services Rooms 105 through 110. The furnace system is approximately 25-30 years and does not adequately cover the volume of the house. While the furnace is providing satisfactory heating needs for the house currently, it is recommended that the furnace be replaced to ensure that a dependable heating system is in place. Heated air distribution to Rooms 101, 102, and 103 should be restored with new ducts and registers.
- **Cooling System:** A ducted forced-air air conditioning system with an exterior condensing unit currently services Rooms 105 through 110. The air-cooled condensing units is 24 years old and does not adequately cover the volume of the house. . With age and the fact that the unit utilizes R-22 (Freon) refrigerant which is being phased out of use, it would be recommended to replace this unit. Conditioned air distribution to Rooms 101, 102, and 103 should be restored with new ducts and registers.
- **Electrical Service:** It is recommended to leave in place the existing indoor Square 'D', 240/120-volt, single-phase, 200-amp, flush-mounted electrical load center and make improvements to it. Grounding on the load center should be provided.
- **Interior Wiring:** Existing NM cable should be replaced with metal clad (MC) cable in all locations where concealed by finishes. Where surface mounted and exposed, existing NM cable should be replaced with electrical metallic tubing (EMT) conduit.
- **Electrical Fixtures and Devices:** Existing fluorescent and incandescent fixtures or lamps should be replaced with LED type fixtures or lamps for energy conservation. Existing receptacles and switches are a mix of modern and outdated components and should be replaced with the wiring systems. New receptacles can be introduced where needed, and GFCI receptacles should be provided where required by code.
- **Communications:** The existing fiber optic line should be extended into the building.
- **Fire and Intrusion Alarms:** A fire/intrusion alarm system should be installed. Smoke detectors should be the aspirating-type with a smoke detection system that is integrated with the early detection system and fire suppression system. An intrusion alarm system should be wireless motion detection and door entry sensors, as preferred by the park.
- **Exit Lighting and Emergency Lighting:** Emergency egress lighting may be required depending on the planned use of the building. This can be accomplished with normal lighting fixtures on a battery backup system. Emergency egress signage should be provided, including indicating the accessible path as appropriate.
- **Lightning Protection System:** Currently, the building does not have a lightning protection system.

A system can be installed on the building. Lighting arrestors and grounding conductors will be visible, and care should be taken in the placement of these components to minimize impact to the resource and visitor experience.

Treatment Recommendations

ENCLOSURE AND STRUCTURAL SYSTEMS

The following rehabilitation and preservation maintenance recommendations are made for the building exterior and enclosure systems.

Galleries

The gallery requires maintenance and in-kind replacement to address life-safety hazards. Areas of deteriorated decking present trip hazards for visitors. Loose or missing railings were noted at several locations and represent a fall hazard. Gallery skirting has been present on the house previously, and was likely added in the late 19th century. No gallery skirting is included in the Treatment Recommendations as it is not in character with the period of interpretation of c. 1790 - 1835, which would have traditionally left the galleries open.

Immediate (Year 1)

Maintain Gallery Posts

- Remove soil in contact with the bases of gallery posts.
- Replace the gallery post at the north elevation exhibiting significant section loss at its intersection with perimeter beams

Replace Decking

- Replace deteriorated, loose, and warped deck boards in-kind.

Replace Railing

- Secure loose railing where necessary.
- Install new railings where missing at east gallery to match other railings in-kind.
- Consider code compliance of existing railings and modify as appropriate to meet code requirements. Additional horizontal rails can be added and have historical precedence at the house.

Replace Deteriorated Gallery Floor Framing

- Replace the heavily deteriorated gallery floor perimeter beam at the location of the south staircase.

Short-Term (2 to 5 Years)

Repair Gallery Attic Perimeter beam

- Address multiple joints in the gallery attic perimeter beam that are no longer tight or have been displaced. The failed splice at the northeast corner should be the first priority.
- Replace the heavily deteriorated south end of the gallery attic perimeter beam at the east gallery.

Maintenance	**Inspections** • On an annual basis, perform preservation maintenance to remove organic growth from gallery decking and gallery first-floor framing members. • Monitor the activity of carpenter and mason bees at the south end of the gallery and mitigate as appropriate. • On an annual basis, remove soil in contact with the bases of gallery posts. • On an annual basis, inspect the gallery railings and stair handrails for any signs of movement or conditions which may negatively affect their performance.

South Exterior Stairs

The stairs at the south gallery were in good condition but have code compliance issues that present fall hazards.

Immediate (Year 1)	**Code-Compliant Stairs** • Replace the existing south gallery stairs with a new stair with equal riser heights and code-compliant handrails. The design of the new stairs should be sympathetic to the house. Provide slip-resistant traction strips at each tread.
Maintenance	**Inspections** • On an annual basis, inspect the stairs and handrails for any signs of movement or conditions which may negatively affect their performance. Check for loose traction strips and remove any biological growth.

Roofing

The wood shingle roof is new and requires no treatment beyond regular maintenance.

Maintenance	**Inspections** • On an annual basis, inspect the roofing for signs of damage or deterioration and repair/replace as necessary. • Remove debris from gutters in spring and fall. • On a two to three year cycle, consider having the wood shakes cleaned and treated with a water repellent treatment.

Chimneys

The recently-rebuilt and original chimneys may have different maintenance needs due to their age and due to possible differences in brick materials and mortar composition. Both chimneys were plumb, solid, and in good condition.

Short-Term (2 to 5 Years)	**Chimney Repairs** • Re-point mortar at both chimneys as appropriate. It is likely that the original east chimney may require more extensive repointing and even isolated brick replacement relative to the re-built chimney at west.

Maintenance

Inspections

- After heavy rains, inspect the fireboxes for signs of water intrusion through the flue.
- On an annual basis, inspect the portions of the chimney stack with rise above the roof line for signs of mortar deterioration and plumbness.

Exterior Walls

The exterior of the house was constructed with varied materials, most of which were in good to fair condition, without areas of significant deterioration. However, some areas of exposed bousillage have failed and require intervention.

Immediate (Year 1)

Bousillage Repairs

- Analysis of existing historic bousillage should be performed to determine components of compatible bousillage replacement.
- Repair localized areas of bousillage with loss, deterioration, or insect damage.

Short-Term (2 to 5 Years)

Log Walls

- Stabilize isolated log walls members exhibiting insect damage, as determined by a wood science report.

Vertical Log Wall Top and Sill Plate

- At the east wall, replace the deteriorated top plate and sill plate. This work will require shoring of the roof framing, localized demolition/reinstallation of the gallery framing, localized demolition/reinstallation of the masonry foundation wall, and restoration of plaster interior finishes.
- Perform localized repairs and stabilization to first floor beams.

Repointing Repairs

- Petrographic analysis should be performed of the existing mortar to determine compatible pointing mortar mixes. The replacement mortar should match the existing in material properties, appearance, and tooling.
- Repoint locations of deteriorated or missing mortar within exterior stone masonry foundation walls at both the interior and exterior.

Exterior Plaster Finish Installation

- Apply new exterior plaster finish (or whitewash) to exterior vertical logs and bousillage to protect against further deterioration. The bousillage historically would have always been protected by a covering.

Wood Siding Replacement

- Histroically, the wood siding would have been whitewashed to protect the wood from the elements and pests. The existing should siding should be treated with a limewash or lime paint.

Long Term (5+ Years)

Wood Siding Replacement

- Existing wood siding is currently in serviceable condition, but replacement is anticipated in 5 to 10 years. Replace the siding in kind.

Maintenance

Inspections

- On an annual basis, inspect the exterior walls for signs of deterioration. Conduct stucco, repointing, and masonry repairs as needed.
- On an annual basis, monitor the east side of the north log wall for additional movement relative to the ends of attic joists visible from the exterior.
- On an annual basis, inspect the exterior walls for signs of deterioration of the vertical logs and bousillage.

Windows

The condition of the windows throughout the Janis-Zeigler house range from good to failed. Most of the windows are in good to fair condition and require maintenance for continued use; however, wood decay is severe enough in some windows that replacement may be necessary. All replacement windows shall be historically accurate replicas of originals to be replaced.

Short-Term (2 to 5 Years)

Shutter Repairs

- Repair broken shutter hinges at basement level openings where broken or missing.
- Replace first floor shutter hooks where missing. Resecure loose shutter hooks.

Trim and Sill Repairs

- Replace missing or damaged trim and jambs where necessary.
- Replace failed exterior sills at Windows WL, WM, and WN.

Window Replacement

- Replace wire mesh screens at basement level openings where missing.
- Replace missing sashes at attic level Windows, WT and WU, with period appropriate replacement to match other existing windows of this kind.
- Additional window replacement may be required at Windows WL, WM and WN. Replacement should be considered at locations where repairs require removal/replacement of greater than 50% of original material.

Surface Cleaning

- On the interior, painted surfaces with mildew or biological soiling should be cleaned using the gentlest means possible. A dilute solution of an unscented surfactant in warm water, such as Dawn Dish Soap, with light abrasion using a natural sponge. This should be sufficient to remove most bulk soiling. Spot treatment with dilute vinegar in warm water, dilute citrus based cleaner, or proprietary chemical cleaners specifically manufactured for this purpose can be tested on areas of heavier soiling.

Maintenance	**Inspections** • On an annual basis, inspect the exterior windows for signs of deterioration, paint failure, broken glass, failed glazing putty, and other conditions which may allow water penetration through the window system.

Exterior Doors

Deterioration and conditions affecting the weather-resistance and operation of the doors were observed at multiple locations. While these conditions do not represent critical structural or life-safety issues, maintaining the performance of the doors is important to prevent moisture and pest-related damage to other building components. Additionally, issues with operation of locks and handles and where doors catch on the flooring affect the daily operations of the park. Addressing these issues should be a priority.

Immediate (Year 1)	**Door and Threshold Repairs** • Address separation at wood joints in doors as needed with caulking and/or painting. • Repair or replace thresholds where damaged. • Repair door jambs and heads at basement level exterior doors while maintaining historic joinery and features.
Short-Term (1 to 2 years)	**Glazing and Finish Repairs** • Replace the failed glazing putty at all exterior doors. • Refinish the exterior stain at Door D108.
Maintenance	**Inspections** • On an annual basis, inspect the exterior doors for signs of deterioration, paint failure, broken glass, failed glazing putty, and other conditions which may allow water penetration or pest infiltration. Ensure all locking mechanisms are in working order.

Interiors

Interiors were generally in good to fair condition. Specific conditions, primarily in the first floor rooms, were identified for repair to address component stability or the long-term performance of finishes. The existing flooring remains in fair condition. Significant areas of cracking, wear, or failure of painted plaster surfaces were observed throughout the first floor rooms.

Short Term (1 to 2 years)

Surface Cleaning

- If repainting is planned, surfaces must be cleaned before new paint is applied. A dilute solution of an unscented surfactant in warm water, such as Dawn Dish Soap or Ivory Liquid Dish Soap (discontinued), with light abrasion using a natural sponge. This should be sufficient to remove most bulk soiling. Spot treatment with dilute vinegar in warm water, dilute citrus-based cleaner, or proprietary chemical cleaners specifically manufactured for this purpose can be tested on areas of heavier soiling.

Wall Finishes

- Repair cracked and damaged plaster in all original first floor rooms.
- Repaint all walls in first floor rooms to conceal old and new repair areas.

Interior Doors

- Re-hang Door D10 to eliminate drag on the floor.
- Refinish interior doors as needed to remove discolorations from weathering. Consider keeping the high-water line from the Great Flood of 1993 in one or two locations, such as Room 103.
- Address separation between the panels and stiles in Door D8.

Ceilings

- Address gaps in ceiling boards in Rooms 101, 102, 103, 104, 105, 106, and sagging boards in Room 113. Caulking and repainting may be sufficient, but ceiling boards may need to be replaced at isolated locations.

Maintenance

Inspection

- On a monthly basis, inspect interiors for signs of pest infiltration, moisture intrusion issues, and mildew growth.

First Floor Framing

The first floor framing was observed to range in condition from fair to poor. A small number of repairs are recommended at specific framing members, based upon results of limited wood-drilling onsite. Limited resistance drilling was performed at a selection of beams within the basement.

Immediate (Year 1)

Floor Joist Replacement

- Replace or provide supplementary support to floor beams that are deteriorated or distressed.

Short-Term (2 to 5 years)

Floor Framing Condition Assessment

- Monitor the condition of first-floor framing. Revisit the condition of select members at five-year intervals to ascertain progression of pest-related deterioration.

Attic Floor Framing

The attic floor framing, visible from the first floor, was observed to be in good condition. Slight rotation was observed at isolated framing members within Room 106; these conditions do not require treatment at this time.

Maintenance

Inspections

- On an annual basis, observe interior finishes covering and adjacent to attic floor framing for cracking or other deterioration that may imply recent movement, including rotation or deflection, within these members.

Roof Framing

Roof framing includes attic rafters, gallery rafters, collar ties, gable end walls, and lateral under-purlins and kickers.

Short-Term (2 to 5 Years)

Roof Framing Repairs

- At attic rafter number 28 from the east, reset the pin connection at the south end of the collar tie to prevent independent movement of these members.
- Supplement or replace-in kind attic rafters exhibiting splitting through the entire width of the member, where the splitting occurs at the intersection of attic rafters and collar ties.
- Supplement or replace attic rafters and gallery rafters that were cut to accommodate since-removed chimneys immediately north and immediately south of the west chimney.

Maintenance

Inspections

- On an annual basis prior to roof replacement, inspect the roof framing for signs of water infiltration, damage, pest activity, or other deterioration.

PLUMBING SYSTEMS

Water Service Utility

The water service piping within the basement level of Janis-Ziegler House appears in satisfactory condition. There are no immediate needs for piping replacements based on visual inspections and observations. Without an active water service to the building, verification of water leaks could not be made. The use of PEX piping exposed in the basement level and first level restroom could easily be replaced with rigid copper piping if so desired should there be a request by NPS to upgrade any of the restroom fixtures and their water service piping.

The Janis-Ziegler House currently does not have an active water service to the house. The water entrance piping would need to connected outside the house on site to a new water service. This water service could easily be installed outside if and when a fire service to the house was installed.

Sanitary Waste Piping

As much of the waste piping is not visible except for what piping is above the first level floor, it is assumed to be in reasonably good condition. There would be no immediate recommendations for any piping replacement at this time unless the staff has any requests that it be replaced with any building renovation or upgrade projects. Moving forward that eventual replacement of the indoor piping may want to be considered as the building continues to age.

It is assumed that the sanitary service line leaving the house is PVC piping, as there is a PVC cleanout on the northeast side of the building where the sanitary line exits. This PVC cleanout is located have been in place for a significant amount of time, it is recommended that the sanitary mains leaving the house be scoped with a camera and cleaned to ensure their integrity to serve the house into the future. This may also reveal any cracks or breaks in the line outside the house prior to the sanitary pipe connection to the sewer at the street which may require attention.

The two existing sump pumps located in the basement level should be checked to make sure they are still operational. If either of the two pumps were found to not operate, it would be recommended that they be repaired if possible or replaced with similar pumps. The sump pump discharge piping from the east pump should also be checked to make sure it has a uniform and proper slope to allow the effluent in the piping to drain properly.

Plumbing Fixtures

It appears that all of the plumbing fixtures in the Janis-Ziegler House are generally operational although the water service to the house is currently active. While most of the fixtures are considered modern in nature, they have been in place for some time. The restroom water closet, lavatory, and shower appear to be in a functional state, although water has not been operational at any of the fixtures for some time. The fixtures may require cleaning, as well as some internal parts, to ensure they operate properly. The internal tank valve in the water closet tank may require replacement as water has not been present in the tank for some time. The restroom, lavatory, and kitchen sink faucets may require cartridge changeouts to ensure the faucets do not leak and operate properly. There would be no recommendations to remove or replace any of the plumbing fixtures unless NPS would want to explore the use of lower-flow fixtures to save on water use.

Gas Service and Water Heater

The gas piping serving the Basement Level gas-fired furnace appears in good condition, so there is no immediate need to remove or replace any of the piping. The recommendation would be to leave the gas service piping in place and let it continue to serve the building in an as-is condition. Should the desire to add additional air conditioning and heating to the house be a priority, the gas service piping will need to be evaluated as to whether the piping is adequately sized for adding an additional heat load to the house.

The electric water heater, which was installed in 2018, provides potable hot water to the first level restroom and kitchen. Since the water heater is only 8 years old and has not been operating since the water service has not been active, there would be no immediate need to remove and replace it. It appears to be an adequate size for the hot water needs of the fixtures in the house. Water heaters with electric heating elements have an expected lifespan of 15-20 years with periodic tank blow-down to minimize scale build-up. It is unclear whether the water

heater maintenance, including blowdown procedures, is being performed on a periodic basis. There would be no recommendation to replace the water heater unless, at some point, the water heater experiences a leak at the tank or the heating element were to fail.

FIRE PROTECTION SYSTEMS

Any inclusion of a fire suppression system associated with the any preservation or revitalization project for the property would require a new fire water main be extended to the house from St. Marys Road to the north of the property if the fire protection system were to include a wet or dry pipe sprinkler system.

As the house is currently a finished space and no dedicated space for a fire entrance location or pathways for piping are readily available, limits the inclusion of a piped fire suppression system. Property protection and life safety are the benefits a fire suppression system would offer. It is with these benefits that the Janis-Ziegler House is recommended to be upgraded with an automatic fire suppression system or early warning system.

Based on the building techniques and materials used in the Janis-Ziegler House construction where extensive use of wood timbers and other wood construction make up a vast majority of the structure, protection against fire is of major importance. Utilizing active fire safety features found in modern automatic fire detection and suppression systems, provide occupant notification, alarm transmittance and the ability to suppress fire growth until the fire department arrives. Relying on active systems with proper maintenance and alarm supervision, they have a high degree of reliability.

Active fire protection is characterized by detection and response. Detection of a fire through smoke or heat sensors initiates a chain of events that reduced threats from a fire. Once a detection system is activated, other actions including sounding alarms and opening of fire sprinklers or other fire suppression systems occur. Fire protection system minimum requirements are to detect a fire, alert the occupants or fire department of a fire emergency, control smoke, and control or extinguish the fire.

Recommended System

A fire suppression system that is a combination wet pipe/ dry pipe with a pre-action system is recommended for the Janis-Ziegler House.

The house currently has an unfinished basement level and a finished first level. An unheated and uninsulated attic space exists above the entire First Level. Having an unheated attic where wood construction is present would necessitate that the attic space be protected by a dry-pipe sprinkler system to protect the piping from freezing temperatures.

Routing of fire protection piping throughout the house will require some coordination to limit any interior wall space demolition, providing a pathway for sprinkler piping to the attic space.

The water entrance space for a fire suppression system would be limited to the basement level of the house as this is currently unfinished. Providing space within the Basement for a fire entrance water supply and the necessary fire protection equipment and valves will need to be coordinated.

As the attic space above the first level ceiling would be exposed to freezing conditions in the winter, a dry-pipe system would be needed to protect the liquid in the piping from freezing. A dry-pipe system would utilize air or nitrogen in the piping in lieu of water to protect the piping from a piping break caused by the lower-than-freezing temperatures the attic would see in the winter.

Types of Fire Suppression Systems

There are many types of fire protection or suppression systems utilized in buildings today to mitigate the risk against the loss of life and property in the event of a fire. The fire suppression system should be based on the building occupancy group, size of the building/fire area, height of the building, and occupant load. The fire suppression system should comply with the current NFPA and IBC requirements as they relate to building usage.

The various types of systems in use range from wet-pipe systems, dry-pipe systems, anti-freeze systems, deluge systems, and pre-action systems. Each of these system types has certain advantages, but for

- **Wet-Pipe System:** A wet pipe system is the most common type of system. It is a sprinkler system employing automatic sprinklers attached to a piping system containing water and connected to a water supply so that water discharges immediately from sprinklers opened by heat from a fire.
- **Dry-Pipe System:** A dry pipe system is the

second most common type of system. A dry-pipe fire suppression system is a piping system filled with pressurized air or nitrogen instead of water. Water does not enter the pipes until a fire event is detected, releasing the dry pipe valve to allow water to flow. Dry-pipe systems are used when protecting areas which have a freeze potential, such as attics, basements, and balconies.

- **Pre-action System:** A pre-action system is used in locations where accidental activation is undesired, such as in museums or collection spaces housing valuable or historic artifacts. Water will not flow from the sprinklers until a fire has generated enough heat to open one or more sprinklers.

Wet-Pipe/Dry-Pipe Combination System

Advantages of using a pre-action, combination wet and dry-pipe fire sprinkler with a pre-action system include the following:

- A dry-pipe sprinkler system provides automatic protection in spaces where s freezing condition is possible such as the attic spaces.
- A dry-pipe sprinkler system with pre-action device offers an advantage when compared to conventional wet-type and dry-pipe sprinkler systems for the protection of collections, artifact and water sensitive documents. The addition of the pre-action devices, such as heat and smoked detectors, provide an added safeguard against false discharges.

Disadvantages of using a pre-action, dry-pipe fire sprinkler system:

- Increased complexity – Dry-pipe systems require additional control equipment and air pressure supply components which increases system complexity. Without proper maintenance this equipment may be less reliable when comparable to a wet-pipe system.
- Higher installation and maintenance costs - The added complexity impacts the overall dry-pipe installation cost. This complexity also increases maintenance costs.
- Lower design flexibility - There are strict requirements regarding the maximum permitted size (typically 750 gallons) of individual dry-pipe systems unless the water delivery time is less than 60 seconds.
- Increased fire response time - Up to 60-seconds may pass from the time a smoke or heat detector actives and a sprinkler head opens until water is discharged onto the fire, which allow for increased fire damage.
- Increased corrosion potential - Following operation, dry-pipe sprinkler systems must be completely drained and dried. Any remaining water may cause pipe corrosion and premature failure.

System Maintenance

Each of the types of fire suppression systems requires some form of inspection, testing and maintenance. The following outlines a typical schedule of inspection, testing and maintenance:

- **Monthly:** Control valves, alarm valves, and pressure gauges should be inspected, tested, and monthly. Control valves should have the appropriate identification and wrench, be accessible, and be locked in the open position or electronically supervised during inspection. Pressure gauges should show that normal water supply pressure is being maintained.
- **Quarterly:** The fire department connection (FDC), water flow/supervisory signal devices, and alarm devices should be inspected, tested, and maintained quarterly. The FDC should be visible and accessible and, identification signs and caps should be in place.
- **Annually:** Sprinklers, pipe and fittings, hangers and any seismic braces, and spare sprinklers should be inspected, tested, and maintained annually. Sprinkler heads should be installed in the proper orientation (e.g., upright, pendent, or sidewall); not show signs of leakage; and should be free of corrosion, foreign materials, paint, and physical damage.
- **Additional Testing and Maintenance:** There are specific requirements for the testing and maintenance of the valve and device components of sprinkler systems that should be done quarterly, semiannually, and annually. Fire sprinkler system service contractors are usually contracted to perform these services. Mechanical water flow devices, including but not limited to water motor gongs should be tested quarterly. Vane-type or pressure switch-type water flow devices should be tested semiannually.

Early Warning Systems

Additional fire and smoke systems are available which are considered Early Warning Systems. One such system utilizes air sampling and is referenced by the name

of "VESDA" which stands for "Very Early Warning Aspirating Smoke Detection". The VESDA system is designed to alarm the occupants to a danger as soon as possible. The VESDA air sampling fire detection system detects invisible by-products of materials as they degrade during the pre-combustion stages of a developing fire.

Depending upon smoke levels and the preprogrammed alarm levels, appropriate output signals are triggered. The first of three staged alarm levels (ALERT) may simply indicate that the system has detected something out of the ordinary that should be investigated. The second level (ACTION) indicates that a potential fire exists and that emergency procedures should begin. The third level (FIRE) signifies an actual fire condition.

The early warning systems such as VESDA while offering an advantage of early detection, would rely on other fire suppression systems to actively extinguish the fire. For the Janis-Ziegler House, this type of system does not offer much benefit as this building would still need some other means to fight a fire including some type of automatic fire suppression system or the local fire department.

Fire Service and Fire Service Room

Any added automatic fire suppression system for the Janis-ZieglerHouse incorporating a wet or dry-pipe solution will require a separate fire water service be installed to the building. This water service will be in addition to any existing potable water service to the building serving domestic water needs. The fire service size anticipated would need to be a minimum 4-inch in size with the water service provided with a post indicator valve near the street giving the fire department visual indication of whether the fire service is active or is inactive due to maintenance.

The fire service to the house should enter the building in a heated space or room. At the Janis-Ziegler House, it is recommended that the fire service be brought in below grade to inside the building at the Basement Level. An area of the Basement Level will need to be provided with heat to protect the fire service from freezing. Ample space will be needed for the fire entrance assembly including backflow preventers, valves, drain and test connections, and an air compressor to keep the piping system charged with air.

A fire department connection or FDC will also be needed allowing the local fire department to connect their water supply to the building fire suppression system if the main fire service from the street is down for servicing or maintenance. The FDC would generally be located 40-feet or more from the building for safety of the fire fighters.

Impact to Historic Finishes

Another consideration is providing a piped fire suppression system in a building which was not built and configured for one. Providing and hiding new fire suppression piping and sprinkler discharge heads to minimize the aesthetic impact requires thoughtful design.

Providing piping throughout the house potentially will involve some selective demolition and new construction and piping soffits may be required in some spaces, which will change the interior appearance.

Fire Service Utility

If a water-based fire protection system is utilized for the Janis-Ziegler House, a review of the available water supply will be needed to ensure that the water volume required for the fire suppression system is available. If the water volume provided by the fire protection water supply cannot provided or comes up short of what is needed, a fire water storage tank might be needed to provide the necessary water volume. With a storage tank, a fire pump would be required to transfer the fire water from the tank, where it is then pumped into the fire protection piping system within the house.

The system water volume and flow would have to be determined based on the water main pressure at the street based on a fire hydrant flow test. There are two fire hydrants within approximately 250 to 275 feet of either end of the house, which could be used for this test, it is assumed. One is located north of the house at the intersection of St. Marys Road and Main Street, and the second hydrant is located south of the house at the intersection of St. Marys Road and Seraphin Street. It is assumed that at least a 6-inch water main is located out at St. Marys Road, which serves the fire hydrants.

An automatic fire suppression system for the Janis-Ziegler House will require a separate fire water service to be installed in the building. This water service will be in addition to any new potable water service to the

building serving the domestic water needs. The fire service size anticipated would need to be a minimum 4 inches in size with the water service provided with a post indicator valve near the street giving the fire department visual indication of whether the fire service is active or is inactive due to maintenance.

The fire service should enter the house in a heated area to protect it against freezing where the fire service would enter from below grade at the basement level as the basement level is currently served by the existing gas-fired furnace. Ample space is present in the basement level to allow a new fire entrance assembly, including backflow preventers, valves, drain and test connections, and an air compressor to keep the piping system charged with air if the piping system were to be filled with nitrogen, there is ample space for the nitrogen tank(s) to reside.

A remote fire department connection (FDC) and post indicator valve (PIV) will also be needed for the fire suppression system. The FDC allows the local fire department to connect their fire-fighting trucks to connect to the building fire suppression system. The PIV allows the fire department to know immediately if the underground fire water supply to the building is down for servicing or maintenance. The FDC and post indicator valve would generally be located 40 feet or more from the building for the safety of the firefighters. These devices would likely need to be located adjacent to Old St. Mary's Road, with the devices located either north or south of the house along the road, as there appears to be ample space in either direction to achieve the 40-foot limit.

HEATING, VENTILATION AND AIR CONDITIONING (HVAC)

Heating System

The Janis-Ziegler House is currently served by a single, 120,000 Btuh input, gas-fired furnace manufactured by Weatherking, which is a division of the Rheem Manufacturing Company. The unit is located in the basement level of the house. This furnace is a 94% thermal efficient unit that utilizes PVC combustion air and flue exhaust piping. The furnace was manufactured back in 1995 based on the nameplate, although it is not known when it was first installed. It is assumed it was installed between 1995 and 1999; therefore, the furnace system is approximately 25-30 years.

While the furnace is providing satisfactory heating needs for the house currently, it is recommended that the furnace be replaced to ensure that a dependable heating system is in place. Gas-fired furnaces commonly last from 25-30 years so the unit serving the house would be approaching the end of its useful life. It is recommended that any replacement unit be at least as efficient as the current unit.

Cooling System

The cooling coil associated with the gas furnace is a Lennox model C23-41W-1, which operates on HCFC-22 (R-22) refrigerant. The coil can pass approximately 1200 cubic feet of air and has a capacity of approximately 36,000 Btuh or 3 tons of cooling.

The condensing unit serving the furnace cooling coil is a Lennox mode HS29-036-1P, which is a 3-ton condensing unit. This unit utilizes R-22 refrigerant. The serial number of the condensing unit is 5801A26741. Modern Lennox system serial numbers contain four numbers followed by a letter. The first two numbers represent the factory where they were manufactured; the second two numbers are the year, which for the unit at the Janis- Ziegler House would be 2001. The first letter is the month of the manufacturer, which is an "A," which corresponds to January; "B" would correspond to February, etc. With its age being almost 24 years old and the fact that the unit utilizes R-22 refrigerant, it would be recommended to replace this unit. Equipment of this type has a life expectancy of 15-20 years, so the condensing unit has outlived its useful life.

R-22 (also called Freon), was developed in the 1930s where R-22 is a hydrofluorocarbon (HCFC) compound that became the standard refrigerant for decades. Scientists later discovered that chlorine, a compound of CFC and HCFC refrigerants, was a contributor to ozone depletion, so this HCFC would be included in the "Montreal Protocol" in 1987, which would phase out its production over time. According to the U.S. State Department, "The Montreal Protocol, is a global agreement to protect the stratospheric ozone layer by phasing out the production and consumption of ozone-depleting substances (ODS)." With 197 countries in agreement, it was the first United Nations treaty to achieve universal ratification. Under the Protocol, which was amended four times since 1988, HCFC production

and consumption in the United States would be banned from production and import by January 1, 2020. As a result, R-22 refrigerant would be phased out. Refrigerant could still be found as part of expensive stockpiles or in reclaimed quantities.

HVAC System Expansion

The existing heating and cooling systems do not adequately cover the interior volume of the house. Rooms 101, 102, and 103 currently do not have supply/return registers or ductwork and are conditioned by overflow from Room 105. This likely causes the existing system to overwork, reducing the efficiency and potentially shortening the service life of the equipment.

Should NPS decide to provide heating and air conditioning for the entire house, heating and cooling calculations would be needed to determine the capacity of any new equipment to ensure that the equipment was sized properly. The existing unit could be removed along with the existing ductwork, as both the equipment and ductwork would not be able to serve the entire house with its current capacity. Another alternative would be to replace the existing unit and allow the supply and return air ductwork to remain to serve the spaces that are currently air-conditioned. A second unit could be added at the Basement Level below the unconditioned spaces, where new supply and return air ductwork could be provided to serve this smaller unit and spaces at the First Level. and provide a new smaller unit to serve the entire for the unconditioned space. New supply and return ductwork could be provided for the unconditioned space sized to handle the airflow for the smaller unit.

Registers and Grilles

The existing registers and grilles in the house are residential-grade metal louvered registers. Historically, the house would not have had a mechanical ventilation system, and the first HVAC system was likely installed int he 1970s as part of the Donze rehabilitation work.

The existing registers are low profile but do impact the historic appearance of the space. For future rehabilitation, registers and vents that are flush with the flooring or baseboards and that can be partially concealed by finishes can be considered. The free air capacity of these vents is typically lower than that of a traditional louvered register; this should be considered with the replacement of the furnace and AC system.

ELECTRICAL SYSTEMS

Electrical Service

It is recommended to leave in place the existing indoor Square 'D', 240/120-volt, single-phase, 200-amp, flush-mounted electrical load center and make electrical improvements to it.

- Remove the existing 20-amp, 1-pole, circuit breakers serving lighting and receptacle loads, and provide arc fault circuit interrupter (AFCI) circuit breakers for the branch circuit over current protection. AFCI breakers are designed to protect against fires caused by electrical arc faults.
- Provide ground fault circuit interrupter (GFCI) circuit breakers where required by the current National Electrical Code (NEC). GFCI breakers can reduce the possibility of electrocution, electrical burns, and electrical shock.
- Provide a new typed panel circuit directory for the existing load center.
- Provide a surge protective device (SPD) on the existing load center. SPDs can stop or reduce power surges caused by voltage spikes and protect electrical equipment from damage.

Grounding

On the existing load center, it is recommended to install an additional grounding electrode system connection to the metallic water service with Bare #4 A.W.G. copper ground wire in 3/4" conduit to comply with NEC Article 250.50..

Provide an intersystem bonding termination device (IBT) installed to bond the incoming communication utility services. A Bare #6 A.W.G. copper grounding conductor in 3/4" conduit will be routed from the IBT to the existing load center to comply with NEC Article 250.94.

Interior Wiring

It is recommended that the existing NM cable be replaced with metal clad (MC) cable. MC cable is a factory-made assembly with multiple insulated conductors enclosed in an armor of interlocking metal tape. The MC cable is more durable and less likely to get damaged as compared to NM cable. In areas, such as the crawl space, where electrical devices are surface-mounted to walls and



Figure 289. An iron French crusie or "Betty" oil lamp, 18th century, in the collection of the Metropolitan Museum of Art (Source: Metropolitan Museum of Art, Accession Number: X.270, www.metmuseum.org/art/collection/search/208805)



Figure 290. An American pewter oil lamp without shade, 1825-1850, in the collection of the Metropolitan Museum of Art (Source: Metropolitan Museum of Art, Accession Number: 16.116.12, www.metmuseum.org/art/collection/search/4681)

floor joists, then it is recommended to install individual conductors in electrical metallic tubing (EMT) conduit.

Lighting

The existing incandescent lighting fixtures should be replaced with new light-emitting diode (LED) type lighting fixtures for energy conservation. The new LED lighting fixtures should have the style and locations needed to complement the building improvements and intended usage.

Historically, evening lighting for the house would have been provided by small fixtures that held candles and oil lamps. At the end of the 18th century, free-standing and suspended crusie or "Betty" lamps would have been in common use by people of all classes all across the New World. Typically made of iron or brass, these lamps were easy to manufacture and were fueled by oil, which burned clearer and cleaner than candles or rushes and would have been preferred by those with sufficient means to afford imported lighting oil. By the early half of the 19th century, larger oil lamps with glass chimneys were widely manufactured in the United States and were readily available.

Period-appropriate lamps and artificial candles will likely not provide a sufficient level of ambient light for evening events but can be included for interpretation purposes. New lighting is recommended to be recognizably modern

in style but with a low profile to reduce the visual impact.

For ambient light, low profile "art gallery" track lighting can be strategically positioned to be concealed behind ceiling beams in most spaces to minimize the visual impact of the modern fixtures, similar to the ceiling-mounted fixtures in Room 108. The ability to position each individual lamp provides a high level of flexibility for diffused or targeted lighting to highlight the interior space and minimize the distraction of modern floor fixtures. In Rooms 108, 109, and 100, which are support spaces and not typically included in the interpretation of the house, the existing ceiling-mounted lighting can be modernized with LED fixtures or lamps for energy efficiency.

Devices (Switches and Receptacles)

Lighting control should be modified to be compatible with future building use. Additional receptacle locations may need to be added to support future building use needs. It is recommended to replace the existing wiring devices when the existing building wiring is replaced. The general-purpose receptacles shall be duplex Type 5-20R, 125-volt, 20-amp, 2-pole, 3-wire grounding, side-wired, specification-grade. Ground-fault circuit interrupter (GFCI) receptacles shall be duplex, Type 5-20R,

125-volt, 20-amp, 2-pole, 3-wire grounding, side-wired, specification-grade. GFCI receptacles shall be used outdoors, in the crawl space, in the kitchen, and in the restroom.

Communications

Depending on the future use of the building, it is recommended to extend the existing fiber optic line in the crawl space to a small rack-mounted patch panel. From the patch panel, Category 6A, copper, twisted pair data cables can be extended out to new communication outlets to serve future loads.

The new rack-mounted patch panel needs to be installed in a small closet or cabinet in a conditioned space.

Fire Alarm Systems

It is recommended to provide an addressable fire alarm system to the building. An addressable manual pull station would be provided in the crawl space and at one location on the first floor. Manual pull stations located in conditioned spaces can be the wireless type.

- An audible/visual signal would be provided in the crawl space and at one location on the first floor. An additional weatherproof audible/visual signal would be provided on the exterior of the building. Audible signals will be the horn type.
- An addressable smoke detector would be provided in each room that is conditioned and not subject to cooking vapors or water vapor, such as the modern kitchen and bathroom. The smoke detectors can be the wireless type.
- An addressable heat detector(s) would be installed in unconditioned spaces, such as the crawl space, attic, and unconditioned parts of the first floor. These would be wired devices.
- An addressable wireless heat detector would be installed in the modern kitchen and bathroom.

As an option, instead of providing fire alarm system smoke detectors and heat detectors, it is recommended to provide an aspirating-type, smoke detection system that would sample the air on all three levels and provide early smoke detection of the spaces. Refer to the “Alternative to Conventional Fire Suppression System” in the appendix for additional information.

Exit Lighting and Emergency Lighting

Depending on the future use of the building, exit lighting and egress lighting may be required to be installed. The egress lighting could be accomplished by utilizing the normal lighting fixtures, backed up by a small battery powered inverter. The exit lighting fixture could have back-up battery power from an inverter system or individual, self-contained batteries.

Intrusion Alarm System

It is recommended to provide an intrusion alarm system to the building. The intrusion alarm motion detectors in conditioned spaces could be the wireless-type.

Lightning Protection System

It is recommended to provide a lightning protection system to the building; however, the visible lightning arrestors on the roof and the grounding conductors routed down the outside of the building to ground rods would be visible on the sides of the building and may be objectionable to look at.

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Mercantile Library at St. Louis University

Ste. Genevieve Archive in the Missouri State Historical Society

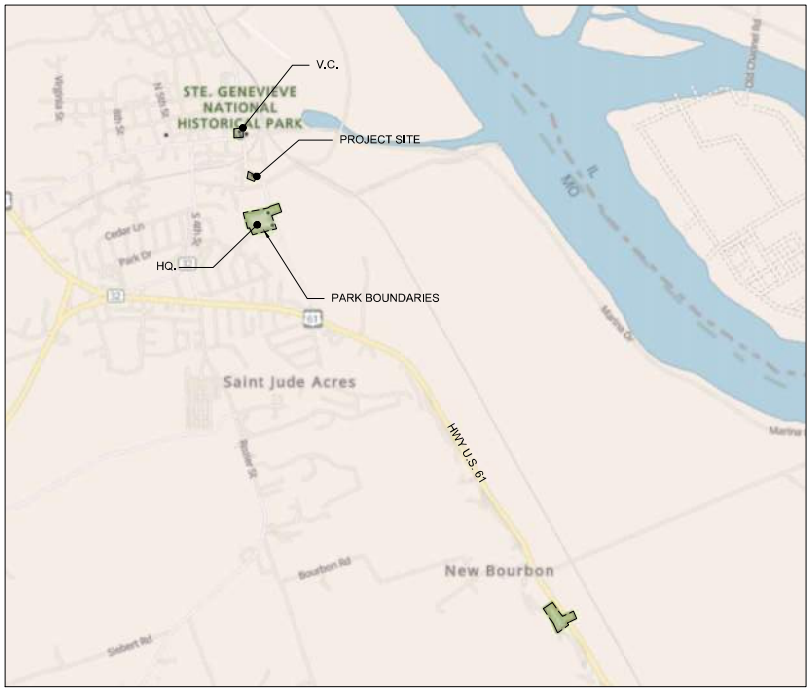
Ste. Genevieve County Courthouse

Ste. Genevieve Museum and Learning Center

Felix Vallé House State Historic Site

National Park Service Website Files

Appendix A:
Existing Condition Drawings



STE. GENEVIEVE, MISSOURI

LEGEND

V.C.	VISITOR CENTER
HQ.	PARK HEADQUARTERS
– – –	PARK BOUNDARIES

SCALE OF FEET
2000 1000 500 0 500 1000 2000
1000 500 0 500 1000
SCALE OF METERS



JANIS-ZIEGLER HOUSE PROJECT SITE

SCALE OF FEET
100 50 0 50 100
30 20 10 0 10 20 30
SCALE OF METERS



LIST OF DRAWINGS

G0.0 COVER SHEET
G0.1 SITE PLAN

A1.0 BASEMENT PLAN
A1.1 FIRST FLOOR PLAN
A1.2 ROOF PLAN

A2.0 SOUTH ELEVATION
A2.1 EAST ELEVATION
A2.2 NORTH ELEVATION
A2.3 WEST ELEVATION

A3.0 BUILDING SECTION
A3.1 BUILDING SECTION
A3.2 BUILDING SECTION
A3.3 BUILDING SECTION
A3.4 BUILDING SECTION

A4.0 PERIOD PLANS
A4.1 PERIOD PLANS

EXISTING CONDITIONS
JANIS-ZIEGLER HOUSE

244 ST. MARYS ROAD, STE. GENEVIEVE, MISSOURI 63670
STE. GENEVIEVE NATIONAL HISTORICAL PARK
PMIS 311239

A/E FIRM	Mark	Sheet	REVISION	Date	Initial
PRIME/ARCH:	x	x	x	xx.xx.xx	xxx
RATHS, RATHS & JOHNSON, INC.					
500 Joliet Road, Suite 200 Willowbrook, Illinois 60527-5618					

QUALITY DESIGN CERTIFICATION
☐ Prepared in Accordance with Design Development (Title I)
OR
☐ Variance from Design Development (Title I) Approved by Superintendent on _____
OR
☐ Construction Drawing Not Preceded by Design Development (Title I)

Project Manager _____ Date _____

CONSTRUCTION DRAWINGS

UNITED STATES
DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE
DENVER SERVICE CENTER

TITLE OF DRAWING
EXISTING CONDITION DRAWINGS

LOCATION WITHIN PARK
JANIS-ZIEGLER HOUSE

NAME OF PARK
STE. GENEVIEVE NHP

REGION: MIDWEST | COUNTY: STE. GENEVIEVE | STATE: MISSOURI

DRAWING NO. - 80005
PMIS/PKG NO. 311239
SHEET 1 OF 16

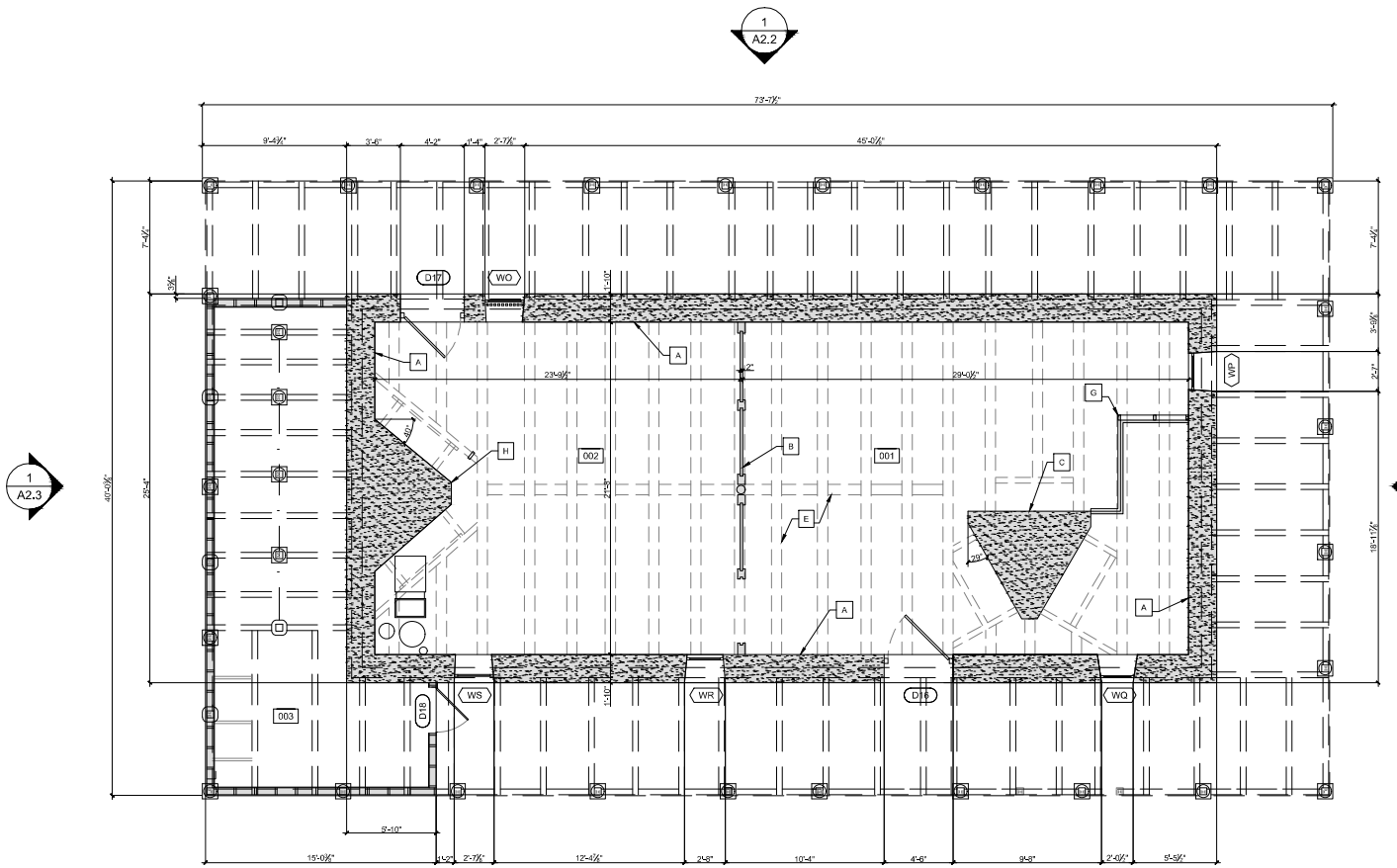
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1 G.01 SITE PLAN
SCALE: 1/8" = 1'-0"

A/E FIRM PRIME/ENG: RATHS, RATHS & JOHNSON, INC. 500 Joliet Road, Suite 200 Willowbrook, Illinois 60527-5618	DESIGNED: . CADD: LMB TECH. REVIEW: . DATE: 10/14/2024	SUB SHEET NO.: G.01	TITLE OF SHEET SITE PLAN JANIS-ZIEGLER HOUSE EXISTING CONDITONS STE. GENEVIEVE NATIONAL HISTORICAL PARK	DRAWING NO. . 80005 PMIS/PKG NO. 311239 SHEET 2 OF 16

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SHEET NOTES:

A. c. 1790 STONE MASONRY WALL
B. c. 1790 PIECE-SUR-PIECE PARTITION WALL
C. c. 1790 STONE AND BRICK CHIMNEY
D. c. 1790 VERTICAL LOG WALL
E. c. 1790 LOG FLOOR FRAMING
F. c. 1790 STUD WALL PARTITION
G. MID-19TH CENTURY PLANK PARTITION WALL
H. 1999 RECONSTRUCTED STONE/BRICK CHIMNEY
I. 1999 RECONSTRUCTED INTERIOR STAIR
J. 1999 RECONSTRUCTED LUMBER PARTITION WALLS
K. EXPOSED VERTICAL LOGS
L. 1999 CEDAR WEATHERBOARD SIDING
M. 1999 REPLACEMENT WINDOWS
N. POSSIBLY c. 1790 WOOD PANEL DOOR
O. 19th CENTURY WOOD PANEL DOOR
P. 2024 WOOD SHAKE ROOFING
Q. POSSIBLE LOCATION OF ORIGINAL STAIR (NOW MISSING)
R. LOCATION OF HISTORIC STAIR (NOW MISSING)

LEGEND:

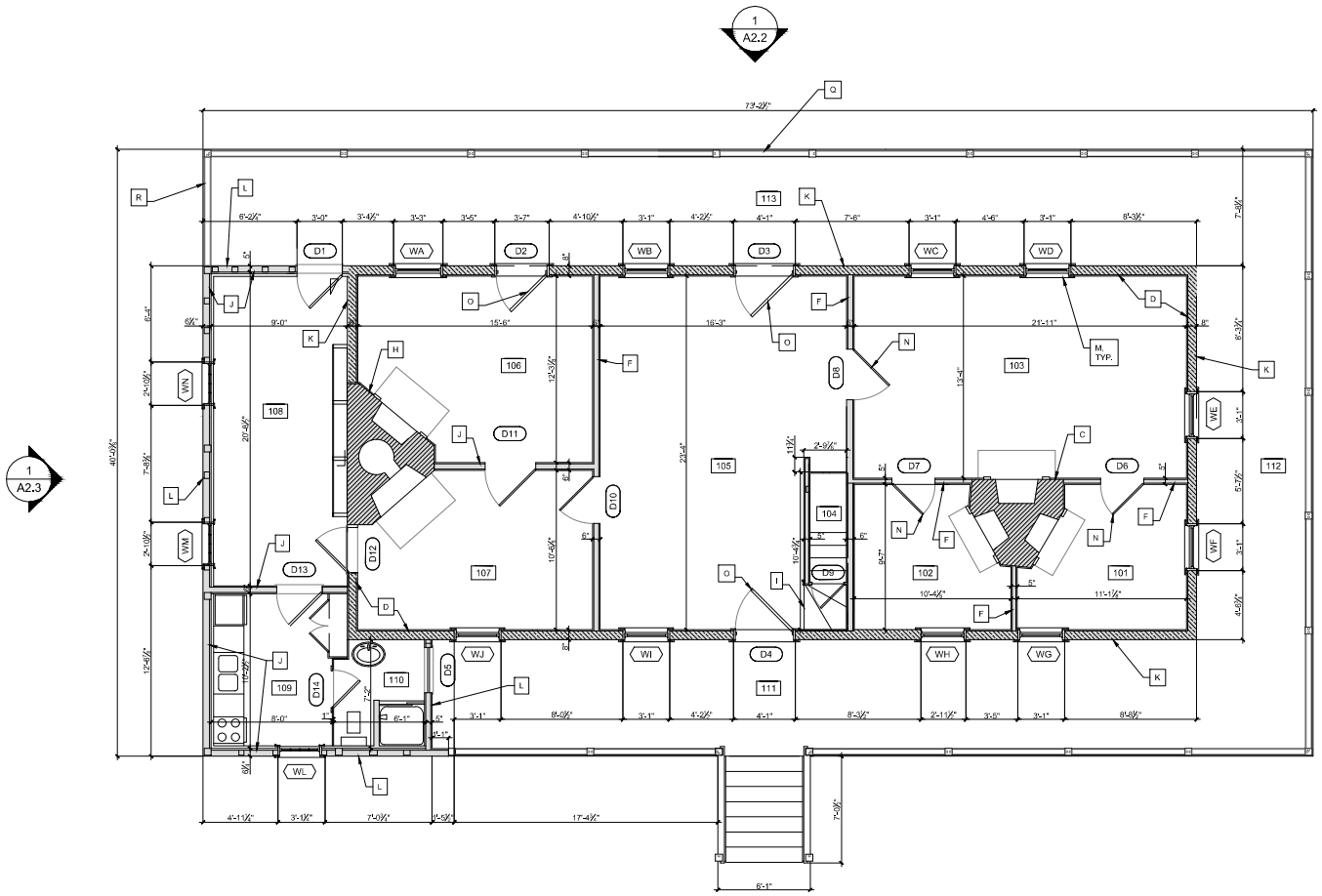
XXX ROOM DESIGNATION
WXXX WINDOW DESIGNATION
DXXX DOOR DESIGNATION
XX KEY NOTE

STONE MASONRY
BRICK MASONRY
TIMBER/LOG FRAME
STUD WALL
CONCRETE

1 A1.0 BASEMENT PLAN
SCALE: ¼" = 1'-0"

A/E FIRM	DESIGNED:	SUB SHEET NO.:	TITLE OF SHEET	DRAWING NO.
PRIME/ENG: RATHS, RATHS & JOHNSON, INC. 500 Joliet Road, Suite 200 Willowbrook, Illinois 60527-5618	CADD: LMB TECH. REVIEW: DATE: 10/14/2024	A1.0	BASEMENT PLAN JANIS-ZIEGLER HOUSE EXISTING CONDITONS STE. GENEVIEVE NATIONAL HISTORICAL PARK	80005 PMIS/PKG NO. 311239 SHEET 3 OF 16

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SHEET NOTES:

A. c. 1790 STONE MASONRY WALL
B. c. 1790 PIECE-SUR-PIECE PARTITION WALL
C. c. 1790 STONE AND BRICK CHIMNEY
D. c. 1790 VERTICAL LOG WALL
E. c. 1790 LOG FLOOR FRAMING
F. c. 1790 STUD WALL PARTITION
G. MID-19TH CENTURY PLANK PARTITION WALL
H. 1999 RECONSTRUCTED STONE/BRICK CHIMNEY
I. 1999 RECONSTRUCTED INTERIOR STAIR
J. 1999 RECONSTRUCTED LUMBER PARTITION WALLS
K. EXPOSED VERTICAL LOGS
L. 1999 CEDAR WEATHERBOARD SIDING
M. 1999 REPLACEMENT WINDOWS
N. POSSIBLY c. 1790 WOOD PANEL DOOR
O. 19th CENTURY WOOD PANEL DOOR
P. 2024 WOOD SHAKE ROOFING
Q. POSSIBLE LOCATION OF ORIGINAL STAIR (NOW MISSING)
R. LOCATION OF HISTORIC STAIR (NOW MISSING)

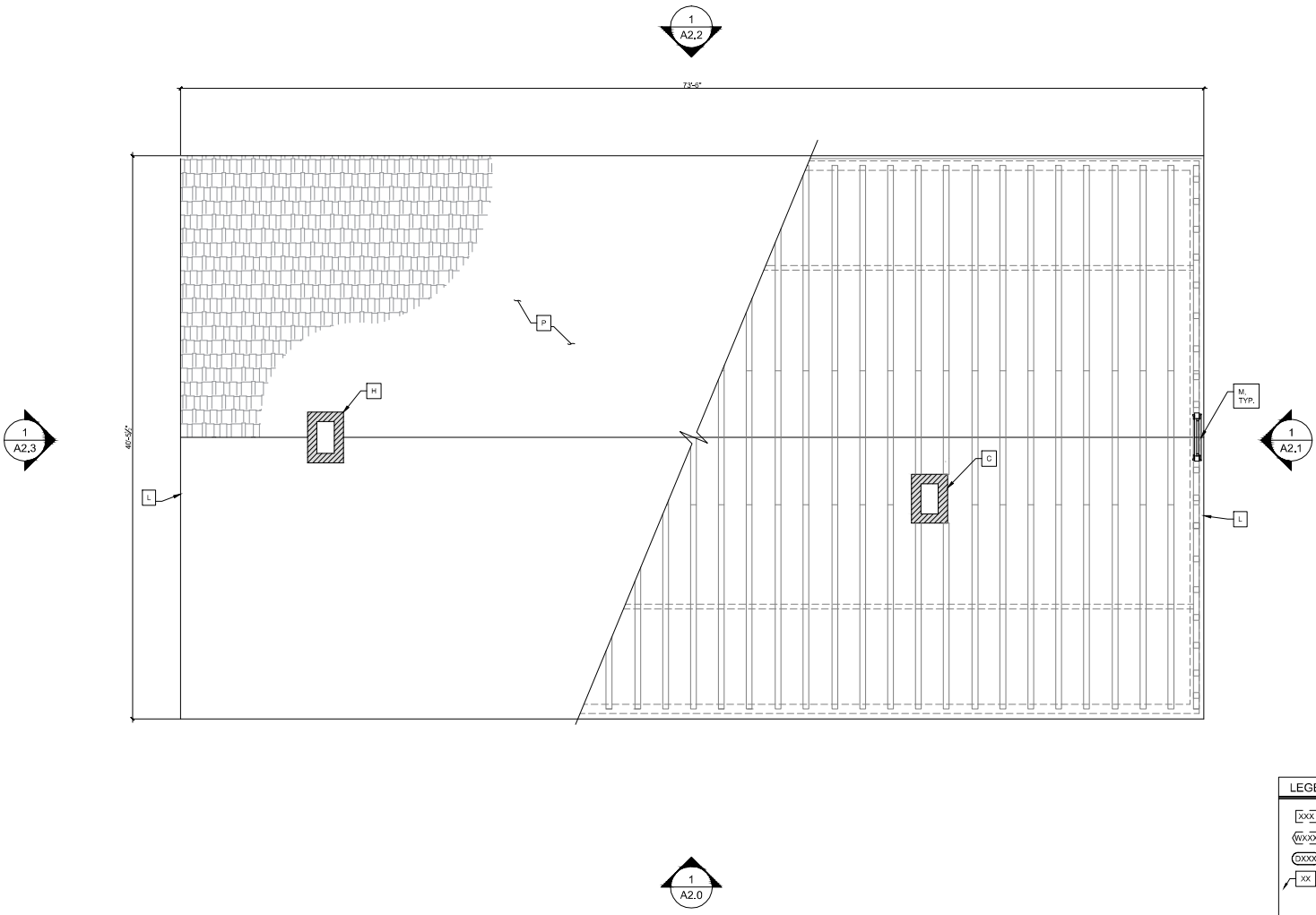
LEGEND:

- XXX — ROOM DESIGNATION
- WXXX — WINDOW DESIGNATION
- DXXX — DOOR DESIGNATION
- XX — KEY NOTE
- STONE MASONRY
- BRICK MASONRY
- TIMBER/LOG FRAME
- STUD WALL
- CONCRETE

1 A1.1 FIRST FLOOR PLAN
SCALE: ¼" = 1'-0"

A/E FIRM PRIME/ENG: RATHS, RATHS & JOHNSON, INC. 500 Joliet Road, Suite 200 Willowbrook, Illinois 60527-5618	DESIGNED: . CADD: LMB TECH. REVIEW: . DATE: 10/14/2024	SUB SHEET NO.: A1.1	TITLE OF SHEET FIRST FLOOR PLAN JANIS-ZIEGLER HOUSE EXISTING CONDITONS STE. GENEVIEVE NATIONAL HISTORICAL PARK	DRAWING NO. 80005 PMIS/PKG NO. 311239 SHEET 4 OF 16

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SHEET NOTES:

A. c. 1790 STONE MASONRY WALL
B. c. 1790 PIECE-SUR-PIECE PARTITION WALL
C. c. 1790 STONE AND BRICK CHIMNEY
D. c. 1790 VERTICAL LOG WALL
E. c. 1790 LOG FLOOR FRAMING
F. c. 1790 STUD WALL PARTITION
G. MID-19TH CENTURY PLANK PARTITION WALL
H. 1999 RECONSTRUCTED STONE/BRICK CHIMNEY
I. 1999 RECONSTRUCTED INTERIOR STAIR
J. 1999 RECONSTRUCTED LUMBER PARTITION WALLS
K. EXPOSED VERTICAL LOGS
L. 1999 CEDAR WEATHERBOARD SIDING
M. 1999 REPLACEMENT WINDOWS
N. POSSIBLY c. 1790 WOOD PANEL DOOR
O. 19th CENTURY WOOD PANEL DOOR
P. 2024 WOOD SHAKE ROOFING
Q. POSSIBLE LOCATION OF ORIGINAL STAIR (NOW MISSING)
R. LOCATION OF HISTORIC STAIR (NOW MISSING)

LEGEND:

XXX ROOM DESIGNATION
WXXX WINDOW DESIGNATION
DXXX DOOR DESIGNATION
XX KEY NOTE

STONE MASONRY
BRICK MASONRY
TIMBER/LOG FRAME
STUD WALL
CONCRETE

1 / A1.2 ROOF PLAN
SCALE: ¼" = 1'-0"

A/E FIRM PRIME/ENG: RATHS, RATHS & JOHNSON, INC. 500 Joliet Road, Suite 200 Willowbrook, Illinois 60527-5618	DESIGNED: . CADD: LMB TECH. REVIEW: . DATE: 10/14/2024	SUB SHEET NO.: A1.2	TITLE OF SHEET ROOF PLAN JANIS-ZIEGLER HOUSE EXISTING CONDITONS STE. GENEVIEVE NATIONAL HISTORICAL PARK	DRAWING NO. 80005 PMIS/PKG NO. 311239 SHEET 5 OF 16

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SHEET NOTES:

A. c. 1790 STONE MASONRY WALL
B. c. 1790 PIECE-SUR-PIECE PARTITION WALL
C. c. 1790 STONE AND BRICK CHIMNEY
D. c. 1790 VERTICAL LOG WALL
E. c. 1790 LOG FLOOR FRAMING
F. c. 1790 STUD WALL PARTITION
G. MID-19TH CENTURY PLANK PARTITION WALL
H. 1999 RECONSTRUCTED STONE/BRICK CHIMNEY
I. 1999 RECONSTRUCTED INTERIOR STAIR
J. 1999 RECONSTRUCTED LUMBER PARTITION WALLS
K. EXPOSED VERTICAL LOGS
L. 1999 CEDAR WEATHERBOARD SIDING
M. 1999 REPLACEMENT WINDOWS
N. POSSIBLY c. 1790 WOOD PANEL DOOR
O. 19th CENTURY WOOD PANEL DOOR
P. 2024 WOOD SHAKE ROOFING
Q. POSSIBLE LOCATION OF ORIGINAL STAIR (NOW MISSING)
R. LOCATION OF HISTORIC STAIR (NOW MISSING)

LEGEND:

XXX ROOM DESIGNATION
WXXX WINDOW DESIGNATION
DXXX DOOR DESIGNATION
XX KEY NOTE

STONE MASONRY
BRICK MASONRY
TIMBER/LOG FRAME
STUD WALL
CONCRETE

1 / A2.0 SOUTH ELEVATION
SCALE: 1/4" = 1'-0"

A/E FIRM PRIME/ENG: RATHS, RATHS & JOHNSON, INC. 500 Joliet Road, Suite 200 Willowbrook, Illinois 60527-5618	DESIGNED: . CADD: LMB TECH. REVIEW: . DATE: 10/14/2024	SUB SHEET NO.: A2.0	TITLE OF SHEET SOUTH ELEVATION JANIS-ZIEGLER HOUSE EXISTING CONDITONS STE. GENEVIEVE NATIONAL HISTORICAL PARK	DRAWING NO. 80005 PMIS/PKG NO. 311239 SHEET 6 OF 16

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1 / A2.1 EAST ELEVATION

SCALE: 1/4" = 1'-0"

0 1/4" 1/2" 1" 2"

SHEET NOTES:

A. c. 1790 STONE MASONRY WALL
B. c. 1790 PIECE-SUR-PIECE PARTITION WALL
C. c. 1790 STONE AND BRICK CHIMNEY
D. c. 1790 VERTICAL LOG WALL
E. c. 1790 LOG FLOOR FRAMING
F. c. 1790 STUD WALL PARTITION
G. MID-19TH CENTURY PLANK PARTITION WALL
H. 1999 RECONSTRUCTED STONE/BRICK CHIMNEY
I. 1999 RECONSTRUCTED INTERIOR STAIR
J. 1999 RECONSTRUCTED LUMBER PARTITION WALLS
K. EXPOSED VERTICAL LOGS
L. 1999 CEDAR WEATHERBOARD SIDING
M. 1999 REPLACEMENT WINDOWS
N. POSSIBLY c. 1790 WOOD PANEL DOOR
O. 19th CENTURY WOOD PANEL DOOR
P. 2024 WOOD SHAKE ROOFING
Q. POSSIBLE LOCATION OF ORIGINAL STAIR (NOW MISSING)
R. LOCATION OF HISTORIC STAIR (NOW MISSING)

LEGEND:

XXX ROOM DESIGNATION
WXXX WINDOW DESIGNATION
DXXX DOOR DESIGNATION
XX KEY NOTE

STONE MASONRY
BRICK MASONRY
TIMBER/LOG FRAME
STUD WALL
CONCRETE

A/E FIRM	DESIGNED:	SUB SHEET NO.:	TITLE OF SHEET	DRAWING NO.
PRIME/ENG: RATHS, RATHS & JOHNSON, INC. 500 Joliet Road, Suite 200 Willowbrook, Illinois 60527-5618	. CADD: LMB TECH. REVIEW: . DATE: 10/14/2024	A2.1	EAST ELEVATION JANIS-ZIEGLER HOUSE EXISTING CONDITONS STE. GENEVIEVE NATIONAL HISTORICAL PARK	. 80005 PMIS/PKG NO. 311239 SHEET 7 OF 16

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1 A2.2 NORTH ELEVATION

SCALE: 1/4" = 1'-0"

0 1/4" 1/2" 1" 2"

SHEET NOTES:

A. c. 1790 STONE MASONRY WALL
B. c. 1790 PIECE-SUR-PIECE PARTITION WALL
C. c. 1790 STONE AND BRICK CHIMNEY
D. c. 1790 VERTICAL LOG WALL
E. c. 1790 LOG FLOOR FRAMING
F. c. 1790 STUD WALL PARTITION
G. MID-19TH CENTURY PLANK PARTITION WALL
H. 1999 RECONSTRUCTED STONE/BRICK CHIMNEY
I. 1999 RECONSTRUCTED INTERIOR STAIR
J. 1999 RECONSTRUCTED LUMBER PARTITION WALLS
K. EXPOSED VERTICAL LOGS
L. 1999 CEDAR WEATHERBOARD SIDING
M. 1999 REPLACEMENT WINDOWS
N. POSSIBLY c. 1790 WOOD PANEL DOOR
O. 19th CENTURY WOOD PANEL DOOR
P. 2024 WOOD SHAKE ROOFING
Q. POSSIBLE LOCATION OF ORIGINAL STAIR (NOW MISSING)
R. LOCATION OF HISTORIC STAIR (NOW MISSING)

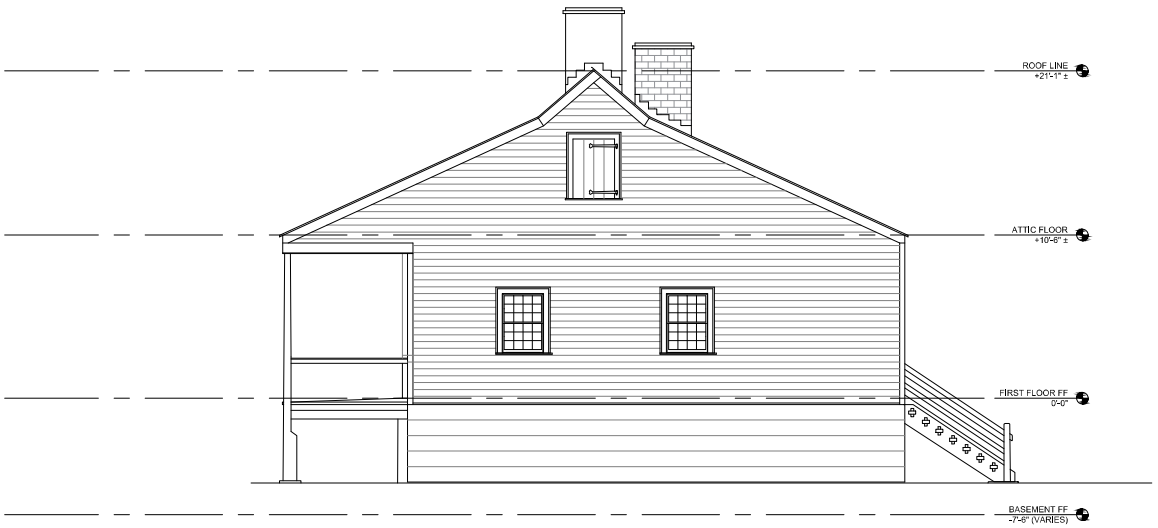
LEGEND:

XXX ROOM DESIGNATION
WXXX WINDOW DESIGNATION
DXXX DOOR DESIGNATION
XX KEY NOTE

STONE MASONRY
BRICK MASONRY
TIMBER/LOG FRAME
STUD WALL
CONCRETE

A/E FIRM	DESIGNED:	SUB SHEET NO.:	TITLE OF SHEET	DRAWING NO.
PRIME/ENG: RATHS, RATHS & JOHNSON, INC. 500 Joliet Road, Suite 200 Willowbrook, Illinois 60527-5618	. CADD: LMB TECH. REVIEW: . DATE: 10/14/2024	A2.2	NORTH ELEVATION JANIS-ZIEGLER HOUSE EXISTING CONDITONS STE. GENEVIEVE NATIONAL HISTORICAL PARK	. 80005 PMIS/PKG NO. 311239 SHEET 8 OF 16

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1 A2.3 WEST ELEVATION

SCALE: ¼" = 1'-0"

0 ¼" ½" 1" 2"

SHEET NOTES:

A. c. 1790 STONE MASONRY WALL
B. c. 1790 PIECE-SUR-PIECE PARTITION WALL
C. c. 1790 STONE AND BRICK CHIMNEY
D. c. 1790 VERTICAL LOG WALL
E. c. 1790 LOG FLOOR FRAMING
F. c. 1790 STUD WALL PARTITION
G. MID-19TH CENTURY PLANK PARTITION WALL
H. 1999 RECONSTRUCTED STONE/BRICK CHIMNEY
I. 1999 RECONSTRUCTED INTERIOR STAIR
J. 1999 RECONSTRUCTED LUMBER PARTITION WALLS
K. EXPOSED VERTICAL LOGS
L. 1999 CEDAR WEATHERBOARD SIDING
M. 1999 REPLACEMENT WINDOWS
N. POSSIBLY c. 1790 WOOD PANEL DOOR
O. 19th CENTURY WOOD PANEL DOOR
P. 2024 WOOD SHAKE ROOFING
Q. POSSIBLE LOCATION OF ORIGINAL STAIR (NOW MISSING)
R. LOCATION OF HISTORIC STAIR (NOW MISSING)

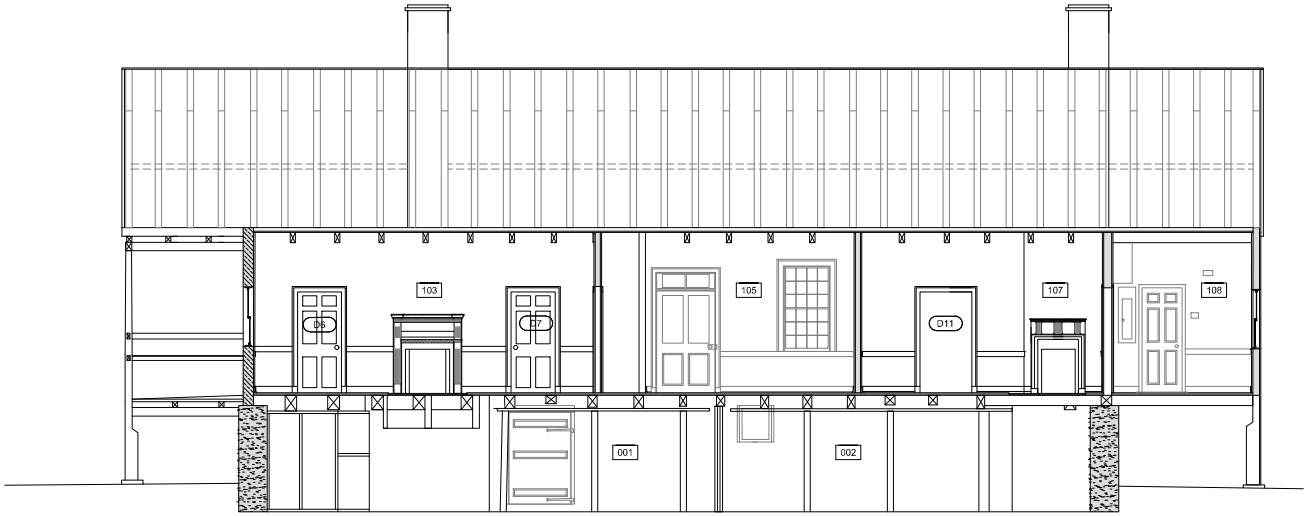
LEGEND:

XXX ROOM DESIGNATION
WXXX WINDOW DESIGNATION
DXXX DOOR DESIGNATION
XX KEY NOTE

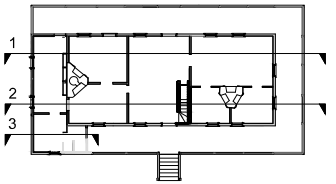
STONE MASONRY
BRICK MASONRY
TIMBER/LOG FRAME
STUD WALL
CONCRETE

A/E FIRM	DESIGNED:	SUB SHEET NO.:	TITLE OF SHEET	DRAWING NO.
PRIME/ENG: RATHS, RATHS & JOHNSON, INC. 500 Joliet Road, Suite 200 Willowbrook, Illinois 60527-5618	CADD: LMB TECH. REVIEW: DATE: 10/14/2024	A2.3	WEST ELEVATION JANIS-ZIEGLER HOUSE EXISTING CONDITONS STE. GENEVIEVE NATIONAL HISTORICAL PARK	80005 PMIS/PKG NO. 311239 SHEET 9 OF 16

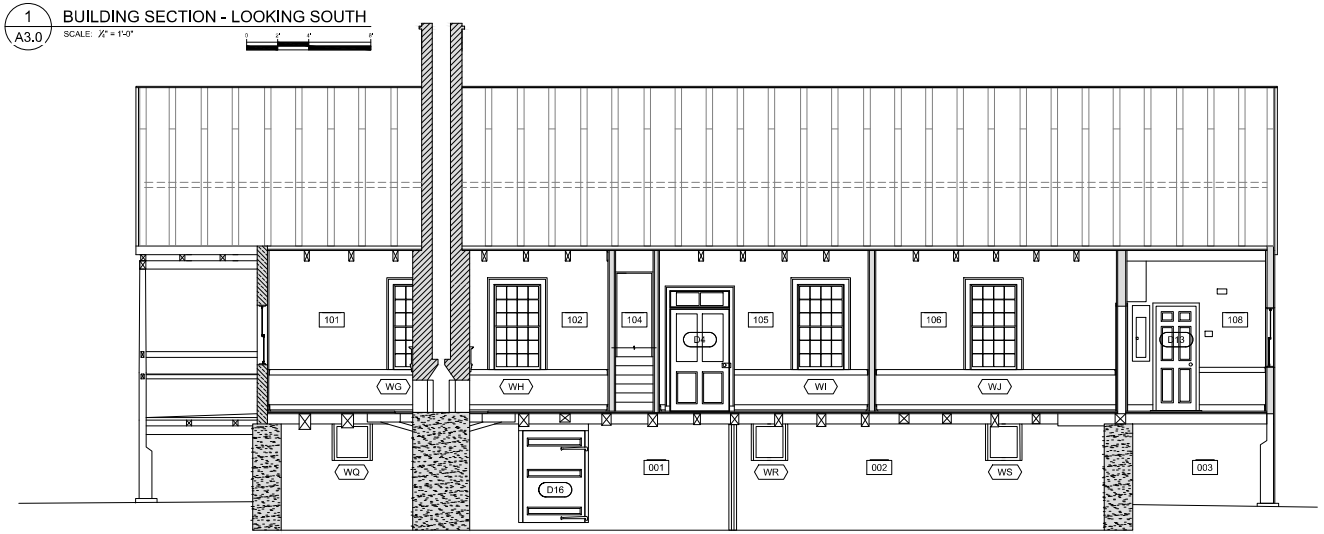
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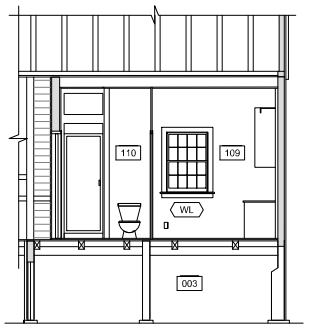


1 A3.0 BUILDING SECTION - LOOKING SOUTH
SCALE: 1/4" = 1'-0"



KEY PLAN



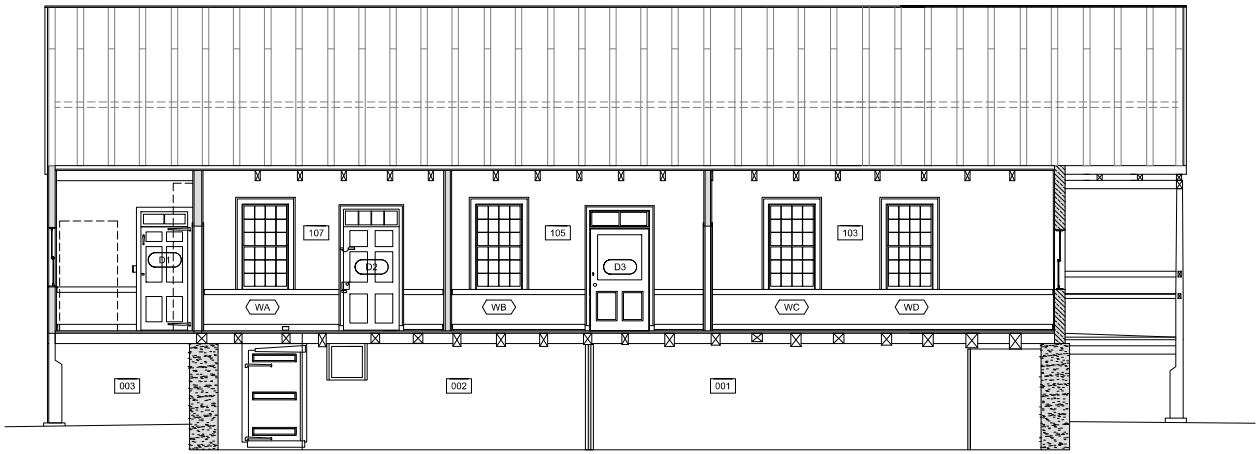


3 A3.0 BUILDING SECTION - LOOKING SOUTH
SCALE: 1/4" = 1'-0"

2 A3.0 BUILDING SECTION - LOOKING SOUTH
SCALE: 1/4" = 1'-0"

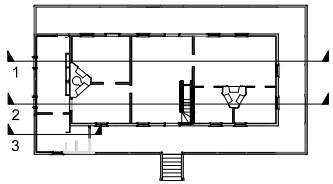
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PRIME/ENG: RATHS, RATHS & JOHNSON, INC. 500 Joliet Road, Suite 200 Willowbrook, Illinois 60527-5618	CADD: LMB	A3.0	BUILDING SECTION	80005
	TECH. REVIEW:		JANIS-ZIEGLER HOUSE EXISTING CONDITONS STE. GENEVIEVE NATIONAL HISTORICAL PARK	PMIS/PKG NO. 311239
	DATE: 10/14/2024			SHEET 10 OF 16

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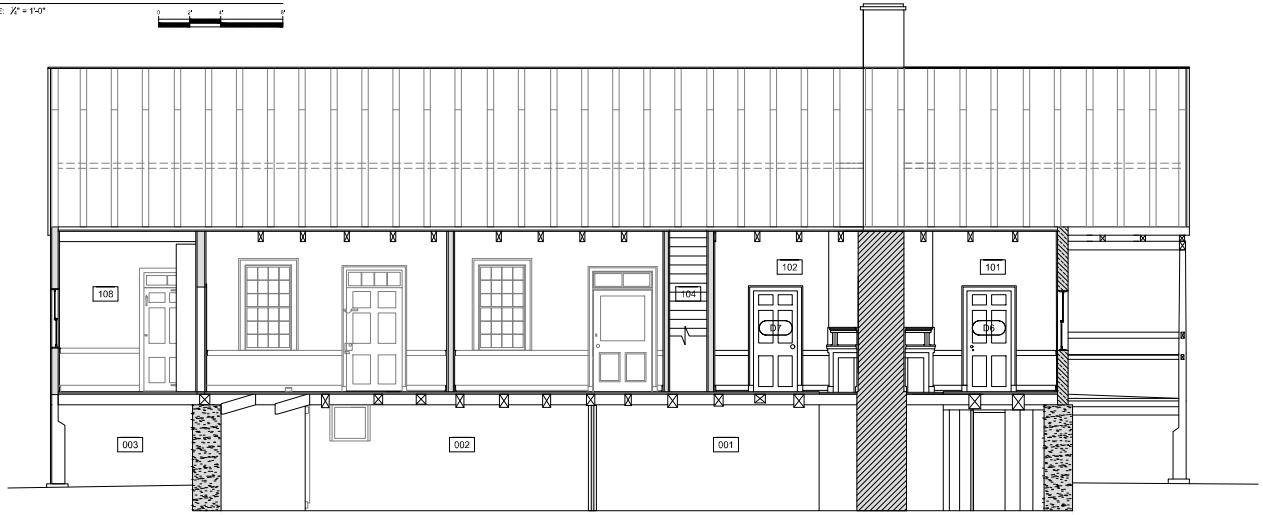


1 A3.1 BUILDING SECTION - LOOKING NORTH

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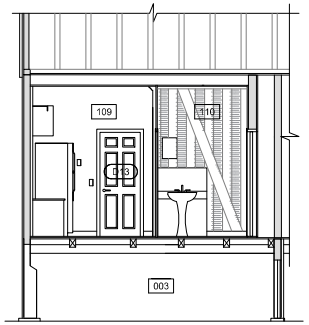


KEY PLAN



2 A3.1 BUILDING SECTION - LOOKING NORTH

SCALE: 1/4" = 1'-0"



3 A3.1 BUILDING SECTION - LOOKING NORTH

SCALE: 1/4" = 1'-0"

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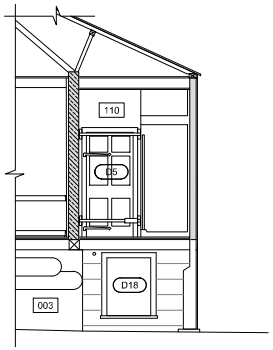
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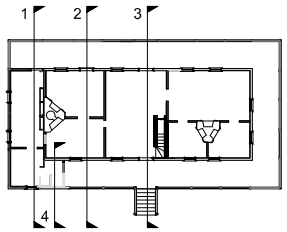
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SCALE: ¼" = 1'-0"



3 A3.2 BUILDING SECTION - LOOKING EAST
SCALE: ¼" = 1'-0"



4 A3.2 BUILDING SECTION - LOOKING EAST
SCALE: ¼" = 1'-0"



KEY PLAN

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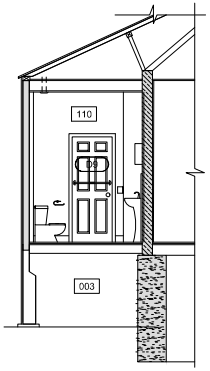
1 A3.3 BUILDING SECTION - LOOKING EAST
SCALE: 1/4" = 1'-0"



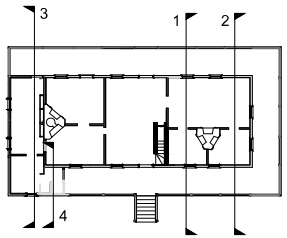
2 A3.3 BUILDING SECTION - LOOKING EAST
SCALE: 1/4" = 1'-0"



3 A3.3 BUILDING SECTION - LOOKING WEST
SCALE: 1/4" = 1'-0"



4 A3.3 BUILDING SECTION - LOOKING WEST
SCALE: 1/4" = 1'-0"



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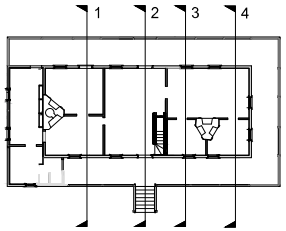
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1 A3.4 BUILDING SECTION - LOOKING WEST
SCALE: 1/4" = 1'-0"



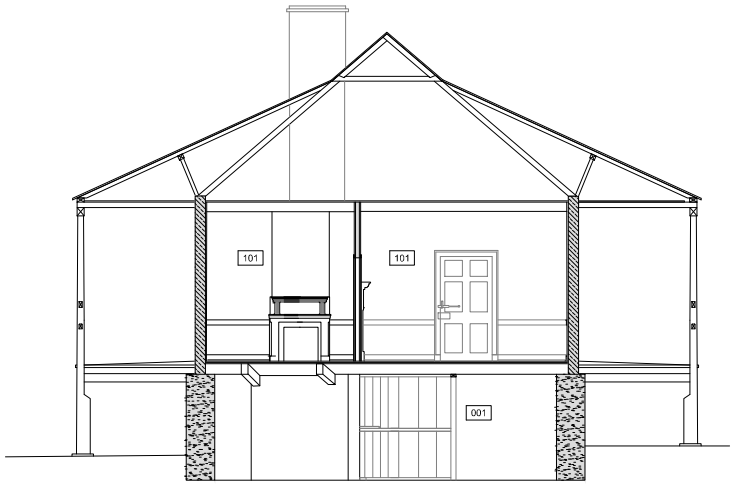
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KEY PLAN



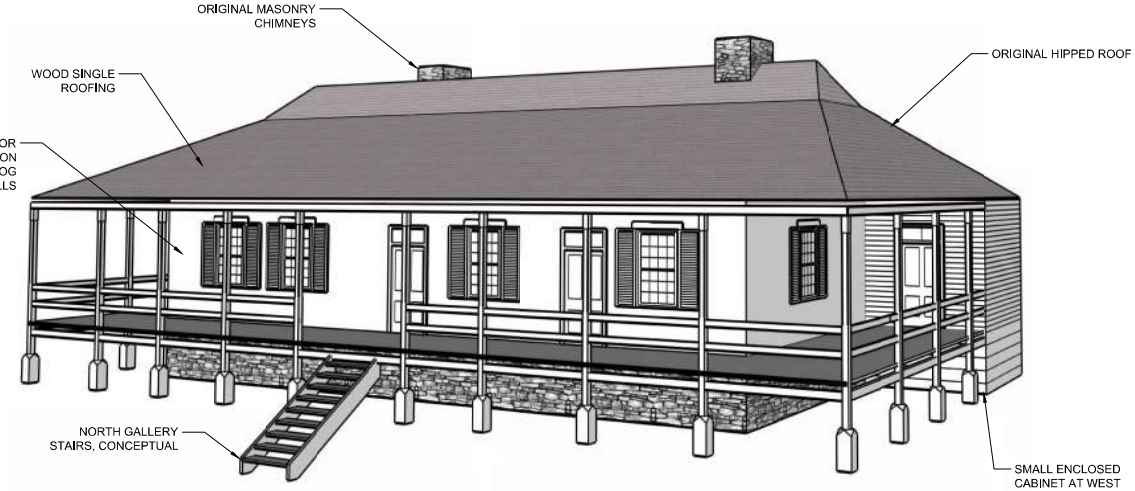
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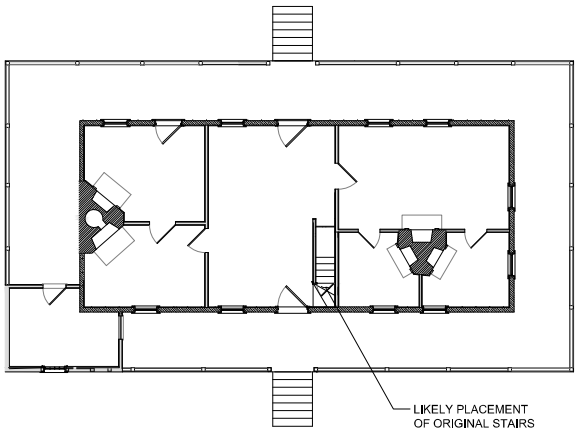


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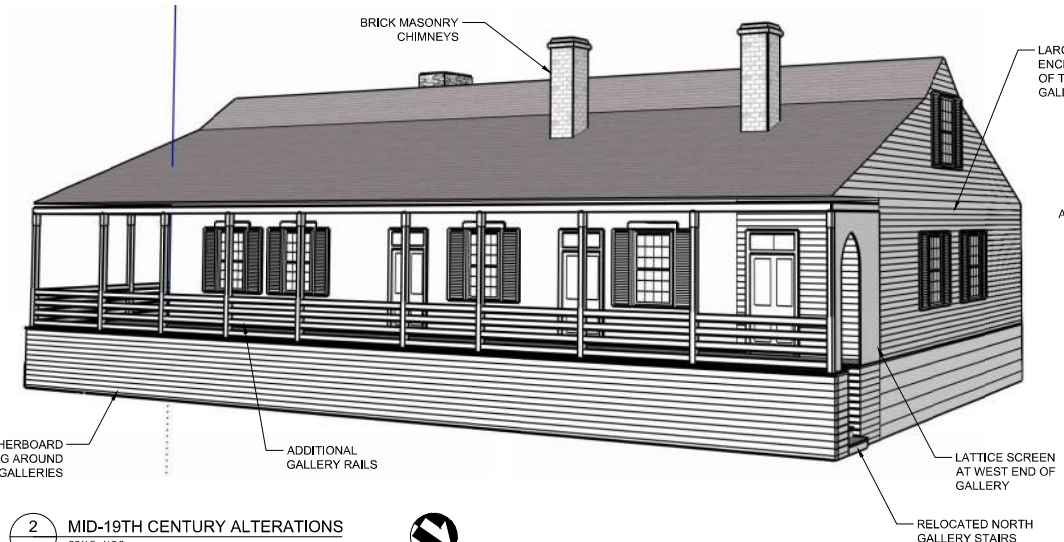
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	DATE: 10/14/2024			SHEET 14 OF 16

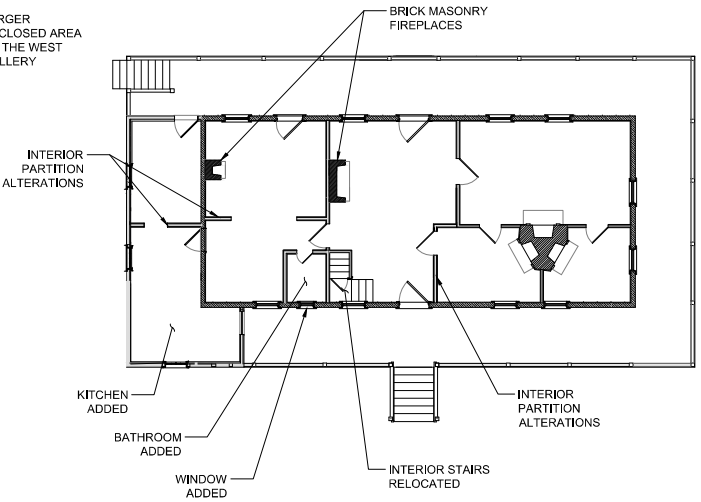
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1 A4.0 c. 1790 - ORIGINAL CONSTRUCTION
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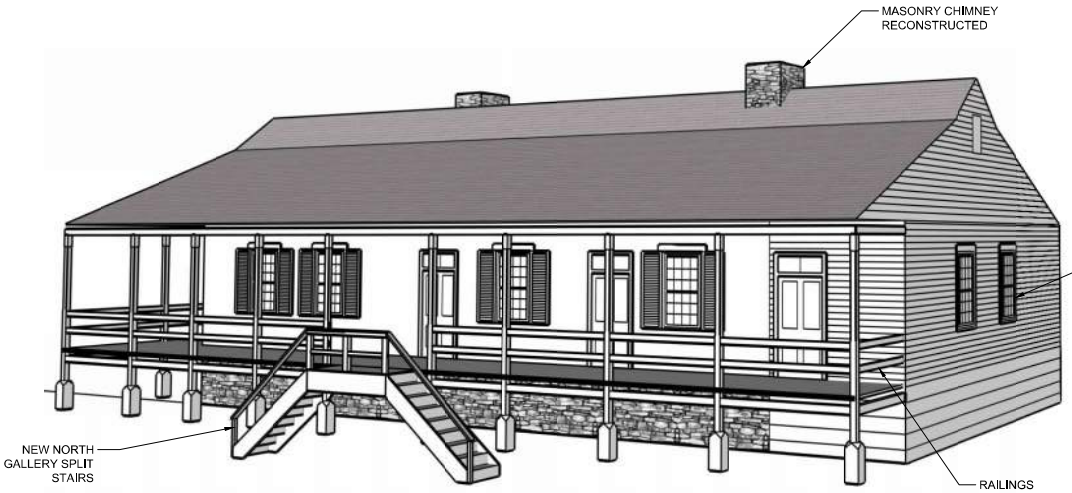




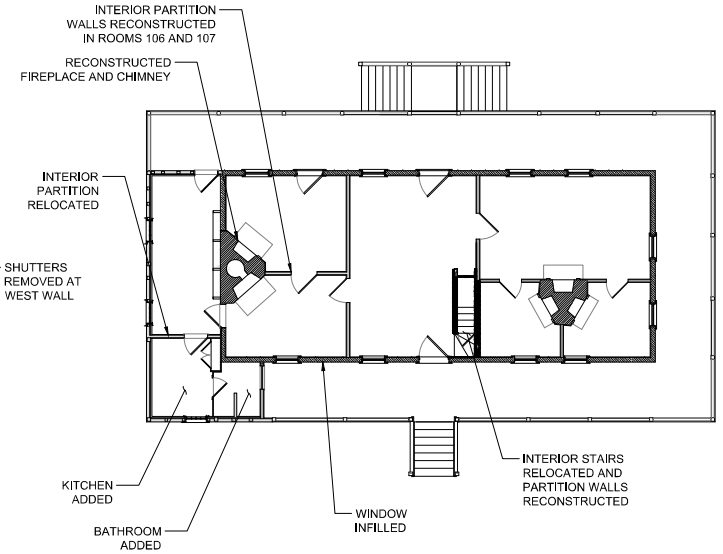
2 A4.0 MID-19TH CENTURY ALTERATIONS
SCALE: N.T.S.

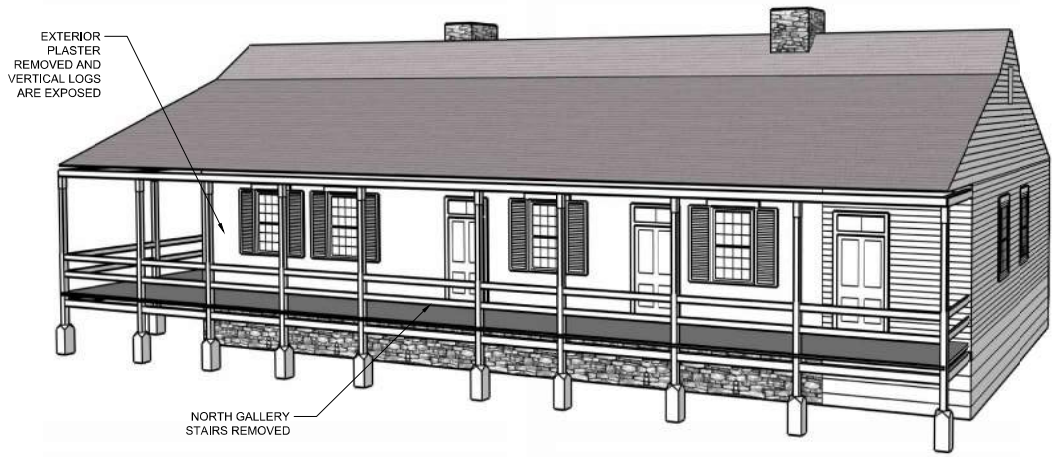
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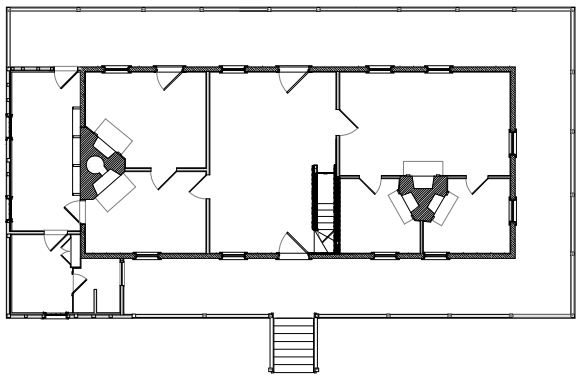


1 A4.1 2000 ALTERATIONS
SCALE: N.T.S.





2 A4.1 2024 EXISTING CONDITIONS
SCALE: N.T.S.



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Appendix B:
Historic Photographs



Figure 1. c. 1890s photograph, looking slightly southwest from the east side of South Gabouri Creek (without water) and St. Marys Road, showing the house and the stone wall. Note the lack of stairs on the primary facade. The west triangular fireplace was already removed by this time. (Source: Richard Deposki, Ste. Genevieve, Images of America)

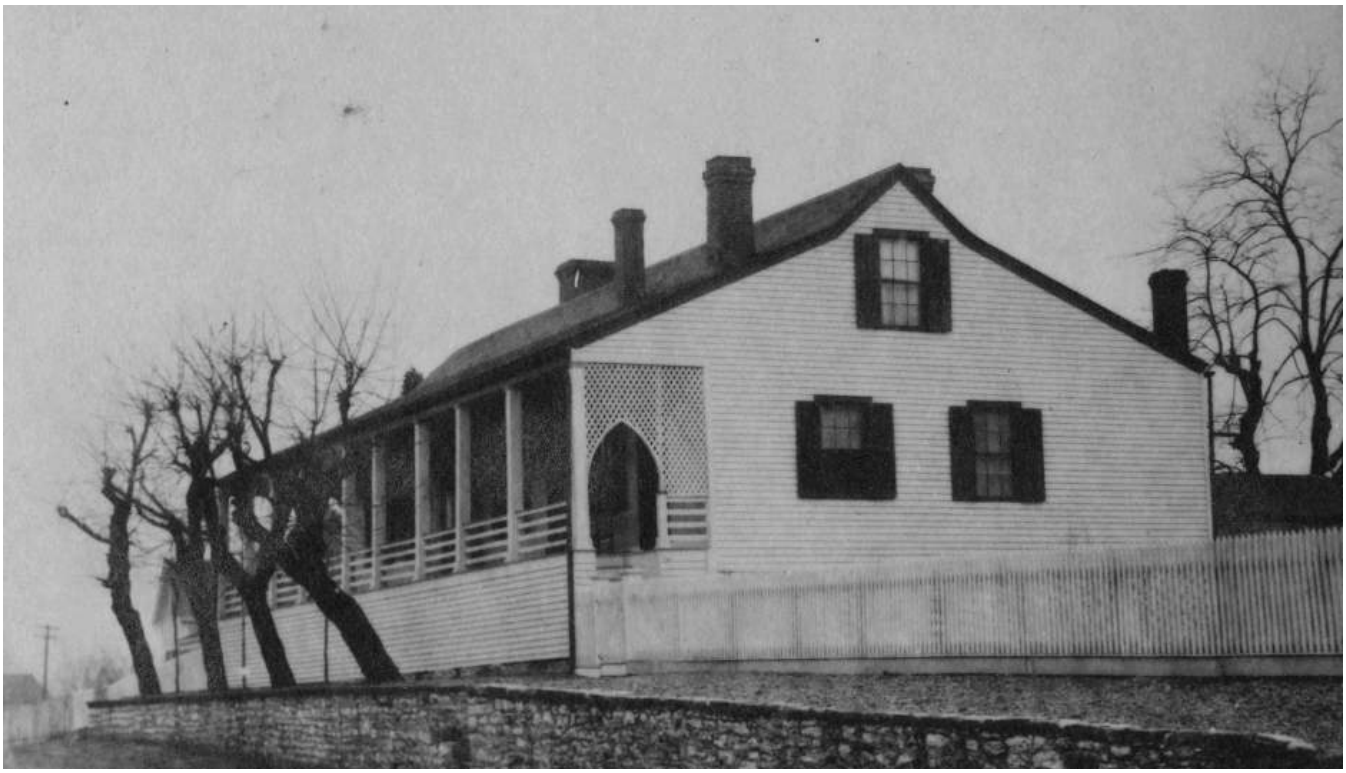


Figure 2. c. 1916 photograph, view of the north and west walls, showing a new picket fence and the same trees as seen in the c. 1890 photograph. The house appears freshly painted. (Source: "The Old Inn, Ste. Genevieve, built 1790", Ethel Massie Withers Collection, the State Historical Society of Missouri, collection no. C1440. https://digital.shsmo.org/digital/collection/imc/id/78497/rec/42)



Figure 3. 1930s postcard, looking east along St. Marys Road, showing the west end wall of the house and the stone wall. (Source: Missouri Printing and Sty Company, Cape Girardeau, Missouri)



Figure 4. c. 1930 postcard, looking southwest from across South Gabouri Creek. Note the 6-over-6 windows on the west wall. (Source: Auburn Greeting Card Company, Auburn, Indiana)



Figure 5. 1934 view of the south (rear) gallery and stairs. Note the plantings and walkways. (Source: HABS)



Figure 6. 1934 photograph, looking west along St Marys Road at the east and north galleries and stone retaining wall. Note the 6-over-6 window in the attic, but the 2-over-2 windows with screens at the main level. (Source: HABS)



Figure 8. c. 1936 photograph of the east gallery. (Source: Felix Vallé House State Historic Site, vertical file for the Janis-Ziegler House)



Figure 7. 1937 photograph, looking east along the north gallery. (Source: HABS)

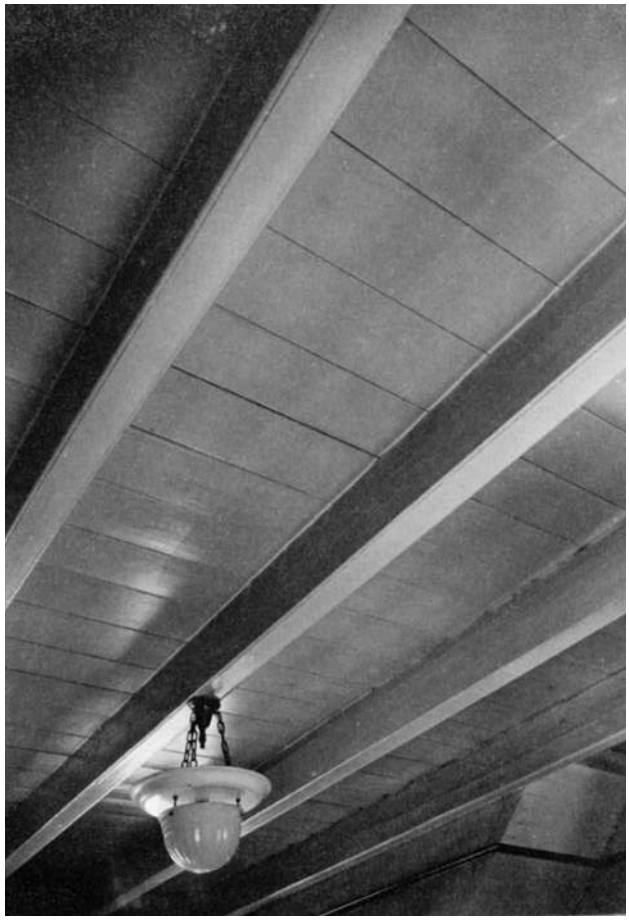


Figure 9. 1937 photograph, showing the wood plank ceiling and beams in Room 105, looking southwest. (Source: HABS)



Figure 10. 1937 photograph, showing the fireplace in Room 105, retrofitted with a late-19th century cast iron fire box. The wood mantel appears to be the same one currently in place. (Source: HABS)

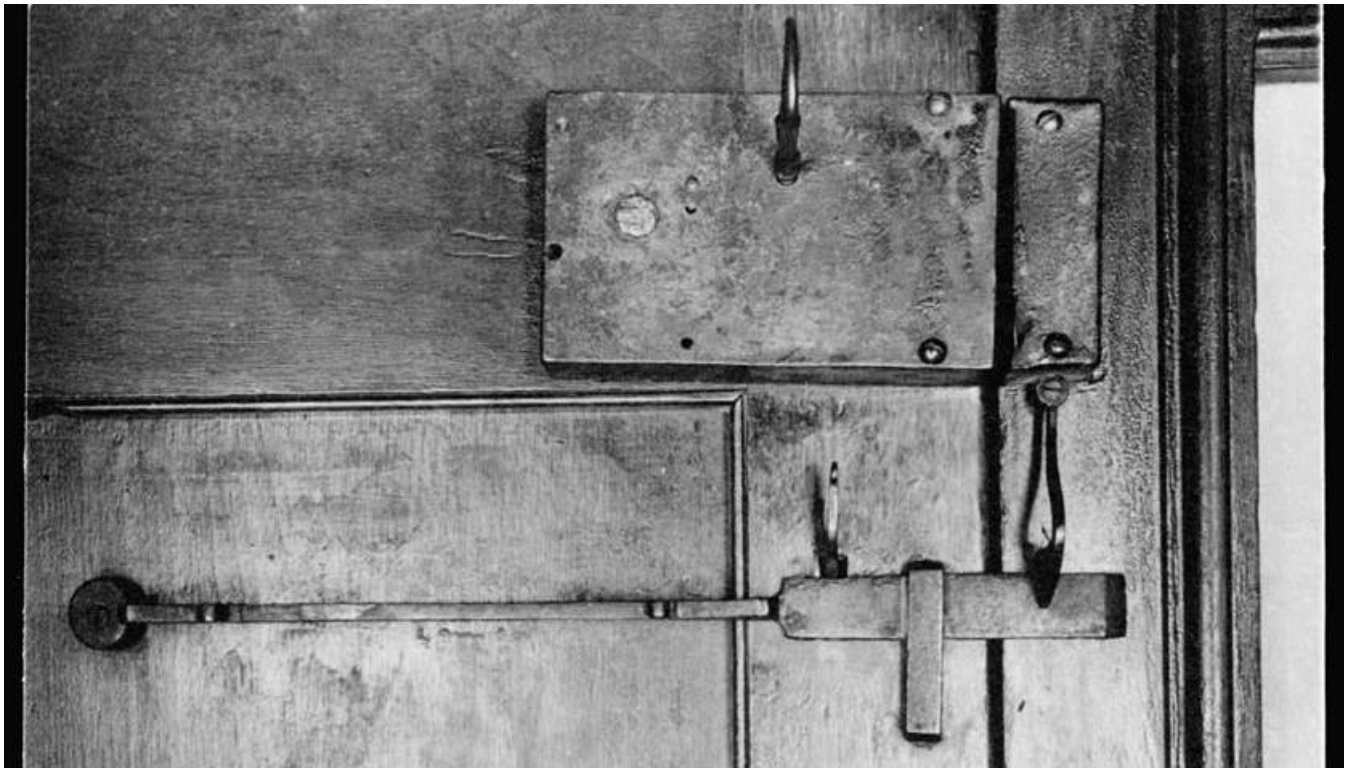


Figure 11. 1937 photograph of the lock on the east face of the door to Room 103. This lock and door are believed to date to c. 1790 and is still in place. (Source: HABS)



Figure 12. 1937 photograph of the east gallery. (Source: HABS)



Figure 13. 1959 photograph of the north and east galleries. Note the loss of two of the trees between the north gallery and the stone wall (Source: 1960/70 NHL nomination form)



Figure 14. 1967 photograph of the north and east galleries. (Source: 1960/70 NHL nomination form)



Figure 15. 1977 photograph of the north and east galleries. (Source: "Green Tree Tavern," *St. Louis Post Dispatch* (1977): n.p.)

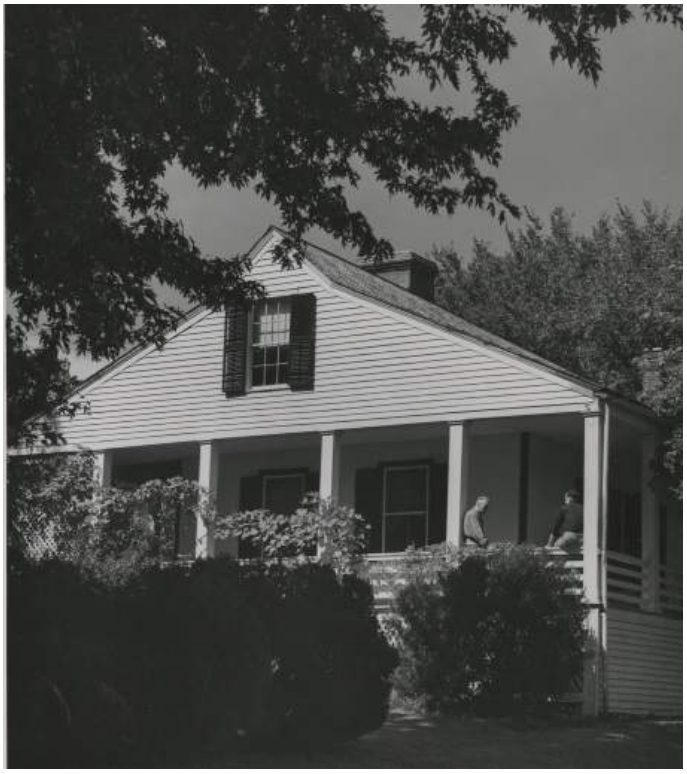


Figure 16. 1960 photograph of the east gallery, showing shingle roofing. (Source: "Green Tree Tavern." The State Historical Society of Missouri, collection no. P0030. https://digital.shsmo.org/digital/collection/imc/id/26588/rec/41)



Figure 17. 1980s photograph of the attic, looking east. (Source: Ste. Genevieve NHP archives)



Figure 18. 1980s photograph of the north and west galleries, showing galvanized metal panel roofing. (Source: Ste. Genevieve NHP archives)



Figure 19. 1980s photograph of the east gallery. (Source: Ste. Genevieve NHP archives)



Figure 20. 1980s photograph of the south gallery and stairs. (Source: Ste. Genevieve NHP archives)



Figure 21. 1980s photograph of the south and west galleries. Note the brick chimney in the corner of Room 109. This was removed during the 1990s restoration work. (Source: Ste. Genevieve NHP archives)



Figure 22. 1980s photograph, looking east along the stone retaining wall. (Source: Ste. Genevieve NHP archives)



Figure 23. 1980s photograph of the west wall. (Source: Ste. Genevieve NHP archives)

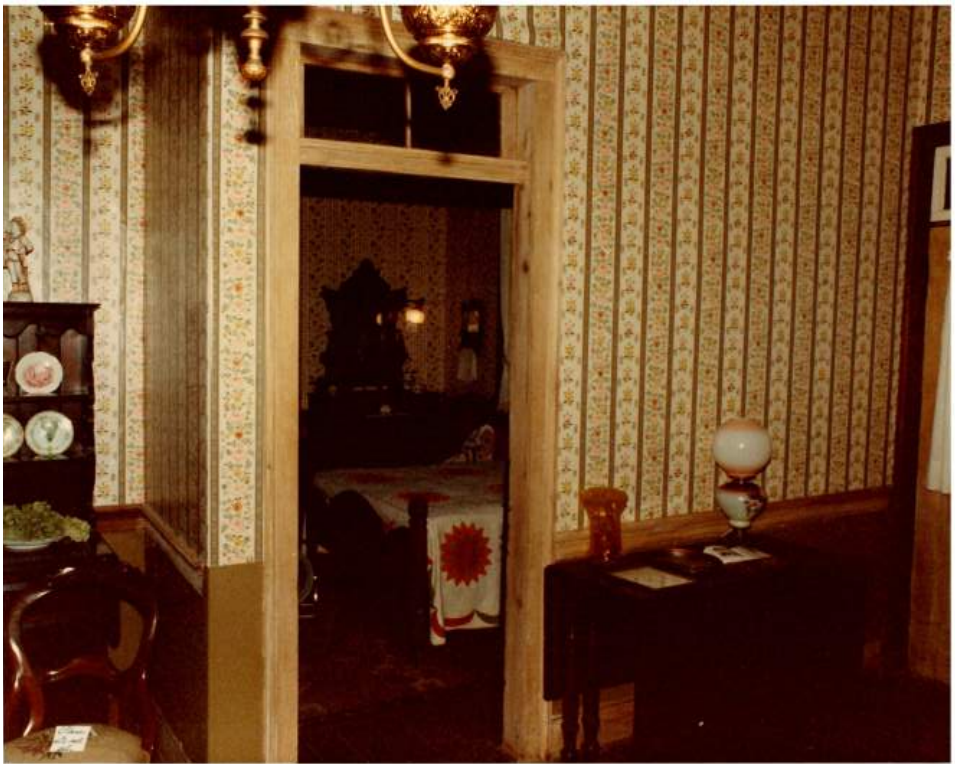


Figure 24. 1980s photograph of the east wall of Room 105, showing relocated partition walls where Room 104 was originally located. In this photo, the original between Rooms 102 and 104 was removed to create a single bedroom. (Source: Ste. Genevieve NHP archives)



Figure 25. 1980s photograph of Room 101, looking north into Room 105. (Source: Ste. Genevieve NHP archives)



Figure 26. 1980s photograph of Room 102, looking northwest. The door to Room 105 is on the right. (Source: Ste. Genevieve NHP archives)



Figure 27. 1980s photograph of Room 103, looking northeast. (Source: Ste. Genevieve NHP archives)



Figure 28. 1980s photograph of Room 105, looking west, showing the door into Room 106, which was subdivided and partially opened to Room 107. The stair structure was removed during the 1990s restoration work. (Source: Ste. Genevieve NHP archives)



Figure 29. 1980s photograph, standing on the stairs and looking northeast into Room 105. (Source: Ste. Genevieve NHP archives)



Figure 30. 1980s photograph of Room 105, looking northeast, showing the door into Room 103. (Source: Ste. Genevieve NHP archives)



Figure 31. 1980s photograph of Room 110, looking southeast into what is today the bathroom; at the time Rooms 109 and 110 were a single kitchen. (Source: Ste. Genevieve NHP archives)



Figure 32. 1980s photograph of Room 109, looking northwest towards Room 108. Today, the kitchen counter and cabinets are on the left side of this photo. (Source: Ste. Genevieve NHP archives)



Figure 33. 1980s photograph of Room 109, looking southwest. The chimney that vented the stove was removed during the 1990s restoration work. (Source: Ste. Genevieve NHP archives)



Figure 34. 1980s photograph of Room 103, looking west towards the door to Room 105. Room 102 and the fireplace are to the left. (Source: Ste. Genevieve NHP archives)



Figure 35. 1980s photograph of Room 105, looking southeast towards the door to Room 101. (Source: Ste. Genevieve NHP archives)



Figure 36. 1980s photograph of Room 102, looking east. This appears to be the fireplace mantle currently in place. (Source: Ste. Genevieve NHP archives)



Figure 37. 1980s photograph of Room 101, looking southwest. This appears to be the fireplace mantle currently in place. (Source: Ste. Genevieve NHP archives)



Figure 38. 1980s photograph of Room 101, looking south. (Source: Ste. Genevieve NHP archives)



Figure 39. 1980s photograph of Room 107, looking northeast. (Source: Ste. Genevieve NHP archives)

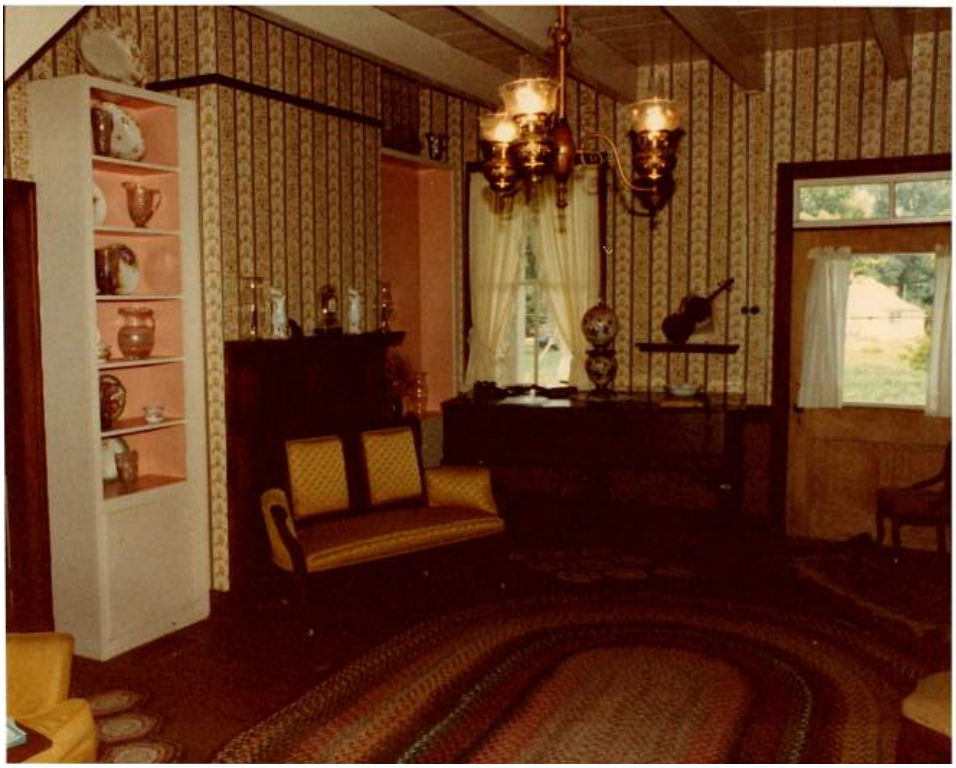


Figure 40. 1980s photograph of Room 105, looking north. The fireplace and chimney on the left behind the settee were removed during the 1990s restoration work. (Source: Ste. Genevieve NHP archives)



Figure 41. 1980s photograph of Room 107, looking northwest. The bricked-in fireplace and chimney on the left were removed during the 1990s restoration work. (Source: Ste. Genevieve NHP archives)



Figure 42. 1980s photograph of Room 107, looking south into Room 107. Note the double door opening where the original partition wall was removed. The partition was reinstalled during the 1990s restoration work. (Source: Ste. Genevieve NHP archives)



Figure 44. 1980s photograph of the attic looking north. (Source: Ste. Genevieve NHP archives)



Figure 43. 1984 photograph of the north and east galleries. (Source: Felix Vallé House State Historic Site, vertical file for the Janis-Ziegler House)



Figure 45. 1986 photograph of the north gallery from across South Gabouri Creek. Note that one historic tree remains in the lawn between the gallery and the stone retaining wall. (Source: HABS)

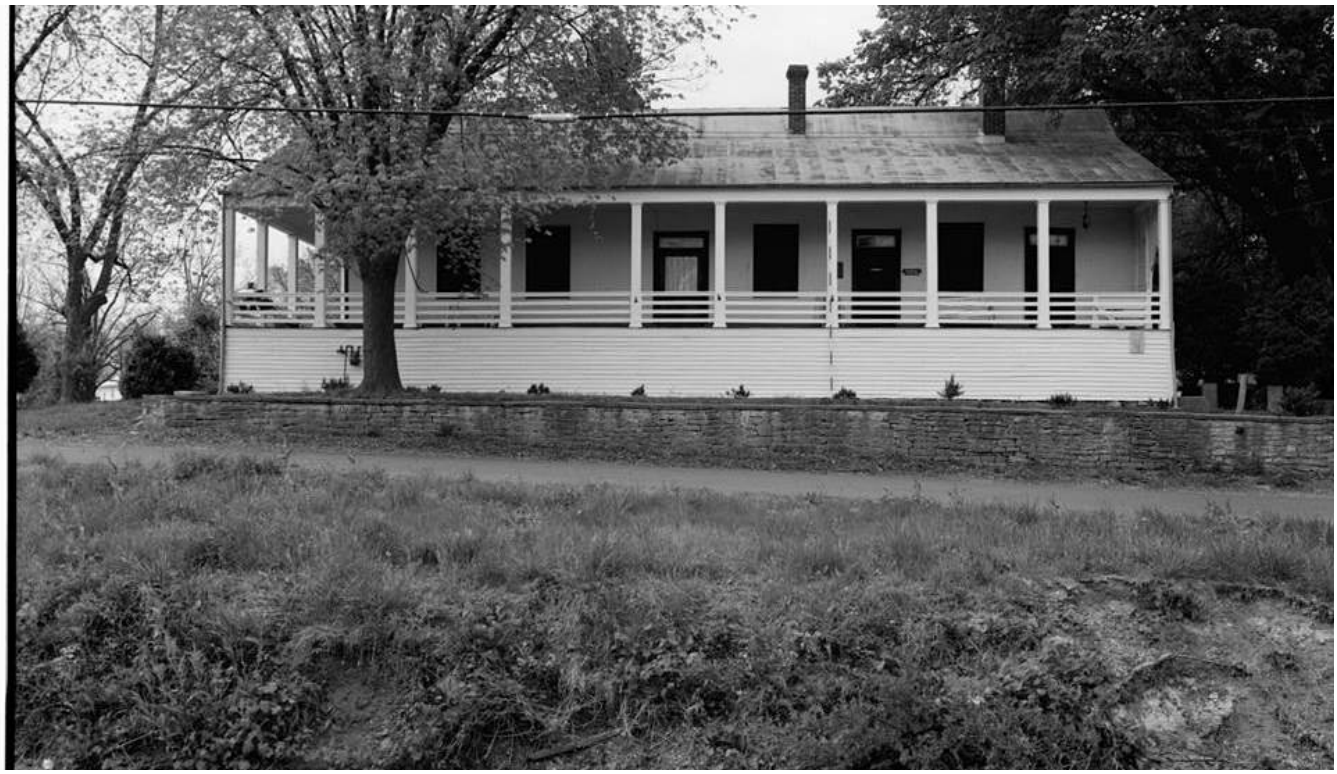


Figure 46. 1986 photograph of the north gallery from across South Gabouri Creek. (Source: HABS)



Figure 47. 1986 photograph, looking east along the stone retaining wall, showing the curved area of the wall that would be later removed. (Source: HABS)



Figure 48. 1986 photograph of the south gallery and stairs. (Source: HABS)



Figure 49. 1986 photograph, showing a 2-over-two window and paneled wood shutter, likely on the south gallery. (Source: HABS)

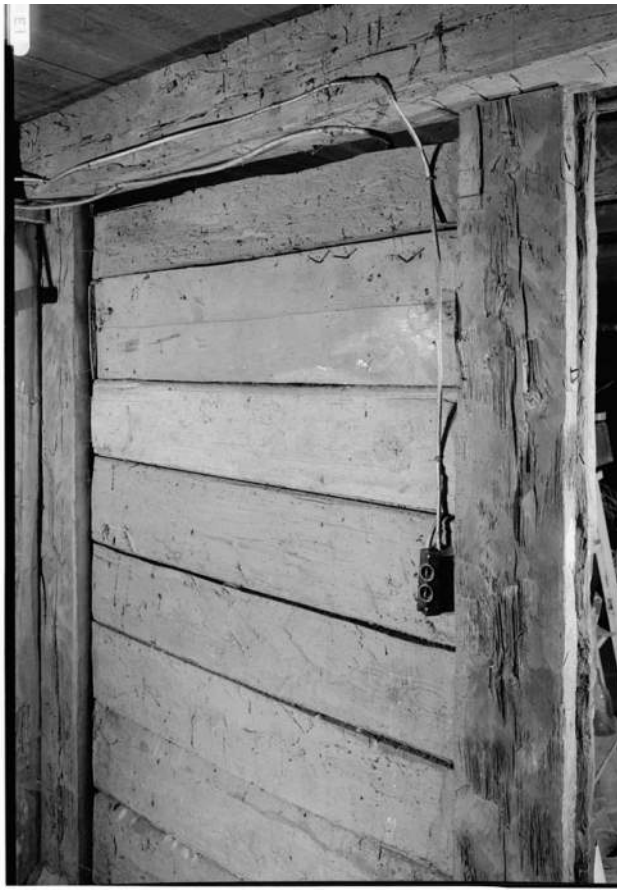


Figure 50. 1986 photograph of the c. 1790 pièce-en-pièce partition wall in the basement. (Source: HABS)



Figure 51. 1986 photograph of the c. 1790 door and lock in Room 103. (Source: HABS)

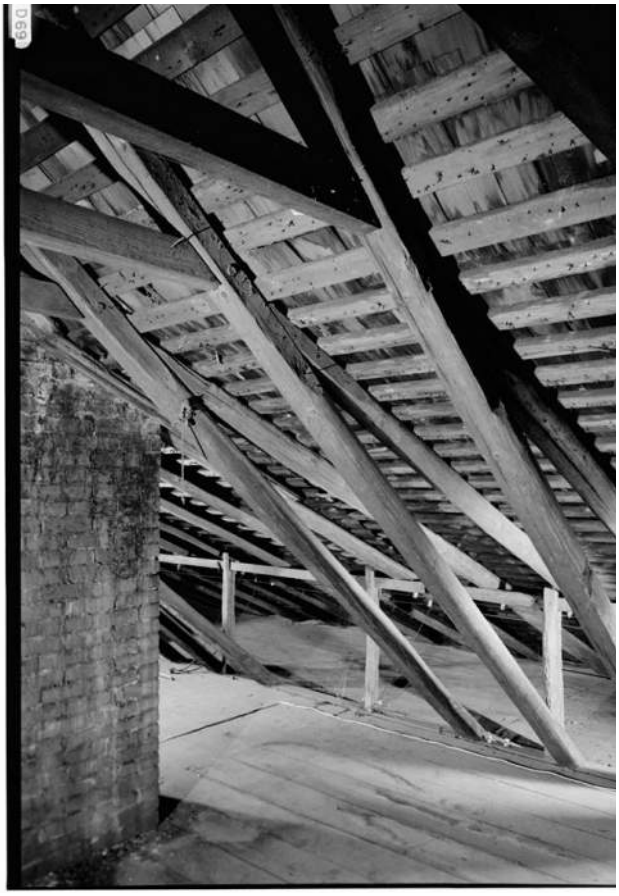


Figure 52. 1986 photograph of the roof framing, possibly looking southeast, with the eastern triangular fireplace at left. (Source: HABS)



Figure 54. 1986 photograph of the attic, looking west from above Room 103. (Source: HABS)



Figure 53. 1986 photograph of Room 105, looking west at the door to Room 106. (Source: HABS)



Figure 55. 1986 photograph of Room 103, looking east, with the door to Room 101 at right. (Source: HABS)



Figure 56. 1986 photograph of Room 102, looking east. (Source: HABS)

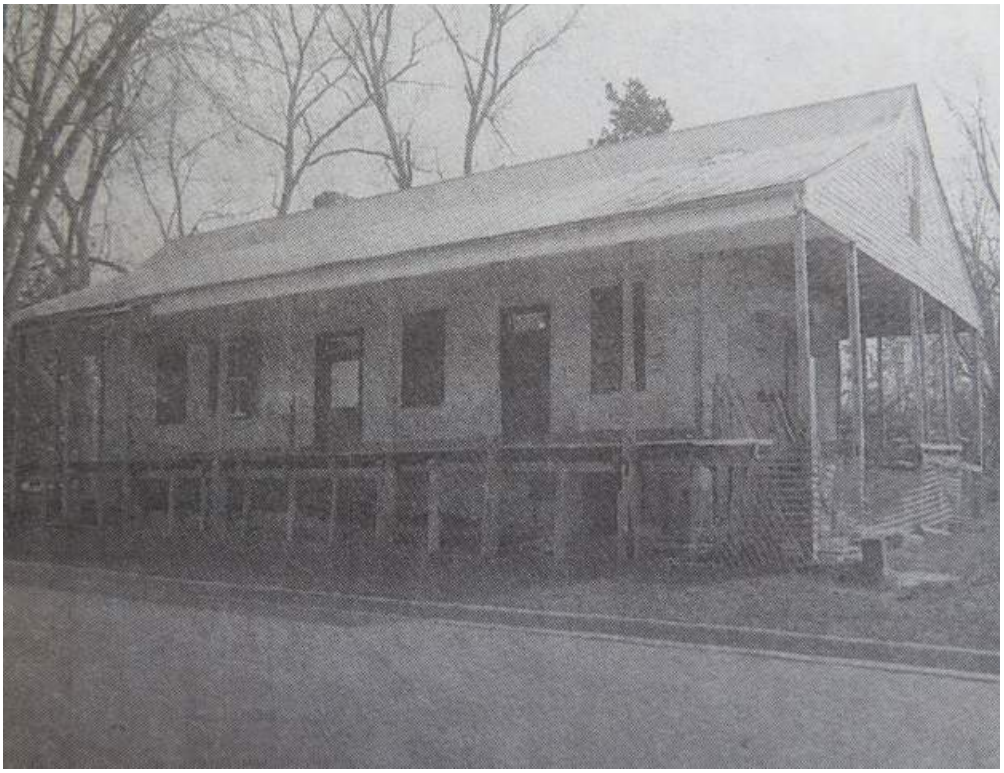


Figure 57. 1995 photograph of the north gallery, showing the house in very poor condition after the Great Flood of 1993. The north and west gallery floor framing has been removed, along with the enclosure around Rooms 108, 109, and 110. Note that the road elevation was raised after the flood (Source: *St. Louis Post-Dispatch*)

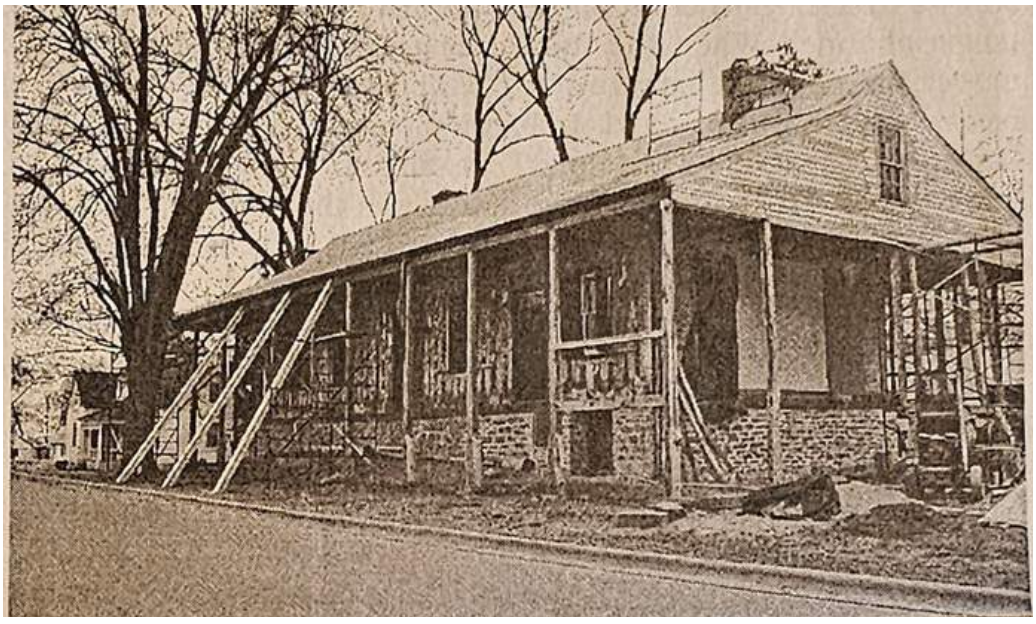


Figure 58. 1995 photograph of the north and west galleries, slightly later than the previous photographs, showing more demolition of the gallery framing. (Source: *Ste. Genevieve Herald*, 8 November 2000)



Figure 59. 1995 photograph of the west gallery, with the exterior walls enclosing Rooms 108, 109, and 110 removed. (Source: 1999 Historic Tax Credit Application)



Figure 60. c. 1999 photograph of the east gallery, during restoration work. Note the split-stair on the north gallery has been constructed. (Source: Felix Vallé House State Historic Site, vertical file for the Janis-Ziegler House)



Figure 61. c. 1999 photograph of the south wall of Room 107, during restoration work to reconstruct the missing partition wall. (Source: Felix Vallé House State Historic Site, vertical file for the Janis-Ziegler House)



Figure 62. c. 1999 photograph of the fireplace mantle in Room 103, during restoration work. (Source: Felix Vallé House State Historic Site, vertical file for the Janis-Ziegler House)



Figure 63. c. 1999 photograph of the vertical log walls at the northwest corner of the house, during the restoration work. (Source: Felix Vallé House State Historic Site, vertical file for the Janis-Ziegler House)



Figure 64. c. 2000 photograph of the north gallery after restoration was completed. Note the vertical logs and bousillage were left uncovered. (Source: Felix Vallé House State Historic Site, vertical file for the Janis-Ziegler House)



Figure 65. c. 2000 photograph of the north gallery after restoration was completed, looking from the pedestrian bridge across South Gabouri Creek. (Source: Felix Vallé House State Historic Site, vertical file for the Janis-Ziegler House)

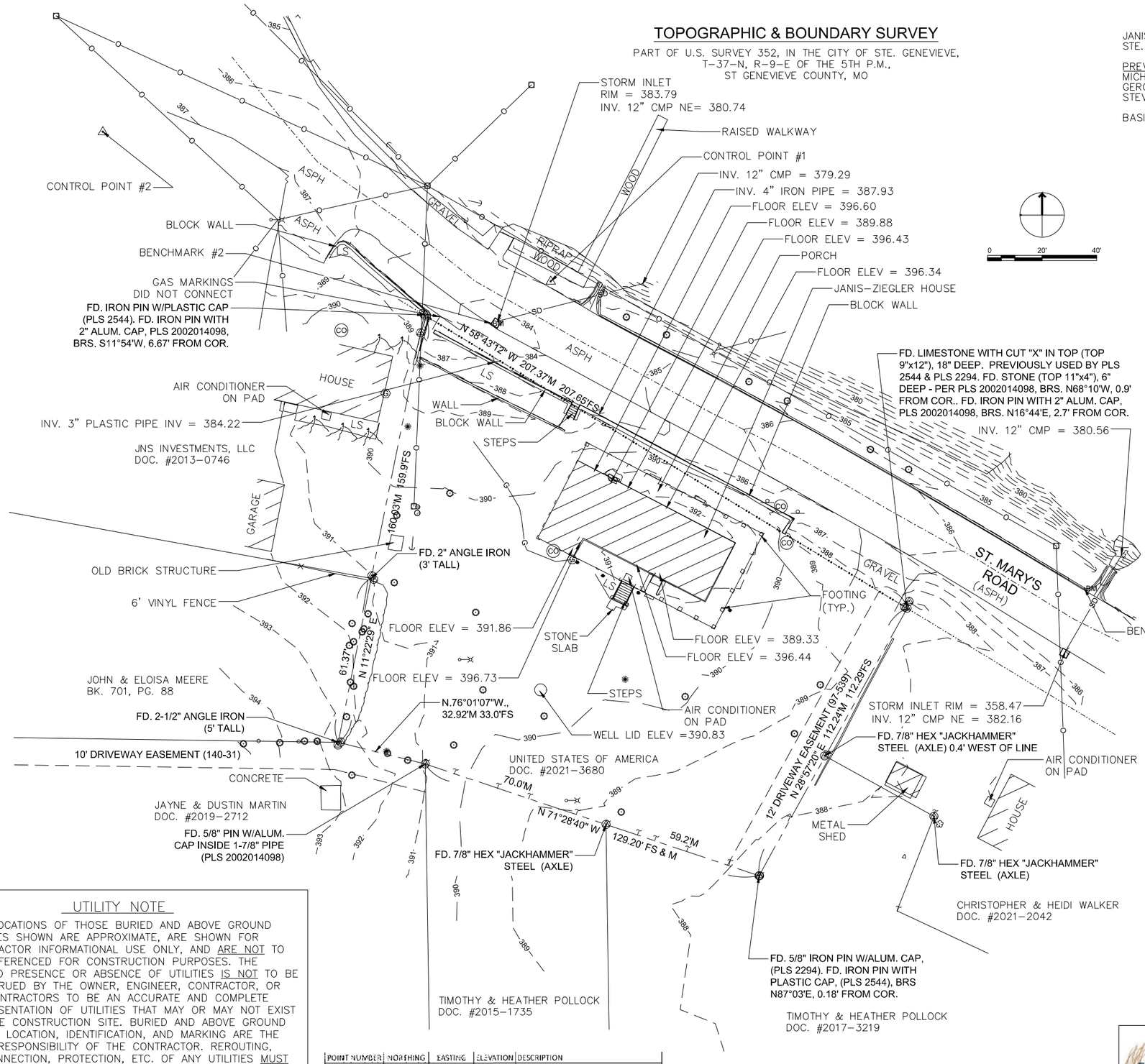


Figure 66. c. 2000 photograph of the north gallery after restoration was completed, looking from Jour de Fete Park. (Source: Felix Vallé House State Historic Site, vertical file for the Janis-Ziegler House)

Appendix C:
Topographical Survey

TOPOGRAPHIC & BOUNDARY SURVEY

PART OF U.S. SURVEY 352, IN THE CITY OF STE. GENEVIEVE,
T-37-N, R-9-E OF THE 5TH P.M.,
ST GENEVIEVE COUNTY, MO



UTILITY NOTE

THE LOCATIONS OF THOSE BURIED AND ABOVE GROUND UTILITIES SHOWN ARE APPROXIMATE, ARE SHOWN FOR CONTRACTOR INFORMATIONAL USE ONLY, AND ARE NOT TO BE REFERENCED FOR CONSTRUCTION PURPOSES. THE IMPLIED PRESENCE OR ABSENCE OF UTILITIES IS NOT TO BE CONSTRUED BY THE OWNER, ENGINEER, CONTRACTOR, OR SUBCONTRACTORS TO BE AN ACCURATE AND COMPLETE REPRESENTATION OF UTILITIES THAT MAY OR MAY NOT EXIST ON THE CONSTRUCTION SITE. BURIED AND ABOVE GROUND UTILITY LOCATION, IDENTIFICATION, AND MARKING ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. REROUTING, DISCONNECTION, PROTECTION, ETC. OF ANY UTILITIES MUST BE COORDINATED BETWEEN THE CONTRACTOR, UTILITY COMPANY, AND OWNER. SITE SAFETY, INCLUDING THE AVOIDANCE OF HAZARDS ASSOCIATED WITH BURIED AND ABOVEGROUND UTILITIES, REMAIN THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

POINT NUMBER	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	780880.142	952123.96	383.23	5/8" ROD WITH CAP
2	780735.057	951959.526	388.38	MAG NAIL
3	780430.151	952495.216	390.65	5/8" ROD WITH CAP
BM1	780567.4	952319.9	385.99	CUT BOX ON CONC CURB
BM2	780664.7	952102.1	383.77	CUT BOX ON CONC AREA INLET

SITE INFORMATION

JANIS-ZIEGLER HOUSE
STE. GENEVIEVE NATIONAL HISTORICAL PARK, 244 ST. MARY'S ROAD, SAINTE GENEVIEVE, MISSOURI

PREVIOUS SURVEYS
MICHAEL ZAHNER, PLS 2294, CO. SURVEYOR RECORD BOOK 6, PAGE 4, (FEB. 1994)
GEROLD BADER, PLS 2544, CO. SURVEYOR RECORD BOOK 9, PAGE 213, (APRIL, 2005)
STEVEN WEIBLE, PLS 2002014098, PLAT CAB. B, PG. 732 & 732 (JULY, 2017)

BASIS OF BEARING – NAD83, MO EAST(2011)

LEGEND

BM	BENCHMARK	OHU	OVERHEAD UTILITY
CO	CLEANOUT	G	UNDERGROUND GAS PAINT
	CONTROL POINT		FENCE
	CULVERT		BOTTOM DITCH
	UTILITY POLE		TIMBER / CULTIVATION LINE
	POST/FENCE POST		BOUNDARY LINE
	GAS METER		RIGHT-OF-WAY LINE
	DOWN GUY		ADJACENT BOUNDARY LINE
	MONUMENT FOUND		EASEMENT LINE
	UTILITY PEDESTAL	SD	STORM SEWER
	POST	739	MINOR CONTOUR
	METAL T-POST	-740-	MAJOR CONTOUR
	SHRUB	PVC	POLYVINYL CHLORIDE PIPE
	SIGN	CMP	CORRUGATED METAL PIPE
	STUMP	INV.	INVERT ELEVATION
	UTILITY POLE WITH LIGHT	LS	LANDSCAPING
	CONIFEROUS TREE	(M)	MEASURED
	DECIDUOUS TREE	(FS)	FORMER SURVEY
	ELECTRIC METER	N 22°42'21 W'	BEARING

NOTES:
1. FIELD WORK: 8/29/23 – 10/11/23.
2. THE HORIZONTAL REFERENCE FOR THIS SURVEY IS THE MISSOURI STATE PLANE COORDINATE SYSTEM, EAST ZONE, NAD83 (2011ADJ.) US SURVEY FEET
3. THE VERTICAL DATUM FOR THIS SURVEY IS NAVD '88.
4. THE LOCATION OF EXISTING UTILITIES WAS DETERMINED FROM AVAILABLE FIELD EVIDENCE AND MAPS PROVIDED. UTILITIES SHOWN ARE APPROXIMATE ONLY AND SHALL BE FIELD VERIFIED FOR EXACT LOCATIONS.
5. UNDERGROUND UTILITIES MAY NOT BE SHOWN.
6. LOCATED INDIVIDUAL TREES, 6" OR GREATER
7. NO TITLE COMMITMENT WAS PROVIDED FOR THE SURVEYED PROPERTY. THE LAND SURVEYOR HAS MADE NO INDEPENDENT SEARCH FOR EASEMENTS, RESTRICTIVE COVENANTS OR ENCUMBRANCE, OWNERSHIP TITLE EVIDENCE OR FACTS THAT A TITLE SEARCH MAY DISCLOSE. THERE MAY BE RECORDED OR NON-RECORDED DOCUMENTS THAT MAY AFFECT THIS SURVEYED TRACT. ALL PROPERTY OWNERSHIP SHOWN ON THIS DOCUMENT WAS OBTAINED FROM THE COUNTY RECORDER AND OR ASSESSORS OFFICE AND ARE CONSIDERED TO BE CURRENT. THE LAND SURVEYOR MAKES NO GUARANTEE TO THE ACCURACY OF THE DEEDS OR THE PROPERTY OWNERS CURRENT STATUS.
8. THIS RETRACEMENT SURVEY IS BASED ON FOUND MONUMENTS FROM BOUNDARY SURVEYS BY: MICHAEL ZAHNER, PLS 2294 (FEB, 1994) AND GERALD BADER, PLS 2544 (APRIL, 2005) AND INFORMATION FROM GERALD BADER'S PRIVATE FILES WHICH AIDED IN LOCATING THE LIMESTONE AT THE NORTHEASTERLY CORNER OF THE SURVEYED PROPERTY.
A SURVEY BY WEIBLE, PLS 2002014098 (JULY, 2017) IS IN CONFLICT WITH THE ABOVE MENTIONED SURVEY; ALONG THE SOUTHERLY LINE OF ST MARY'S ROAD, WEIBLE FOUND A DIFFERENT STONE NEAR THE NORTHEASTERLY CORNER AND PROJECTED NORTH 2.5 FEET NORTH. AT THE NORTHWESTERLY CORNER; WEIBLE SET A PIN 6.6' SOUTH OF BADER'S EXISTING PIN (COR. LOCATION) ZAHNER HAD EVIDENCE OF MONUMENTS ALONG THE NORTH LINE OF SURVEY 209. (BY PIRRIE, PLS 1728, COUNTY SURVEYORS SURVEY #656, JUNE 1989)

I HEREBY CERTIFY THAT THE ABOVE BOUNDARY RETRACEMENT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT THE SURVEY WAS EXECUTED IN ACCORDANCE WITH THE CURRENT MISSOURI MINIMUM STANDARDS FOR BOUNDARY AND TOPOGRAPHIC SURVEYS AS ESTABLISHED BY THE MISSOURI DEPARTMENT OF AGRICULTURE AND THE MISSOURI BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS AND PROFESSIONAL LAND SURVEYORS, AND THAT I AM A DULY LICENSED LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MISSOURI.

PRELIMINARY

THEODORE D. VAHLE LICENSE NO. PLS-2644 DATE
EXPIRES: 12-31-2024
CERTIFICATION COVERS SHEETS 1 OF 1

PREPARED FOR: NATIONAL PARK SERVICE
FIELD SURVEY COMPLETED 10/11/23

Prairie Engineers
ENGINEERING · SURVEYING · SCIENTISTS
Prairie Engineers, P.C.
404 N. Main St.
Columbia, IL 62236
(217) 605-0403

DESIGNED: DADD
JBULFER
TECH. REVIEW: TDV
DATE: 10/13/23

SUB SHEET NO.

TITLE OF SHEET
EXISTING TOPOGRAPHIC & BOUNDARY SURVEY
Janis-Ziegler House
Ste. Genevieve National Historical Park at
244 St. Mary's Road,
Sainte Genevieve, Missouri

DRAWING NO.
PMIS/PKG NO.
SHEET 1 OF 1

OCT 19, 2023 11:13 AM JBULFER
I:\JOBS\2020\306.2001.05 JANIS-ZEIGLER HOUSE\DRAWINGS\SHEET\C1 EXSURV PLAN.DWG

Appendix D:
Other Treatments Options Considered

Other Treatment Options Considered

In the course of developing conceptual treatments for the Janis-Ziegler House, multiple options for addressing site, landscape, circulation, and accessibility were developed to facilitate discussion during the participatory workshop which included NPS staff, the project consultant team, park partners, and other stakeholders. The outcome of that workshop was a consensus agreement on the preferred treatment recommendations; included here the alternative options presented. Additionally, alternate options to address fire suppression system needs were considered; these are also presented here for reference.

SITE AND LANDSCAPE OPTIONS

Three conceptual options were presented for consideration related to the provision of accessible parking, site access, and house and landscape circulation systems that meet ABBAS. Each option suggests potential ways in which visitors may arrive, park, and circulate within the Janis-Ziegler property. The figure below illustrates the site access treatment options as presented.

Existing Conditions

No ABAAS Compliant Access to the House and Landscape

One treatment option not considered was the option of taking no action and making no interventions to the site. This approach does

- There is currently no accessible entrance to the site or the house.
- There is no dedicated parking and no accessible parking.
- There are no site walkways.

Currently, the existing conditions do not respond to NPS goals or objectives for interpretation for the house and site and do not provide a barrier-free experience for visitors. As such, this option was not presented for discussion.

Option: Visitor Access and Parking from Jour de Fête Park

This option proposes an accessible circulation route to the Janis-Ziegler House parcel from a developed parking area in Jour de Fête Park, across St. Marys Road and South Gabouri Creek.

Jour de Fête Park is a large, unimproved grassy parcel at the southeast intersection of St. Marys Road and South Gabouri Street that is under private ownership. One the grounds of the park are two historic buildings, Moses Austin House Outbuildings built c. 1800-1810. The park also contains a gravel driveway trace and the remains of utility posts for mobile home lots. Currently, the park is often used as informal parking by visitors to the Janis-Ziegler House.

In this option, a surface parking area would be provided in Jour de Fête Park. No sanitary facilities or visitor comfort station would be provided. From the surface parking, pedestrian walkways would create an accessible path to the house. Visitors would cross South Gabouri Creek via the wood pedestrian bridge, currently maintained by the City of Ste. Genevieve, and cross St. Marys Road to arrive at the house. Once of the west side of St. Marys Road, visitors with mobility challenges would be directed along the shoulder of the road to the east driveway trace, where the grade can be adjusted to provide an accessible path of travel to the south gallery.

The major advantages of this options:

- Parking is separated from the historic resource.
- Visitors can enjoy the historic view of the house from across the creek.

Disadvantages for this option are numerous. The major disadvantages are:

- Jour de Fête Parkis privately owned, which would require either NPS to purchase the park or establish some sort of leasing agreement with the ownership.
- The pedestrian bridge is maintained by the City of Ste. Genevieve, which may require an agreement between NPS and the city.
- The pedestrian bridge is currently not compliant with ABAAS and IBC requirements for gaps in walking surfaces, slope, and railings. Repairs or redesign of the bridge may be required to bring it into ABAAS

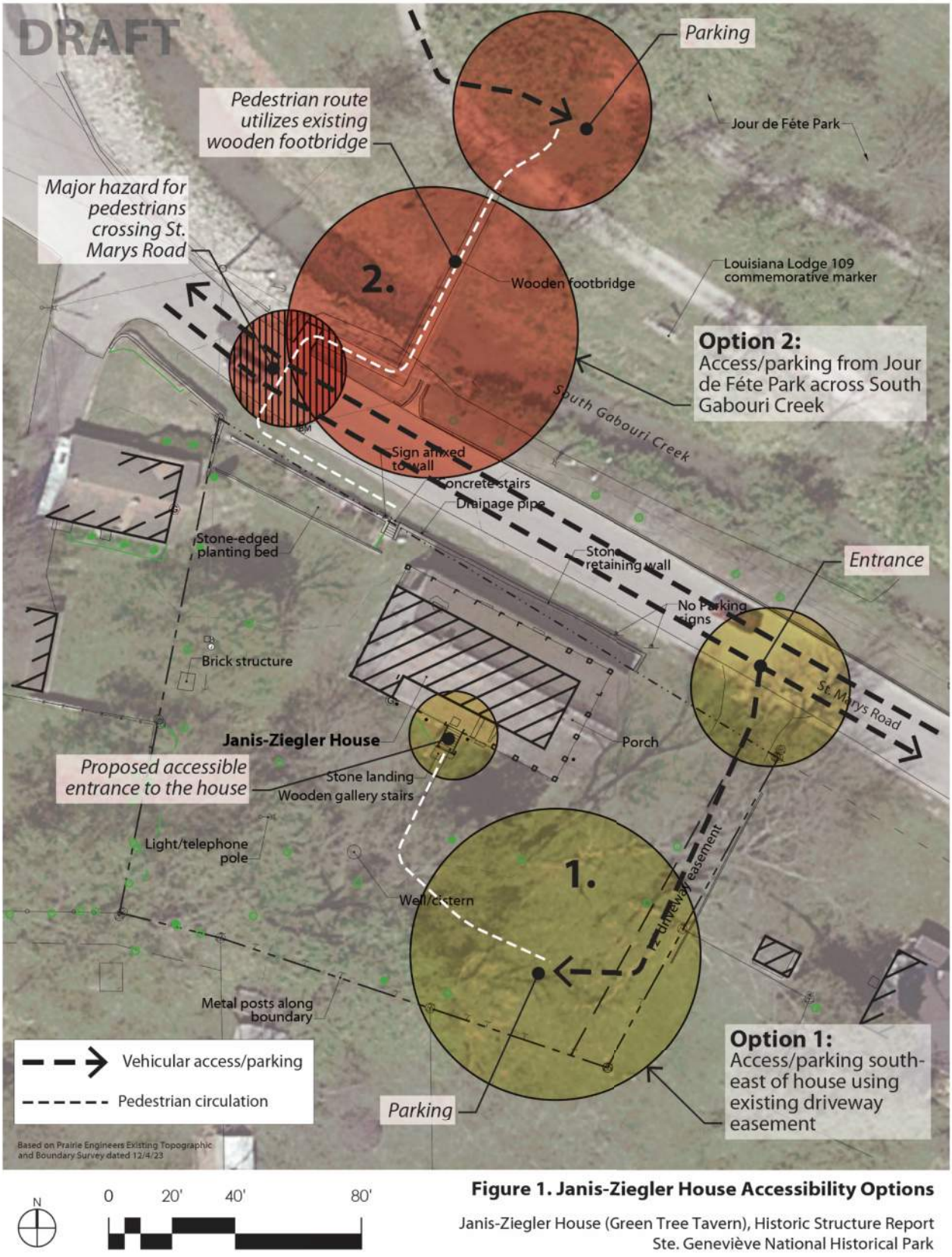


Figure 1. Conceptual options for landscape treatment. (Source: LSHLA)

compliance.

- At this juncture in St. Marys Road, there is limited visibility for drivers to see pedestrians who cross from the bridge. Currently there is no dedicated crosswalk or signage, which would need to be provided by the city.
- The shoulder along St. Marys Road is unimproved and does not provide an accessible walking path. Sidewalks would need to be provided by the city. Currently, the city is exploring a sidewalk and trail improvement plan which will link the historic downtown with NPS sites along St. Marys Road, which may include sidewalks or walking trails to the historic properties. The timeline of finalizing and implementing this plan is currently undetermined.

Based on discussions during the treatment workshop of the challenges presented above, this option was not preferred.

ACCESSIBILITY OPTIONS

No accessible route currently exists to bring mobility challenged visitors to the main level of the house. Multiple options were considered for providing an accessible entry to the main level, as well as options that could provide accessible circulation to the basement and second levels. These options, which included the addition of motorized lifts and elevators to make various levels of the structure accessible, were determined to have an adverse effect on the historic resource due to the level of physical intervention required for construction, as well as a significant negative impact to the exterior appearance and integrity.

Exterior Chair Lifts

Options for adding an accessible route to the main level were considered which included the addition of a motorized chair lift at the south side of the house. A vertical wheelchair lift would be suitable to bring a visitor from grade to the south (rear) door. These lifts are typically electric with battery backup and can bridge a 5-foot difference in elevation between two level surfaces. Larger models capable of supporting heavier, motorized wheelchairs and mobility devices are available.

The primary advantage of a motorized chair lift is the relatively small footprint the equipment requires,

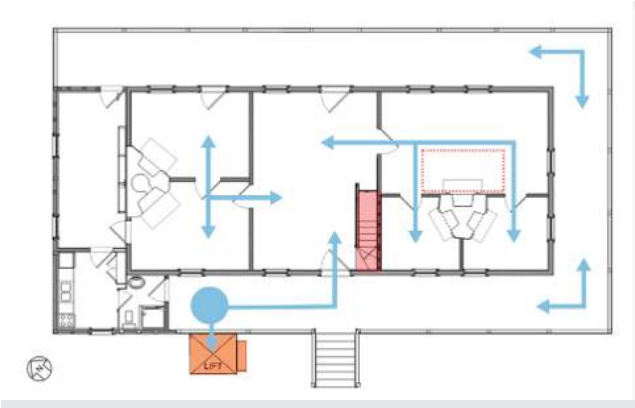


Figure 3. Possible placement for a motorized chair lift at the south gallery.



Figure 2. Massing model of the proposed location for a motorized chairlift (yellow) at the south gallery.

compared to space intensive options, such as ramps. Disadvantages of chair lifts include that they require power to operate and require regular maintenance. When the motorized chair lift is out of service, there are no secondary options for barrier free access to the site. Additionally, a lift is more expensive in both initial costs and periodic maintenance costs than a ramp.

For these reasons, a lift was not selected as the preferred treatment option.

Alternate Ramp Placement

During the treatment discussion, concerns were raised that the proposed location for the ramp at the west wall would potentially interfere with access to the site via the west stairs.

A scaled layout of the proposed ramp at the length required to meet the 5-ft rise to the gallery decking does not interfere with the walking path from the

stairs. However, orientation and layout of the ramp can be reconfigured in numerous options to adjust to site requirements. Below are alternate ramp orientation options.

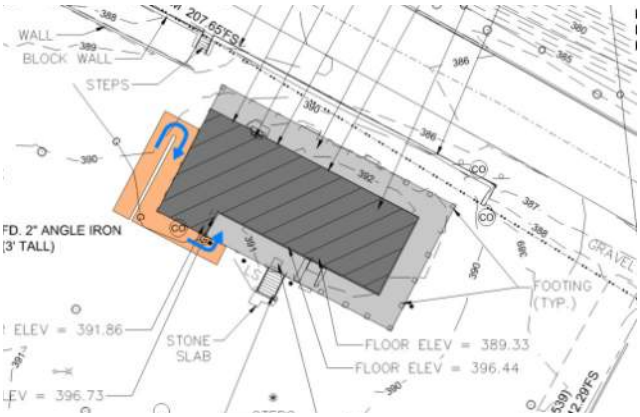


Figure 4. South gallery ramp orientation along the west and south walls, as proposed as the preferred treatment.



Figure 5. Alternate option to reorient the ramp to the south and leave the west wall clear.



Figure 6. Alternate option to reorient the ramp to the east to more directly connect with the proposed surface parking.

FIRE PROTECTION SYSTEM OPTIONS

Fire Suppression System Types

A combination wet-pipe/dry-pipe fire suppression system with a pre-action system is recommended for the Janis-Ziegler House. Several options exist for fire suppression, and included below is a discussion of the available systems not selected for the boodling.

There are many types of fire protection or suppression systems utilized in buildings today to mitigate the risk against the loss of life and property in the event of a fire. The fire suppression system should be based on the building occupancy group, size of the building/fire area, height of the building, and occupant load. The fire suppression system should comply with the current NFPA and IBC requirements as they relate to building usage.

The various types of systems in use range from wet-pipe systems, dry-pipe systems, anti-freeze systems, deluge systems, and pre-action systems. Each of these system types has certain characteristics, some of which are not appropriate for the Janis-Ziegler House.

Wet-Pipe System

A wet pipe system is the most common type of system. It is a sprinkler system employing automatic sprinklers attached to a piping system containing water and connected to a water supply so that water discharges immediately from sprinklers opened by heat from a fire.

Dry-Pipe System

A dry pipe system is the second most common type of system. A dry-pipe fire suppression system is a piping system filled with pressurized air or nitrogen instead of water. Nitrogen is used in these systems as an alternative to air as nitrogen does not contain any oxygen, which can support corrosion to the interior of the sprinkler piping.

This air holds a remote valve, known as a dry pipe valve, in a closed position. Located in a heated space, the dry-pipe valve prevents water from entering the pipe until a fire causes one or more sprinklers to operate. Once this happens, the air escapes, and the dry pipe valve releases. Water then enters the pipe, flowing through open sprinklers onto the fire. It is used in spaces where

the ambient temperature may be cold enough to freeze the water in a wet pipe system, rendering the system inoperable, such as in unconditioned attic spaces or crawl spaces. Dry-pipe systems oftentimes require a small air compressor to be utilized to maintain the pressure in the system as the system can and will lose air pressure over time, and the air compressor may have to activate to maintain any loss in pressure. Another form of dry system involves the use of dry heads. This type of system assumes the piping system has water in it but the heads stay dry until such time as their activation. These types of heads are used when protecting outdoor areas such as balconies, breezeways, porches, etc., or when protecting cold storage areas such as freezers where the piping system is installed in a tempered space but needs to protect a space that has a freeze potential.

Antifreeze Systems

Antifreeze systems are used in spaces where the ambient temperature may be cold enough to freeze the water in a wet pipe system. This system employs automatic sprinklers attached to a piping system containing an antifreeze solution. The antifreeze solution is discharged, followed by water, immediately upon operation of sprinklers opened by heat from a fire.

While mentioned as a possible solution, these types of systems have had a falling out as viable fire suppression system options as they tend to make fires worse. As these systems typically use propylene glycol or glycerin as the antifreeze solution to protect the piping systems from freezing temperatures where piping is installed in non-heated areas such as attics, the mixtures of the solutions with water do not always remain in the intended mixture and naturally separate over time due to gravity. Thus, when the proportion of the active ingredients near a sprinkler becomes too high relative to water, an antifreeze solution can actually serve as fuel for a fire when the sprinkler discharges. It is for this reason an antifreeze system is not recommended.

Deluge System

A deluge fire protection system is one that utilizes unpressurized dry piping and open sprinkler heads. The system is directly connected to a water supply and when the system is activated, a deluge valve will release the water to all the open heads. The valve is opened when activated by a heat or smoke detection system.

A deluge system offers several advantages over a traditional fire sprinkler system. In a traditional sprinkler system, the pipes are filled with water, and the sprinkler heads are closed. A deluge system is a dry system, which means it is not at risk of having frozen pipes. The pipes of traditional sprinklers can freeze when exposed to cold temperatures because they are filled with water. In addition, a deluge system offers a quicker response to a fire by releasing water through all its open heads at once. A regular sprinkler system with closed heads must activate each sprinkler head individually. Therefore, the deluge system is more effective in high-hazard situations.

A disadvantage of a deluge system is that all of the open sprinkler heads would discharge water into the space, which could result in considerable damage to historic materials within the house should a system discharge be activated.

Deluge systems are used in high-hazard areas such as power plants, aircraft hangars, and chemical plants. These systems are very effective in hazardous areas because they release water or another fire suppressant to all the open sprinkler heads simultaneously. This total flood method douses a fire before it has the chance to grow uncontrollably. The use of this system in a historical house such as the Janis-Ziegler House may not be attractive simply due to the large amount of water discharged in a fire event.

Pre-Action System

A pre-action system is used in locations where accidental activation is undesired, such as in museums or collection spaces housing valuable or historic artifacts. This type of system employs automatic sprinklers attached to a piping system that contains air that might or might not be under pressure. This type of system employs the use of additional detection devices, such as smoke or heat detectors, which have to activate within the same areas as the sprinklers. When the supplemental heat or smoke detector activates, the pre-action valve will open and allow water to flow into the piping. Water will not flow from the sprinklers until a fire has generated enough heat to open one or more sprinklers.

If NPS desires to provide a higher degree of protection from accidental activation, a pre-action in combination with a dry-pipe system may be an alternative. The addition of smoke and heat detectors would provide

an additional layer of detection ensuring no sprinkler system activation occurs unless a detection of smoke or heat is first activated before a system sprinkler head discharge occurs. Advantages of using a pre-action, combination dry-pipe fire sprinkler system include the following:

- A dry-pipe sprinkler system provides automatic protection in spaces where freezing conditions are possible, such as the attic spaces.
- A dry-pipe sprinkler system with a pre-action device offers an advantage when compared to conventional wet-type or dry-pipe sprinkler systems for the protection of collections, artifacts, water-sensitive documents, and historical fabric. The addition of pre-action devices such as heat and smoke detectors can provide an added safeguard against false discharges, as the sprinkler system supplemental devices must be activated first before the water is allowed to enter the piping system and be discharged.

Disadvantages of using a pre-action, dry-pipe fire sprinkler system:

- Increased complexity – Dry-pipe systems require additional control equipment and air pressure supply components, which increases system complexity. Without proper maintenance this equipment may be less reliable when comparable to a wet-pipe system.
- Higher installation and maintenance costs - The added complexity impacts the overall dry-pipe installation cost. This complexity also increases maintenance expenditure, primarily due to added service labor costs.
- Lower design flexibility - There are strict requirements regarding the maximum permitted size (typically 750 gallons) of individual dry-pipe systems unless the water delivery time is less than 60 seconds.
- Increased fire response time - Up to 60 seconds may pass from the time a smoke or heat detector actives and a sprinkler head open until water is discharged onto the fire. This will delay the fire extinguishing actions, which may produce increased content damage.
- Increased corrosion potential - Following the operation, dry-pipe sprinkler systems must be completely drained and dried. Otherwise, remaining water may cause pipe corrosion and premature failure.

ALTERNATIVE TO CONVENTIONAL FIRE SUPPRESSION SYSTEM

Additional fire and smoke systems are available, which are considered Early Warning Systems. One such system utilizes air sampling and is referenced by the name of “VESDA,” which stands for “Very Early Warning Aspirating Smoke Detection.” The VESDA system is designed to alarm the occupants to a danger as soon as possible.

The VESDA air sampling fire detection system detects invisible by-products of materials as they degrade during the pre-combustion stages of a developing fire. By actively and continuously sampling air, the system operates independently of air movements. Air samples are continuously drawn from the monitored environment, typically through a sampling pipe network with the aid of a high-efficiency aspirator. The air samples pass through a filter assembly to screen out large airborne dust particles before they reach the air-sampling detector.

Once inside the air-sampling detector, the samples are exposed to a high-intensity, broad-spectrum light source. The incident light scattered from smoke particles in the air sample passes through a series of optical components to a solid-state light receiver. The light is converted to an electronic signal and passed to the control system. At the control module, the signal is processed and presented on a graph to visually indicate the level of smoke present in the monitored area.

Depending upon smoke levels and the preprogrammed alarm levels, the appropriate output signals are generated. The first of three staged alarm levels (ALERT) may simply indicate that the system has detected something out of the ordinary that should be investigated. The second level (ACTION) indicates that a potential fire exists and that emergency procedures should begin. The third level (FIRE) signifies an actual fire condition.

Early warning systems, such as the VESDA system, should be considered when aesthetics in the space are of utmost importance or when reducing the risk of vandalism. Many areas that cause environmental issues to conventional detection where an early warning system can offer a suitable solution while avoiding false alarms and reducing maintenance demands. Areas with high temperatures, cold areas, high humidity, and dusty areas are areas where VESDA can be of an advantage.

VESDA systems have been used in combination with other extinguishing systems where a conventional water-based system may cause damage upon a sprinkler head discharge. The VESDA system can be used in combination with conventional fire suppression systems as an early warning system, which signals a warning before a fire grows to a level that a sprinkler system needs to be activated. Another combination includes the use of a VESDA system in combination with systems utilizing chemical agents such as FM 200, which uses hydrofluorocarbons to fight the fire. VESDA with systems using gaseous agent systems such as Inergen, which is a mixture of nitrogen, argon, and carbon dioxide, smothers the fire. Chemical agent and gaseous agent systems are typically used in locations where water damage would be most critical. Chemical agents, when used in critical spaces such as data centers and mission-critical facilities, can damage computer systems, while gaseous agents work very well for this application.

The early warning systems, such as VESDA, while offering an advantage of early detection, would rely on other fire suppression systems to actively extinguish the fire. For the Janis-Ziegler House, this type of system does not offer much benefit as this building would still need some other means to fight a fire, including some type of automatic fire suppression system or the local fire department.

As the VESDA solution does not utilize as comprehensive of an installation that a water-based fire suppression system could involve, it does not eliminate the potential time factor it would take a fire department to arrive on site to extinguish the fire before extensive damage may have already been done.

Appendix E:
Phase 2 Environmental Survey Report

Consulting
Engineers and
Scientists

December 20, 2023
GEI Project 2303630

VIA EMAIL: lmblank@rrj.com

Lurita McIntosh Blank
Raths, Raths & Johnson, Inc.
500 Joliet Road
Suite 200
Willowbrook, IL 60527

Dear Ms. McIntosh Blank:

Re: Environmental Survey of Lead-Based Paint, Asbestos, and Hazardous Materials
Janis-Ziegler House
Ste. Genevieve, Missouri

GEI Consultants, Inc. is pleased to submit this report presenting the findings of the lead-based paint, asbestos, and hazardous materials survey performed at the Janis-Ziegler House located at 244 St. Mary's Road, St. Genevieve, Missouri on August 21 and 22, 2023. This work was completed in accordance with the Standard Agreement between Raths, Raths, & Johnson, Inc. and GEI dated October 9, 2020 and the RRJ, Inc. Task Order Number 140P6023F0019 dated July 17, 2023.

GEI subcontracted SITEX Environmental, Inc. of St. Louis Missouri to lead the field investigation activities at the Janis-Ziegler House. The investigation report prepared by SITEX is attached.

If you have any questions, please feel free to contact me at 314-328-0716.

Sincerely,

GEI CONSULTANTS, INC.

Nathan McNurlen, CHMM
Project Manager

Attachments
Hazardous Materials Survey of Janis-Ziegler House – SITEX Environmental, Inc.

SITEX Project No: 20389

HAZARDOUS MATERIALS SURVEY

Of

Janis-Ziegler House
244 Saint Mary's Road
Sainte Genevieve, Missouri 63670

Prepared for:

GEI Consultants
400 North Lakeview Parkway, Suite 140
Vernon Hills, Illinois 60061

Prepared by:

SITEX Environmental, Inc.
1525 South Broadway
St. Louis, Missouri 63104

September 28, 2023

SITEX Est. 1987

Your Sole Provider of Environmental Health & Safety Services

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EXECUTIVE SUMMARY

SITEX Environmental, Inc. (SITEX) was awarded the contract by GEI Consultants, Inc. (GEI) to perform a hazardous materials survey of the Janis-Ziegler House located at 244 Saint Mary Road in Sainte Genevieve, Missouri. This assessment was performed to determine the presence or absence of asbestos-containing materials (ACM) and lead-based paint (LBP) for the purposes of building renovation and demolition. Bulk samples of suspect building materials were analyzed for asbestos content by Polarized Light Microscopy (PLM). Paint on surfaces was tested for lead content using an X-Ray Fluorescence (XRF) spectrum analyzer. Additionally, SITEX took an inventory of universal hazardous materials; however, at the time of the hazardous materials survey, no universal hazardous materials were observed.

SURVEY INTRODUCTION/SCOPE OF WORK

This survey was conducted by Robert H. Hill II on August 21, 2023. The 1790s French log/timber structure is a one-story log cabin residential structure with partial basement. The structure is part of the National Park Service (NPS). The exterior roof is pitched with cedar shake shingles. The interior ceilings consist of hardwood and/or painted plaster or drywall. Interior walls consisted of painted drywall, plaster and exposed wood lathe. Interior floors consisted of hardwood flooring.

ASBESTOS SURVEY SUMMARY TABLE DEFINITIONS

Sample Number

A number is assigned to each sample to track results. A homogenous area is defined as an area of material that is uniform in color, texture and age. Each homogenous area was given a distinct letter designation. An example of the numbering sequence is as follows:

101-PL-01A

101 = Janis-Ziegler House Room Number
PL = Plaster
01 = Homogeneous area number designation
A = First sample taken of homogeneous number designation of building material description

Sample Description

Describes the bulk sample material collected.

Approximate Quantity

Approximate quantity of ACM broken down by location.

Abbreviations

DW = Drywall Joint Compound System
MTR = Mortar
PL = Plaster
WG = Window Glazing
WP = Wallpaper

Condition

Condition of the suspect material at the time of this inspection. This is based on the discretion of the inspector. The condition categories are as follows:

Good = no visible damage
Fair = minor damage
Poor = major damage, needs action as soon as possible

Accessibility

Indicates how accessible the suspect material is and to what group of people. The categories are as follows:

Low = material is inaccessible or access is very limited
Moderate = material is only accessible to maintenance personnel
High = material is accessible to the general public

Friability (Non-Friable versus Friable)

A designation to indicate friability (extent to which material, when dry, may be crushed, crumbled, or reduced to powder with hand pressure):

Friability (Non-Friable versus Friable) Continued

No = non-friable
Yes = friable

Bulk Sample Results

Positive - > 1% Asbestos
Negative - < or = 1% Asbestos

The United States Environmental Protection Agency (U.S. EPA) guidelines for classifying asbestos containing material is any material that contains equal to or greater than one percent (1%) asbestos by visual estimated weight percent (% weight).

ASBESTOS SURVEY SUMMARY

SITEX collected up to three bulk samples of each homogeneous suspect asbestos continuing building materials (ACBM) which was observed throughout the interior or exterior of the structure.

Bulk samples were collected in discrete locations or in aeras which already had sustained water and/or physical damage.

Assumptions

SITEX observed attic insulation which was premanufactured (non-suspect) Styrofoam insulation with backing observed at the side of the fireplace stack. This material was assumed to be beneath floorboards in the attic which covered the wood ceiling joists.

SITEX was informed that the structure had been recently remodeled (kitchen and backroom) areas which included premanufactured components (shelving, countertops, cabinetry, wood painted splash board)), therefore, no sampling was performed on these materials.

SITEX did not sample the “Chinking” which was observed on the exterior. The chinking was observed to be composed of brown earth/mud with straw. The exterior structural timbers were bleached and appeared white.

SAMPLE NUMBER	SAMPLE LOCATION	SAMPLE DESCRIPTION	APPROXIMATE QUANTITY	CONDITION	ACCESSIBILITY	FRIABILITY	SAMPLE RESULTS
101-PL-01A	Room 101	Blue and White Plaster	133 SF	Good	High	No	Negative
103-PL-01B	Room 103			Good	High	No	Negative
106-PL-01C	Room 106			Good	High	No	Negative
104-WP-02A	Room 104	Gray/Brown Wallpaper Border	11 SF	Good	Low	Yes	Negative
104-WP-02B	Room 104			Good	Low	Yes	Negative
104-WP-02C	Room 104			Good	Low	Yes	Negative
106-WP-03A	Room 106	Blue Wallpaper Border	12 LF	Good	Low	Yes	Negative
106-WP-03B	Room 106			Good	Low	Yes	Negative
106-WP-03C	Room 106			Good	Low	Yes	Negative
107-PL-04A	Room 107	Thin White Layer Plaster	146 LF (12 Panes)	Fair	High	N/A	No Sample
107-PL-04B	Room 107			Fair	High	No	Negative
107-PL-04C	Room 107			Fair	High	No	Negative
ADD-WG-05A	West Exterior Addition	Off White Window Glazing	1,950 SF	Good	High	No	Negative
ADD-WG-05B	West Exterior Addition			Good	High	No	Negative
ADD-WG-05C	West Exterior Addition			Good	High	No	Negative
001-MTR-06A	Basement (001)	Off White Mortar	495 SF	Good	High	No	Negative
001-MTR-06B	Basement (001)			Good	High	No	Negative
001-MTR-06C	Basement (001)			Good	High	No	Negative

Notes:
The United States Environmental Protection Agency (U.S. EPA) has defined an asbestos material to contain equal to or greater than one percent asbestos.
The Occupational Safety and Health Administration (OSHA) has determined asbestos detected at any level is a potential health exposure hazard.
Bulk samples were analyzed using Polarized Light Microscopy (PLM) by a trained McCrone Research Institute microscopist
PLM Methodology using United States Environmental Protection Agency (U.S. EPA) EPA/600/R-93/116 based on a total visual estimated weight percentage.
Bulk samples ending with 1/2/3 denote each sample collected per homogeneous sample set.
Negative = A non-regulated material containing less than one percent asbestos (<1%).
SF = Square feet.
LF = Linear feet.
N/A = No bulk sample present as reported by laboratory.

ASBESTOS SAMPLING AND ANALYTICAL PROCEDURES

Random bulk samples, representative of the suspect asbestos-containing building materials of each homogeneous area, were collected. Representative sampling is based on the following criteria:

1. The distribution of the suspect material throughout the homogeneous area.
2. The suspect material's physical characteristics and application.
3. Random sampling patterns determined for each homogeneous area.

Suspect materials, sampled and analyzed should be considered to be representative of materials in each homogeneous area if:

1. They exhibit similar physical characteristics. (i.e. color, texture).
2. The application of the sampled material can be correlated to the application of unsampled material by physical appearance and time of application.

All bulk samples collected were analyzed using the Environmental Protection Agency's Method for the Detection of Asbestos in Bulk Samples (EPA 600/M4-82020, December 1982) and the McCrone Research Institute's The Asbestos Particle Atlas as method references.

The bulk samples were collected on August 21, 2023. A total of 18 bulk samples were collected by Robert H. Hill II for asbestos analysis. SITEX was responsible for determining if asbestos was present on the exterior and interior of the structure and if present, provide estimated quantities of asbestos materials found. The samples, along with the proper Chain-of-Custody forms were sent to SITEX Environmental Solutions, Inc. (SITEX) for bulk sample analysis. The analysis of the bulk samples was performed on August 24, 2023, to September 1, 2023. SITEX uses McCrone Institute certified microscopist and is an environmental laboratory. A copy of the McCrone Institute microscopists credentials are included in this report as Appendix E – Laboratory and Accreditations and Individual Certifications.

XRF LEAD-BASED PAINT SURVEY SUMMARY

The XRF lead paint survey shots are included in this report and summarized in Appendix C – XRF Lead Paint Summary. An X-ray Fluorescence analyzer spectrum (XRF) was used for the lead survey. The InnoV-X Systems Delta Standard (model DS-2000, Serial #501736) was calibrated by the manufacturer. A copy of XRF Manufacturer's calibration and the field calibration is included with this report as Appendix D – XRF Certificate of Calibration.

Assumptions

SITEX assumed seven (7) deteriorated green painted wood shutters loosely stored in the attic are LBP.

SITEX assumed that the upper and lower wall portions of the south, east, and west walls in Room 104 are lead-based paint based on shots taken.

SITEX assumed that pre-manufactured, anodized or baked-on surfaces were not LBP due to the paint composition and processes. Therefore, no shots were taken of the gray interior power panels.
Typically, these materials contain negligible amounts of lead which are below the regulated threshold limits for LBP. These materials are usually classified as lead-containing materials (LCM).

XRF Lead Shot Sample Identification and Documentation

Each lead shot taken was immediately recorded onto the Lead Paint Survey field log sheet. The following paragraphs provide an explanation of the terms used on the lead paint survey log sheet.

Lead Survey Paint Field Log Sheet

The lead paint survey field log sheet includes the shot number, shot location, a description of the building component shot, its condition, paint substrate, paint color, XRF shot results, positive/negative, and estimated quantity. The following paragraphs provide an explanation of the above-mentioned terms used on the lead paint survey data sheet.

Shot Number

The shot number is a three-digit sequential number beginning with 001. The shot number includes pre- and post-calibration shots, and quality control shots (duplicates or re-takes). An example of the numbering sequence is as follows:

001 = First shot taken for the lead survey

Shot Location

Describes the shot's physical location of the painted building component within the facility exterior or interior.

Component

Describes the painted building component material being tested.

Condition

Describes the physical condition of the building component material. Two physical conditions exist which include intact or deteriorated as described in these categories.

Intact: Exterior surfaces with large surface areas with no deteriorated paint.

Intact: Interior surfaces with large surface areas with no deteriorated paint.

Intact: Interior and Exterior components with small surface area with no deteriorated paint.

Deteriorated: Exterior components with large surface area more than 10 square feet of deteriorated paint or, Interior components with large surface more than 2 square feet of deteriorated paint or interior and exterior components with small surface area more than 10 percent (10%) of the total surface area of the component.

Substrate

Defines the composition of the material (concrete, metal, wood, plastic) to which the paint is adhered to.

Color

Provides the physical description of the color of the painted building component. Color helps the lead-risk assessor determine homogenous areas (similar painting history), and can assist with certain types of older paint known to contain lead (battleship gray, red).

Results

Shows the units of measure for the painted building component. For purposes of this survey, the XRF direct-reading instrument displays the lead content in milligrams per square centimeter (mg/cm^2). This unit of measure can be directly compared to the federal HUD guideline definition of LBP.

Positive/Negative

The determination of whether a painted component is positive or negative is given by the XRF direct-reading measurement displayed in mg/cm^2. Painted building components which are equal to (=) or greater than (>) 1.0 mg/cm^2 are considered to be lead-based paint (LBP). LBP is regulated under the United States Environmental Protection Agency (USEPA), HUD federal regulatory lead standards, and State of Missouri lead regulations.

Painted building components which do not exceed (<) 1.0 mg/cm^2 are not considered to be LBP and are not regulated. However, the Occupational Safety and Health Administration (OSHA) regulates lead exposure to workers. OSHA considers any amount of lead in a painted building component to be a lead-containing material (LCM). According to OSHA, LCMs have the potential to create lead exposure hazards to workers.

For purposes of this survey the following terms will be used to represent the following:

Positive: Painted component which contains > or = 1.0 mg/cm^2 lead content.
Negative: Painted component which contains < 1.0 mg/cm^2 lead content.

Painted components which are listed as positive are LBP; these materials are regulated.

Painted components which are negative are LCM; these materials are non-regulated.

Quantity

The approximate estimated quantities of the lead building component expressed as square feet (SF), linear feet (LF), or each (Each).

Pre- and post-calibration shots do not have a quantity associated with these shots.

Regulatory Guidance

Lead-based paint is considered 1.0 milligrams per square centimeter (mg/cm^2) for the XRF instrumentation, or 0.5 lead percent by weight (% weight) if a physical lead paint chip sample had been collected.

Lead testing combinations were followed in accordance with the federal United States Department of Urban and Housing Development (HUD) guidelines. The XRF instrument was pre- and post-calibrated using a manufactured coin, a negative plastic-coated lead template (SRM 2570), and a positive plastic-coated lead template (SRM 2573).

According to the Resource Conservation Recovery Act (RCRA) for Lead-Based Paint (LBP) renovation/demolition activities, general construction debris which contains lead must be analyzed by the Toxicity Characteristic Leaching Procedure (TCLP) to determine

toxicity. Construction debris that exceeds 5 parts per million (ppm) will be disposed of as hazardous waste. Construction debris that is below 5 ppm is considered to be non-hazardous and be disposed into a sanitary landfill.

The Occupational Safety and Health Administration (OSHA) has determined that any level of lead in a substance is defined as a Lead Containing Material (LCM). When disturbing LCMs the contractor is held to specific work practices and employee protection in accordance with the Lead in Construction Standard 20CFR 1926.62.

LBP PAINT SAMPLING AND ANALYTICAL PROCEDURES

The direct-reading shots were taken on August 22, 2023. A total of 204 shots (including pre- and post-calibration) were taken by State of Missouri Lead Risk-Assessor Robert Hill II. SITEX did not collect paint chip samples because the direct-reading instrument had no inconclusive readings. SITEX identified 40 LBP painted components on the interior and/or exterior of the structure.

UNIVERSAL HAZARDOUS MATERIALS INVENTORY

At the time of the site reconnaissance, SITEX did not observe hazardous materials observed in or near the Subject Property.

CONCLUSIONS AND RECOMMENDATIONS

SITEX performed an asbestos and LBP survey of Janis-Ziegler House located at 244 Saint Mary's Road in Sainte Genevieve, Missouri in preparation of planned demolition and renovation. SITEX presents the following conclusions and recommendations.

Identified Asbestos Containing Materials (ACM)

Based on the bulk samples collected and review of laboratory analytical results no ACM was identified on the interior or exterior of the building.

Identified Lead-Based Paint Building Components

Shot Number	Shot Location	Result	Estimated Quantity
006	Room 107 (East)	Transom	1 Each
017	Room 108 (Kitchen)	Hutch Frame	1 Each
018	Room 108 (Kitchen)	Hutch Door	1 Each
045	Room 106	Ceiling Deck	180 SF
046	Room 106	Ceiling Joist	90 SF
062	Room 104	Ceiling Deck	410 SF
063	Room 104	Ceiling Joist	205 SF
072	Room 104 (East/West/South)	Wall (Lower)	190 SF
073	Room 104 (South/West/East)	Wall (Upper)	240 SF
075	Room 104 (East)	Door	1 Each
076	Room 104 (East)	Transom	1 Each
082	Room 104 (West)	Door	1 Each
083	Room 104 (West)	Transom	1 Each
103	Room 101	Ceiling Deck	110 SF
104	Room 101	Ceiling Joist	60 SF
134	Room 103	Threshold	1 Each
135	Room 101	Threshold	1 Each
136	Room 104	Threshold	1 Each
139	Exterior (West)	Door Frame	1 Each
140	Exterior (West)	Door	1 Each
141	Exterior (West)	Transom	1 Each
142	Exterior (West)	Window Frame	1 Each
144	Exterior (West)	Window Sill	1 Each
145	Exterior (West)	Window Shutter	1 Each
149	Exterior (West)	Chair Rail	15 LF
150	Exterior (West)	Porch Ceiling Deck	450 SF
151	Exterior (West)	Porch Ceiling Joist	200 SF
153	Exterior (East)	Door	1 Each
154	Exterior (East)	Transom	1 Each
160	Exterior (East)	Transom	1 Each
171	Exterior (East)	Window Shutter	1 Each
177	Exterior (West)	Window Frame	1 Each
179	Exterior (West)	Window Shutter	1 Each
180	Exterior (West)	Window Sill	1 Each
181	Exterior (West)	Window Frame	1 Each
183	Exterior (West)	Window Shutter	1 Each
184	Exterior (West)	Window Sill	1 Each
185	Exterior (West)	Window Frame	1 Each
187	Exterior (West)	Window Shutter	1 Each
188	Exterior (West)	Window Sill	1 Each

Recommendations

ACM

No Asbestos Containing Building Materials (ACBM) were found on the interior of the Subject Property. Prior to future planned renovation/demolition activities, suspect or confirmed ACBM should be removed by a Missouri licensed asbestos abatement contractor.

LBP

Lead-based paints were found to be present on the interior and exterior of the Subject Property. SITEX recommends that these materials be stabilized and/or removed by a State of Missouri lead abatement contractor prior to the demolition/renovation activities.

Additionally, the results indicate that some of the paint does contain lead below 1.0 mg/cm^2. The Occupational Safety & Health Administration (OSHA) regulations require proper handling and safety precautions when working with any amount of lead-containing paint. SITEX recommends that the use of cutting equipment that will raise the temperature of the lead-containing surface above 250^o F be prohibited.

Universal Hazardous Materials

No universal hazardous materials were found by SITEX at the time of the site reconnaissance.

SURVEY TEAM

The representative for SITEX Environmental, Inc. conducting the survey was Robert H. Hill II, and GEI Staff Geologist David Lere. Mr. Hill is accredited in Missouri as an asbestos inspector and Lead Risk Assessor. Mr. Hill's certifications are included in Appendix E – Laboratory Accreditations and Individual Certifications
of this report.

Limitations

One bulk sample (107-PL-04A) was missing at the time when the bulk samples were analyzed. The bulk sample likely fell out of the sampling bag in the field during collection. However, the bulk sample collected is deemed a surfacing sample by industry sampling protocols which requires up to three samples per U.S. EPA guidelines and inspector discretion. The homogeneous set contained two bulk samples (107-PL-04B and 107-PL-04C). The number of bulk samples collected is more than enough for bulk sample analysis and is representative for asbestos content determination.

Disclaimer

These results do not imply nor deny conditions that may have existed prior to our sampling or previous inspections. This survey and sampling were performed in a thorough and professional manner consistent with industry standards.

The ACM and LBP survey are representative of bulk samples collected and XRF shots taken at the time of the survey. SITEX performed limited destructive sampling. The analytical results are valid only for the bulk samples collected and the XRF shots taken.

If during renovation and/or/demolition activities, additional suspect asbestos and/or lead is uncovered, SITEX recommends that a State of Missouri licensed asbestos or lead inspector collect a bulk sample for analysis to determine the presence of asbestos or taken additional shots to determine the presence of lead.

The Asbestos and Lead-Based Paint (LBP) Survey Team consisted of the following State of Missouri licensed individuals.

Surveyed by:

Robert Hill II
Missouri Asbestos Inspector
Missouri Certificate #7118020416MOSR2164

Missouri Lead Risk Assessor
Missouri Certificate #01057-200133036

FIGURES

Asbestos and Lead Bulk Sample Locations

APPENDICES

Appendix A – SITEX Laboratory PLM Analysis Reports
Appendix B – Photograph Log
Appendix C – XRF Lead Paint Summary Log Sheets
Appendix D – XRF Certificate of Calibration
Appendix E – Laboratory Accreditation and Individual Certifications

FIGURES

FIGURE 1

Asbestos Bulk Sample Locations

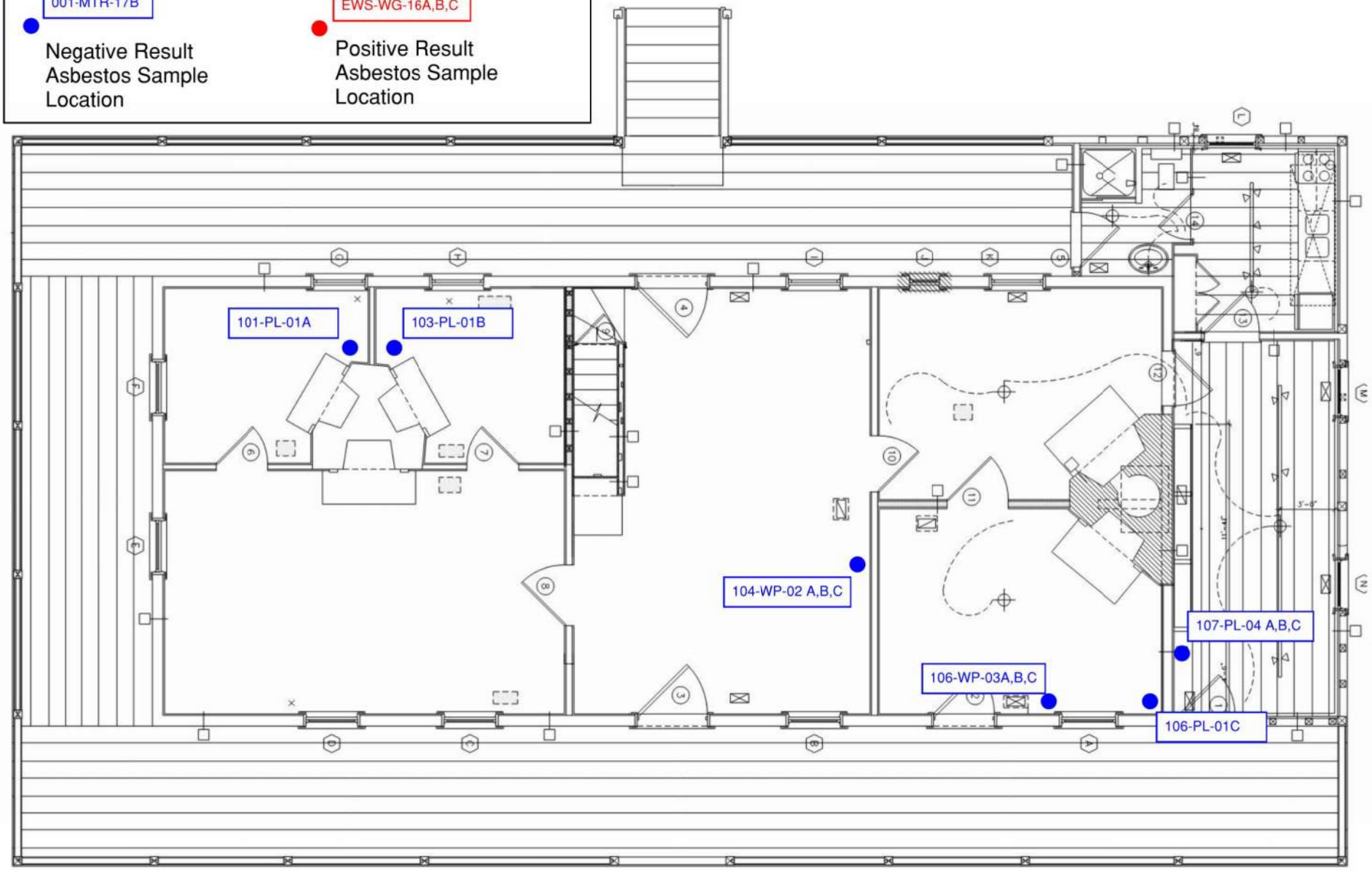
LEGEND

001-MTR-17B

Negative Result
Asbestos Sample
Location

EWS-WG-16A,B,C

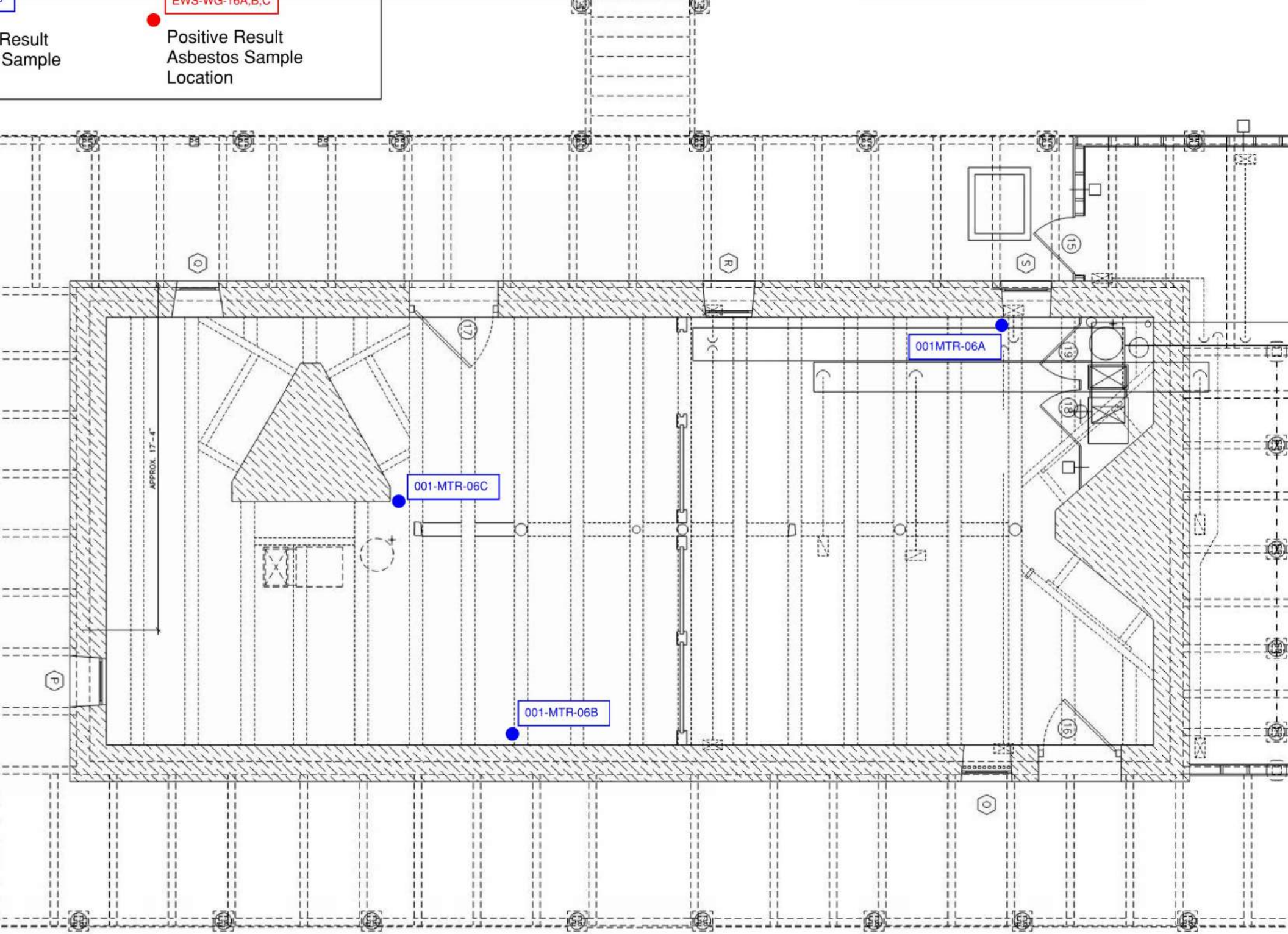
Positive Result
Asbestos Sample
Location



FIRST FLOOR PLAN

3/16" = 1'-0"

0 2' 4' 8'


EWS-WG-16A,B,C
Result
Sample
Positive Result
Asbestos Sample
Location
001MTR-06A
001-MTR-06C
001-MTR-06B
APPROX. 17'-4"

NT PLAN

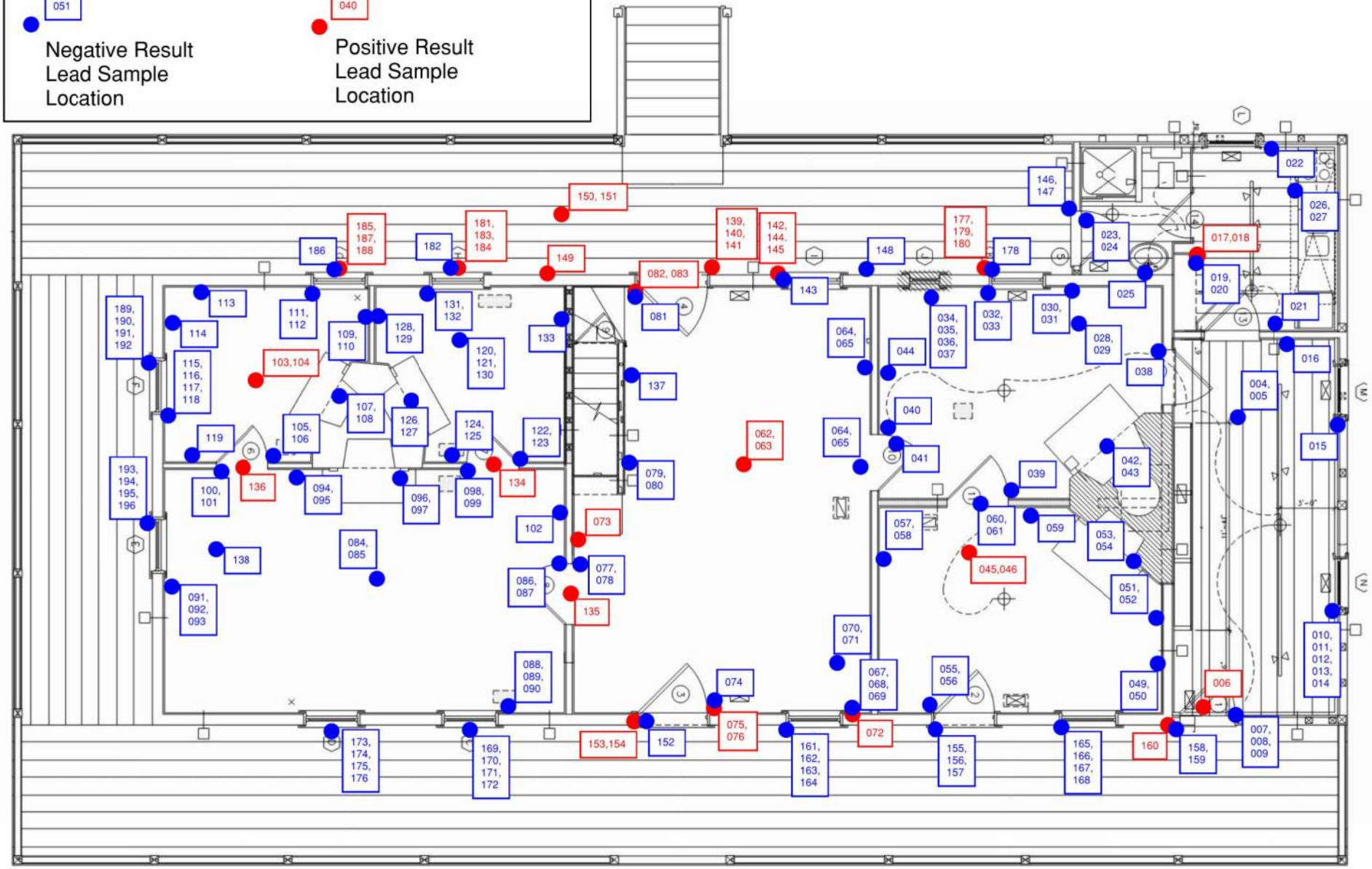
FIGURE 2

Lead-Based Paint Shot Locations

LEGEND

051 — Negative Result Lead Sample Location

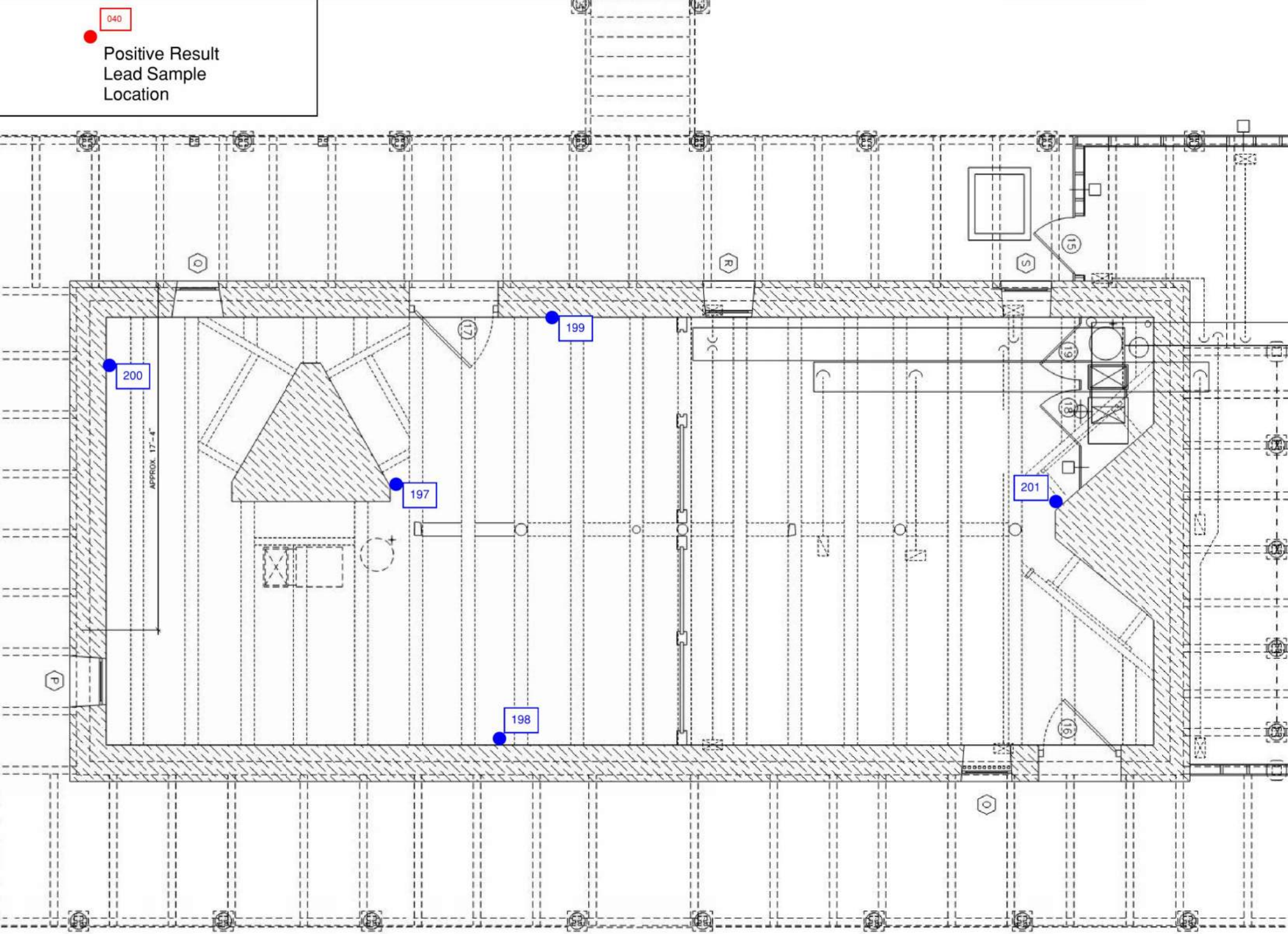
040 — Positive Result Lead Sample Location



FIRST FLOOR PLAN

3/16" = 1'-0"

0 2' 4' 8'


040
Positive Result
Lead Sample
Location
199
200
197
201
198
APPROX. 17'-4"

NT PLAN

APPENDIX A

SITEX LABORATORY PLM ANALYSIS REPORT

Dedicated to a Cleaner Environment Since 1982

NY ELAP LAB# 11993 for PCM, PLM, TEM & Lead

batta LABORATORIES

BATTA LABORATORIES, LLC

A Certified MBE Company

Delaware Industrial Park, 6 Garfield Way
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Web: http://www.battaenv.com E-mail: battaenv@battaenv.com

EPA Lab ID #DE004

NVLAP Lab Code: 101032-0

Dept. Code: PLM

Rev. #: 0
Batch#: N/A
COC#: N/A

CERTIFICATE OF PLM ANALYSIS

Test Method: EPA/600/R-93/116 in conjunction with Batta SOP

Report Date: 09/01/23

Sampling Data

Date Sampled: 08/21/23
BLI Project #: R106315
Sampled By: CLIENT
Project Name: SITEX ENV.-20389-JANICE ZEIGLER-244 ST. MARY'S RD.
Date Analyzed: 08/30/23

Sample ID		Client-supplied Data			Analytical Data			Reported Results	
Lab Sample#	Client Sample#	Sample Description	Material Type	Friable?	Texture/	Gross	Color	Non-asbestiform Components	Asbestiform Components
1424127	101-PL-01A	Room 101	Plaster Skim	n/a	Cementitious	Homogeneous	White	2% Cellulose 98% Non-fibrous Material	No Asbestos Found
1424128	101-PL-01A (Layer 1)	Room 101	Plaster Base	n/a	Cementitious	Homogeneous	Tan	10% Cellulose 90% Non-fibrous Material	No Asbestos Found
1424129	103-PL-01B	Room 103	Plaster	n/a	Cementitious	Homogeneous	White	1% Cellulose 99% Non-fibrous Material	No Asbestos Found
1424131	106-PL-01C	Room 106	Plaster	n/a	Cementitious	Homogeneous	White	1% Cellulose 99% Non-fibrous Material	No Asbestos Found
1424133	104-WP-02A	Room 104	Wallpaper	n/a	Paperlike	Homogeneous	Brown	98% Cellulose 2% Non-fibrous Material	No Asbestos Found

Note 1 *Due to limitations of the EPA PLM method, floor tiles may yield false negative (<1%) results by this method. As such, the EPA recommends further analysis by electron microscopy. Batta recommends the NY 198.4 over the Chatfield method.*

Note 2 Unless otherwise specified, Tr=Trace and correlates to <0.25% (based on a 400-point EPA point count).

Note 3 Materials containing vermiculite are not good candidates for analysis using standard EPA 600 PLM protocol. Results may be low-biased due to inherent limitations caused by the material. The EPA recommends that vermiculite attic insulation (VAI) be prepped and analyzed using EPA 600/R-04/004, known as "The Cincinnati Method".

ANALYST: JWL

REVIEWED BY: ARL

QA/QC Officer/Signatory

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*The test data pertain only to the items tested. No assumptions or conclusions should be made to materials or samples not analyzed. Furthermore, Batta Laboratories, LLC assumes no responsibility for the accuracy of results influenced by the use of improper collection techniques or equipment.

*Organically-bound, nonfriable material may interfere with the accurate and reproducible quantification of asbestos. In these cases, the EPA recommends further analysis by a matrix-reduction method. Batta recommends the NY ELAP Item 198.6/198.4 over the Chatfield method. When point count techniques are utilized on organically-bound, nonfriable materials without the EPA-recommended matrix reduction steps, Batta Laboratories assumes no responsibility regarding the accuracy or precision associated with these results. In these cases, Batta employs a modified version of the EPA point count method.

*WRTA refers to a group of fibrous Amphiboles typically associated with 'Libby Amphibole'. Within this classification are: winchite, richterite, tremolite, and actinolite.

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Lab Sample#	Client Sample#	Sample Description	Material Type	Friable?	Texture/	Gross	Color	Non-asbestiform Components	Asbestiform Components
1424134	104-WP-02B **	Room 104	Wallpaper	n/a					Sample Not Received By Lab (Empty Bag)
1424135	104-WP-02C	Room 104	Wallpaper	n/a	Paperlike Homogeneous		Tan	96% Cellulose 4% Non-fibrous Material	No Asbestos Found
1424136	106-WP-03A	Room 106	Wallpaper	n/a	Paperlike Homogeneous		Gray	98% Cellulose 2% Non-fibrous Material	No Asbestos Found
1424137	106-WP-03B	Room 106	Wallpaper	n/a	Paperlike Homogeneous		Gray	95% Cellulose 5% Non-fibrous Material	No Asbestos Found
1424138	106-WP-03C	Room 106	Wallpaper	n/a	Paperlike Heterogeneous		Yellow Gray	80% Cellulose 20% Non-fibrous Material	No Asbestos Found

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REVIEWED BY: A.R.L

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Lab Sample#	Client Sample#	Sample Description	Material Type	Friable?	Texture/	Gross	Color	Non-asbestiform Components	Asbestiform Components
N/A	107-PL-04A **	Room 107	Plaster	n/a					Sample Not Received By Lab (Empty Bag)
1424139	107-PL-04B	Room 107	Plaster	n/a	Cementitious Homogeneous		Gray White	1% Cellulose 99% Non-fibrous Material	No Asbestos Found
1424141	107-PL-04C	Room 107	Plaster	n/a	Cementitious Homogeneous		Gray White	5% Cellulose 95% Non-fibrous Material	No Asbestos Found
1424143	ADD-WG-05A	Exterior West	Glazing	n/a	Firm Homogeneous		Gray	<1% Cellulose 100% Non-fibrous Material	No Asbestos Found
1424144	ADD-WG-05B	Exterior West	Glazing	n/a	Firm Homogeneous		Gray	100% Non-fibrous Material	No Asbestos Found

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Lab Sample#	Client Sample#	Sample Description	Material Type	Friable?	Texture/	Gross	Color	Non-asbestiform Components	Asbestiform Components
1424145	ADD-WG-05C	Exterior West	Glazing	n/a	Firm Homogeneous		Gray	100% Non-fibrous Material	No Asbestos Found
1424146	001-MTR-06A	Basement	Mortar	n/a	Cementitious Homogeneous		White	<1% Cellulose 100% Non-fibrous Material	No Asbestos Found
1424147	001-MTR-06B	Basement	Mortar	n/a	Cementitious Homogeneous		White	<1% Cellulose 100% Non-fibrous Material	No Asbestos Found
1424148	001-MTR-06C	Basement	Mortar	n/a	Cementitious Homogeneous		White	<1% Cellulose 100% Non-fibrous Material	No Asbestos Found

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CHAIN OF CUSTODY / LABORATORY WORK REQUEST

SITEX Environmental Inc.
1525 S. Broadway
St. Louis, MO 63104-4014

Phone: (314) 421-0600
FAX: (314) 421-0234

Project Name: JANICE Zeigler
Project Address: 244 St. Marys Rd. Sainte Genevieve Missouri 63670
Project # : 20389
Client Contact: Robert Hill
E-Mail: bobh@sitexsolutions.com

Invoice to: SITEX Environmental 1525 S. Broadway Saint Louis Missouri 63104
Date : August 21, 2023
P.O. # :

Sample ID	Description	Date/Time Sampled	# of Cont	Type	Matrix: Bulk	Air	Water	Soil	Sludge	Preservative: Unpres.	HNO_3	NaOH	H_2SO_4	HCl	Cold	Analysis Required: PLM / DS							
101-PL-01A	Room 101 Plaster	8/21/23 1130	1	Baggie	X					X						X							
103-PL-01B	Room 103 Plaster	8/21/23 1140	1		X					X						X							
106-PL-01C	Room 106 Plaster	8/21/23 1145	1		X					X						X							
104-WP-02A	Room 104 Wallpaper	8/21/23 1150	1		X					X						X							
104-WP-02B	Room 104 Wallpaper	8/21/23 1152	1		X					X						X							
104-WP-02C	Room 104 Wallpaper	8/21/23 1153	1		X					X						X							
106-WP-03A	Room 106 Wallpaper	8/21/23 1157	1	Baggie	X					X						X							
106-WP-03B	Room 106 Wallpaper	8/21/23 1158	1		X					X						X							
106-WP-03C	Room 106 Wallpaper	8/21/23 1159	1		X					X						X							
107-PL-04A*	Room 107 Plaster	8/21/23 1205	1		X					X						X							
107-PL-04B	Room 107 Plaster	8/21/23 1209	1		X					X						X							
107-PL-04C	Room 107 Plaster	8/21/23 1210	1		X					X						X							
ADD-WG-05A	Exterior West Glazing	8/21/23 1215	1	Baggie	X					X						X							
ADD-WG-05B	Exterior West Glazing	8/21/23 1218	1		X					X						X							
ADD-WG-05C	Exterior West Glazing	8/21/23 1220	1		X					X						X							

1424
127-128
129-130
131-132
133
138
139-140
141-142
143
144
145

Comments:
Stop at first positive per homogeneous sampled set.
107-PL-04A - Empty

Relinquished By	Date/Time	Received By	Date/Time
Robert Hill	August 21, 2023 4:30	NYR	8/24/23 1130

Turn Around Time
___ 1 hour
___ 2-3 hour
___ 6-8 Hours
___ 24 Hour
___ Same Day
___ 48 Hours
X 3-5 Day

Samples Taken By
RHH

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1525 S. Broadway
St. Louis, MO 63104-4014

Phone: (314) 421-0600
FAX: (314) 421-0234

Project Name: Janice Zeigler
Project Address: 24 St. Mark's Rd
Sainte Genevieve
Missouri 63670
Project # : 20389
Client Contact: Robert Hill
E-Mail: bobh@sitexsaintlouis.com

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1525 S. Broadway
Saint Louis
Missouri
63104
Date : August 21, 2023
P.O. # :

Sample ID	Description	Date/Time Sampled	# of Cont	Type	Matrix: Bulk	Air	Water	Soil	Sludge	Preservative: Unpres.	HNO_3	NaOH	H_2SO_4	HCl	Cold	Analysis Required: PLM / DS							
001-MTR-06A	Basement Mortar	8/21/23 1224	1	Bagged				X		X						X							1424
001-MTR-06B	Basement Mortar	8/21/23 1230	1	"				X		X						X							1446
001-MTR-06C	Basement Mortar	8/21/23 1234	1	"				X		X						X							1447
																							1448

Comments: Stop at first positive per homogeneous sample set.

Turn Around Time
___ 1 hour
___ 2-3 hour
___ 6-8 Hours
___ 24 Hour
___ Same Day
~~48 Hours~~
X 3-5 Day

Samples Taken By: RHH

Relinquished By	Date/Time	Received By	Date/Time
Robert Hill	August 21, 2023 4:30p	KyK	8/24/23 1130

APPENDIX B

PHOTOGRAPH LOG



Photograph 1: Facing toward the west exterior of historic residence.



Photograph 2: Facing toward the east exterior of the historic home.



Photograph 3: Facing toward the south exterior of the historic home.



Photograph 4: Facing toward the north exterior of the historic home.



Photograph 5: LBP Transom (white) above exit door in Room 107.



Photograph 6: LBP kitchen hutch door and frame (brown stain) in Room 108.



Photograph 7: LBP green ceiling deck and joist Room 106.



Photograph 8: LBP bluish green ceiling deck and joist Room 104.



Photograph 9: LBP plaster (lower and upper wall) Room 104.



Photograph 9: LBP plaster (lower and upper wall) Room 104.



Photograph 10: LBP east door and transom (White) in Room 104.



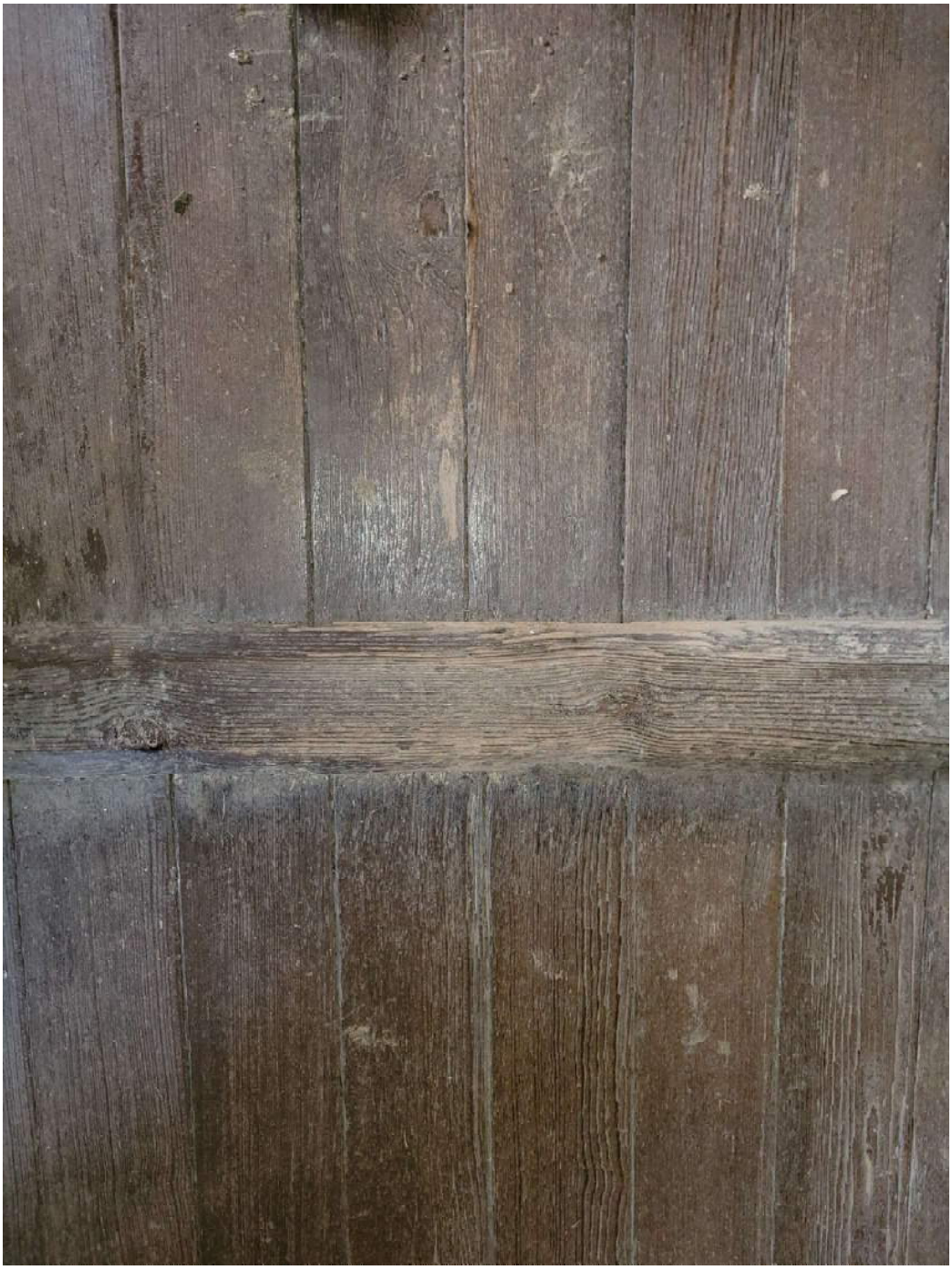
Photograph 11: LBP west door and transom (white) in Room 104.



Photograph 12: LBP ceiling deck and joists (teal) Room 101.



Photograph 13: LBP wood threshold (Room 103).



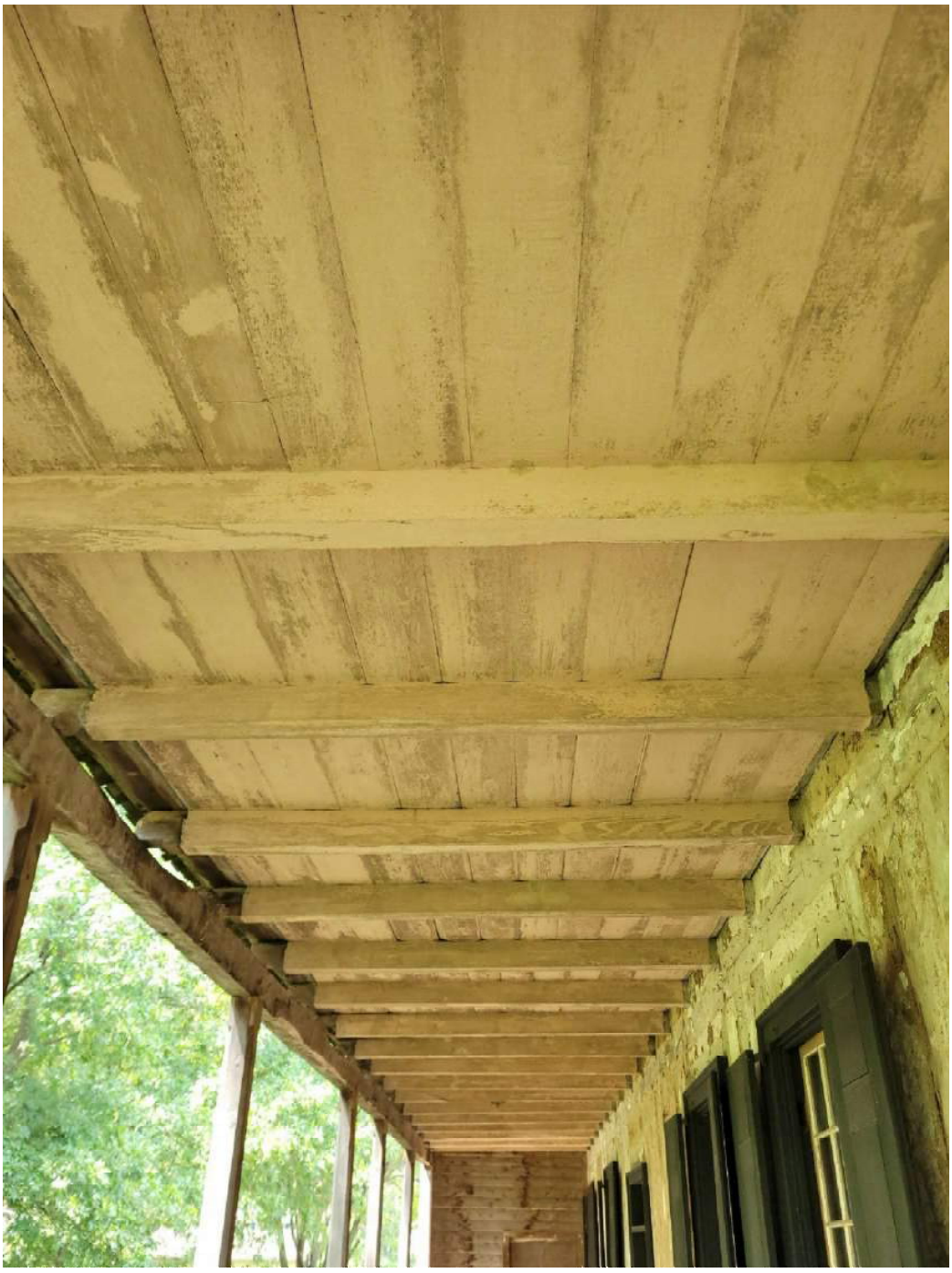
Photograph 14: View of LBP wood threshold (between Room 102 and Room 104).



Photograph 15: LBP west exterior entrance (door, door frame, transom, and door window frame).



Photograph 16: LBP west exterior (window sill, window shutter, and chair rail).



Photograph 17: Exterior west LBP porch ceiling and ceiling joists.



Photograph 18: View of basement showing lumber, HVAC unit, and hot water tank.



Photograph 19: View of basement showing empty plastic bucket, plastic, sawhorse, and steel posts.

APPENDIX C

XRF LEAD PAINT SUMMARY LOG SHEETS

LEAD PAINT SURVEY

Project Name: Janis-Ziegler House
Date Collected: August 22, 2023
On-Site Technician: Robert H. Hill II
Project Number: 20389/19203.15
Project Location: 244 Saint Mary's Road
Instrument Used: Olympus Innov-X XRF Analyzer

SAMPLE	LOCATION	COMPONENT	CONDITION	SUBSTRATE	COLOR	RESULTS	POS/NEG	QUANTITY
001	Calibration	Coin	Intact	Metal	Silver	Pass	N/A	N/A
002	Calibration	SRM 2570	Intact	Plastic	White	0.00±0.00	NEG	N/A
003	Calibration	SRM 2573	Intact	Plastic	Red	1.63±0.08	POS	N/A
004	Room 107	Ceiling Joist	Intact	Wood	Varnish	0.00±0.00	NEG	N/A
005	Room 107	Ceiling Deck	Intact	Wood	Varnish	0.00±0.00	NEG	N/A
006	**Room 107 (East)**	**Transom**	**Deteriorated**	**Wood**	**White**	**5.00±0.37**	**POS**	**1 Each**
007	Room 107 (East)	Door	Intact	Wood	Stain	0.42±0.02	NEG	N/A
008	Room 107 (East)	Door Frame	Intact	Wood	Stain	0.00±0.00	NEG	N/A
009	Room 107 (East)	Wall	Intact	Plaster	White	0.00±0.00	NEG	N/A
010	Room 107 (North)	Baseboard	Intact	Wood	Raw	0.00±0.00	NEG	N/A
011	Room 107 (North)	Chair Rail	Intact	Wood	Raw	0.00±0.00	NEG	N/A
012	Room 107 (North)	Window Sill	Intact	Wood	Raw	0.00±0.00	NEG	N/A
013	Room 107 (North)	Window Frame	Intact	Wood	Raw	0.00±0.00	NEG	N/A
014	Room 107 (North)	Window	Intact	Wood	Raw	0.00±0.00	NEG	N/A
015	Room 107 (North)	Wall	Intact	Wood	Raw	0.00±0.00	NEG	N/A
016	Room 107 (West)	Wall	Intact	Drywall	White	0.00±0.00	NEG	N/A
017	**Room 108 (Kitchen)**	**Hutch Frame**	**Intact**	**Wood**	**Stain**	**5.00±0.27**	**POS**	**1 Each**
018	**Room 108 (Kitchen)**	**Hutch Door**	**Intact**	**Wood**	**Stain**	**5.00±0.36**	**POS**	**1 Each**
019	Room 108 (Kitchen)	Hutch Shelf	Intact	Wood	Green	0.12±0.03	NEG	N/A
020	Room 108 (Kitchen)	Hutch Interior	Intact	Wood	Red	0.03±0.00	NEG	N/A
021	Room 108 (East)	Wall	Intact	Drywall	White	0.00±0.00	NEG	N/A
022	Room 108 (West)	Wall	Intact	Plaster	White	0.00±0.00	NEG	N/A
023	Room 109 (South)	Exterior Door	Intact	Wood	Stain	0.85±0.03	NEG	N/A
024	Room 109 (South)	Door Frame	Intact	Wood	Stain	0.00±0.00	NEG	N/A
025	Room 109 (West)	Sink Back Splash	Intact	Wood	Tan	0.00±0.00	NEG	N/A
026	Room 108 (North)	Cabinet Frame	Intact	Wood	Gray	0.00±0.00	NEG	N/A
027	Room 108 (North)	Cabine Door	Intact	Wood	Gray	0.00±0.00	NEG	N/A
028	Room 105	Ceiling Deck	Intact	Wood	Stain	0.00±0.00	NEG	N/A
029	Room 105	Ceiling Joist	Intact	Wood	Stain	0.00±0.00	NEG	N/A
030	Room 105 (West)	Wall Border	Intact	Plaster	Red	0.00±0.00	NEG	N/A
031	Room 105 (West)	Wall Border	Intact	Plaster	Gray	0.00±0.00	NEG	N/A
032	Room 105 (West)	Window Frame	Intact	Wood	Stain	0.29+0.01	NEG	N/A
033	Room 105 (West)	Window	Intact	Wood	Stain	0.00±0.00	NEG	N/A
034	Room 105 (West)	Chair Rail	Intact	Wood	Stain	0.00±0.00	NEG	N/A

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Date Collected: August 22, 2023

On-Site Technician: Robert H. Hill II

Project Number: 20389/19203.15

Project Location: 244 Saint Mary's Road

Instrument Used: Olympus Innov-X XRF Analyzer

SAMPLE	LOCATION	COMPONENT	CONDITION	SUBSTRATE	COLOR	RESULTS	POS/NEG	QUANTITY
035	Room105 (West)	Baseboard	Intact	Wood	Stain	0.01±0.00	N/A	N/A
036	Room105 (West)	Quarter Round	Intact	Wood	Raw	0.00±0.00	NEG	N/A
037	Room105 (West)	Floor	Intact	Wood	Raw	0.00±0.00	NEG	N/A
038	Room 105 (North)	Door Frame	Intact	Wood	Stain	0.00±0.00	NEG	N/A
039	Room 105 (East)	Door Frame	Intact	Wood	Stain	0.00±0.00	NEG	N/A
040	Room 105 (South)	Door Frame	Intact	Wood	Stain	0.13±0.01	NEG	N/A
041	Room 105 (South)	Door	Intact	Wood	Stain	0.00±0.00	NEG	N/A
042	Room 105	Mantle	Intact	Wood	Stain	0.09±0.01	NEG	N/A
043	Room 105 (East)	Wall	Intact	Plaster	White	0.00±0.00	NEG	N/A
044	Room 105 (South)	Wall	Intact	Wood	White	0.00±0.00	NEG	N/A
045	**Room 106**	**Ceiling Deck**	**Intact**	**Wood**	**Green**	**1.12±0.08**	**POS**	**1 Each**
046	**Room 106**	**Ceiling Joist**	**Intact**	**Wood**	**Green**	**5.00±0.27**	**POS**	**1 Each**
047	Room 106 (East)	Window Frame	Intact	Wood	Stain	0.18±0.02	NEG	N/A
048	Room 106 (East)	Window	Intact	Wood	Stain	0.00±0.00	NEG	N/A
049	Room 106 (North)	Chair Rail	Intact	Wood	Stain	0.00±0.00	NEG	N/A
050	Room 106 (North)	Baseboard	Intact	Wood	Stain	0.00±0.00	NEG	N/A
051	Room 106	Quarter Round	Intact	Wood	Raw	0.00±0.00	NEG	N/A
052	Room 106	Floor	Intact	Wood	Raw	0.00±0.00	NEG	N/A
053	Room 106	Mantle	Intact	Wood	Stain	0.02±0.00	NEG	N/A
054	Room 106	Fireplace	Intact	Plaster	White	0.00±0.00	NEG	N/A
055	Room 106 (East)	Door Frame	Intact	Wood	Stain	0.09±0.01	NEG	N/A
056	Room 106 (East)	Door	Intact	Wood	Stain	0.07±0.01	NEG	N/A
057	Room 106 (South)	Wall Decoration	Intact	Plaster	Green	0.00±0.00	NEG	N/A
058	Room 106 (South)	Wall Decoration	Intact	Plaster	Red	0.00±0.00	NEG	N/A
059	Room 106 (West)	Wall	Intact	Plaster	White	0.00±0.00	NEG	N/A
060	Room 106 (West)	Door Frame	Intact	Wood	Stain	0.00±0.00	NEG	N/A
061	Room 106 (West)	Threshold	Intact	Wood	Raw	0.00±0.00	NEG	N/A
062	**Room 104**	**Ceiling Deck**	**Intact**	**Wood**	**Green**	**5.00±0.27**	**POS**	**1 Each**
063	**Room 104**	**Ceiling Joist**	**Intact**	**Wood**	**Green**	**5.00±0.27**	**POS**	**1 Each**
064	Room 104 (North)	Door Frame	Intact	Wood	Stain	0.01±0.00	NEG	N/A
065	Room 104 (North)	Door	Intact	Wood	Stain	0.00±0.00	NEG	N/A
066	Room 104 (East)	Wall (Old Stair)	Intact	Plaster	Green	0.02+0.00	NEG	N/A
067	Room 104 (East)	Chair Rail	Intact	Wood	Stain	0.02±0.00	NEG	N/A
068	Room 104 (East)	Baseboard	Intact	Wood	Stain	0.01±0.00	NEG	N/A

LEAD PAINT SURVEY

Project Name: Janis-Ziegler House
Date Collected: August 22, 2023
On-Site Technician: Robert H. Hill II
Project Number: 20389/19203.15
Project Location: 244 Saint Mary's Road
Instrument Used: Olympus Innov-X XRF Analyzer

SAMPLE	LOCATION	COMPONENT	CONDITION	SUBSTRATE	COLOR	RESULTS	POS/NEG	QUANTITY
069	Room104 (East)	Quarter Round	Intact	Wood	Raw	0.00±0.00	NEG	N/A
070	Room104 (East)	Floor	Deteriorated	Wood	Green	0.28±0.03	NEG	N/A
071	Room104 (East)	Floor	Intact	Wood	Brown	0.35±0.01	NEG	N/A
072	**Room 104 (East)**	**Wall (Lower)**	**Intact**	**Plaster**	**Green**	**5.00±0.43**	**POS**	**140 SF**
073	**Room 104 (South)**	**Wall (Upper)**	**Intact**	**Plaster**	**Tan**	**5.00±0.55**	**POS**	**1 Each**
074	Room 104 (East)	Door Frame	Intact	Wood	Stain	0.05±0.01	NEG	N/A
075	**Room 104 (East)**	**Door**	**Intact**	**Wood**	**Stain**	**1.74±0.08**	**POS**	**1 Each**
076	**Room 104 (East)**	**Transom**	**Intact**	**Wood**	**White**	**5.00±0.36**	**POS**	**1 Each**
077	Room 104 (South)	Door Frame	Intact	Wood	Stain	0.00±0.00	NEG	N/A
078	Room 104 (South)	Door	Intact	Wood	Stain	0.01±0.00	NEG	N/A
079	Room 104 (South)	Wall	Intact	Drywall	White	0.00±0.00	NEG	N/A
080	Room 104 (South)	Closet Wall	Intact	Drywall	White	0.00±0.00	NEG	N/A
081	Room 104 (West)	Door Frame	Intact	Wood	Stain	0.05±0.01	NEG	N/A
082	**Room 104 (West)**	**Door**	**Intact**	**Wood**	**Stain**	**1.18±0.10**	**POS**	**1 Each**
083	**Room 104 (West)**	**Transom**	**Intact**	**Wood**	**White**	**1.07±0.05**	**POS**	**1 Each**
084	Room 102	Ceiling Deck	Intact	Wood	Stain	0.00±0.00	NEG	N/A
085	Room 102	Ceiling Joist	Intact	Wood	Stain	0.00±0.00	NEG	N/A
086	Room 102 (North)	Door Frame	Intact	Wood	Stain	0.01±0.00	NEG	N/A
087	Room 102 (North)	Door	Intact	Wood	Stain	0.01±0.00	NEG	N/A
088	Room 102 (East)	Window Frame	Intact	Wood	Stain	0.02±0.00	NEG	N/A
089	Room 102 (East)	Window	Intact	Wood	Stain	0.00±0.00	NEG	N/A
090	Room 102 (East)	Chair Rail	Intact	Wood	Stain	0.09±0.01	NEG	N/A
091	Room 102 (South)	Baseboard	Intact	Wood	Stain	0.09±0.01	NEG	N/A
092	Room 102 (South)	Quarter Round	Intact	Wood	Stain	0.24±0.00	NEG	N/A
093	Room 102	Floor	Intact	Wood	Stain	0.34±0.07	NEG	N/A
094	Room 102 (West)	Wall (Lower)	Intact	Plaster	Green	0.00±0.00	NEG	N/A
095	Room 102 (West)	Wall (Upper)	Intact	Wood	Tan	0.00±0.00	NEG	N/A
096	Room 102 (West)	Fireplace Trim	Intact	Wood	Stain	0.00±0.00	NEG	N/A
097	Room 102 (West)	Fireplace	Intact	Plaster	White	0.00±0.00	NEG	N/A
098	Room 102 (West)	Door Frame	Intact	Wood	Stain	0.00±0.00	NEG	N/A
099	Room 102 (West)	Door	Intact	Wood	Stain	0.00±0.00	NEG	N/A
100	Room 102 (West)	Door Frame	Intact	Wood	Stain	0.02+0.00	NEG	N/A
101	Room 102 (West)	Door	Intact	Wood	Stain	0.01±0.00	NEG	N/A
102	Room 102 (West)	Wall	Intact	Plaster	Stain	0.00±0.00	NEG	N/A

LEAD PAINT SURVEY

Project Name: Janis-Ziegler House

Date Collected: August 22, 2023

On-Site Technician: Robert H. Hill II

Project Number: 20389/19203.15

Project Location: 244 Saint Mary's Road

Instrument Used: Olympus Innov-X XRF Analyzer

SAMPLE	LOCATION	COMPONENT	CONDITION	SUBSTRATE	COLOR	RESULTS	POS/NEG	QUANTITY
103	**Room 101**	**Ceiling D**	**Intact**	**Wood**	**Teal**	**5.00±0.42**	**POS**	**1 Each**
104	**Room 101**	**Ceiling J**	**Intact**	**Wood**	**Teal**	**5.00±0.46**	**POS**	**1 Each**
105	Room 101 (East)	Door Frame	Intact	Wood	Stain	0.01±0.00	NEG	N/A
106	Room 101 (East)	Door Frame	Intact	Wood	Stain	0.01±0.00	NEG	N/A
107	Room 101	Fireplace Trim	Intact	Wood	Stain	0.01±0.00	NEG	N/A
108	Room 101	Fireplace Wall	Intact	Plaster	White	0.02±0.00	NEG	N/A
109	Room 101 (North)	Wall, lower	Intact	Wood	Blue	0.00±0.00	NEG	N/A
110	Room 101 (West)	Chair Rail	Intact	Wood	Stain	0.00±0.00	NEG	N/A
111	Room 101 (West)	Window Frame	Intact	Wood	Stain	0.03±0.00	NEG	N/A
112	Room 101 (West)	Window	Intact	Wood	Stain	0.00±0.00	NEG	N/A
113	Room 101 (West)	Wall	Intact	Plaster	Tan	0.14±0.01	NEG	N/A
114	Room 101 (South)	Wall, lower	Intact	Wood	Blue	0.00±0.00	NEG	N/A
115	Room 101 (South)	Baseboard	Intact	Wood	Stain	0.05±0.01	NEG	N/A
116	Room 101 (South)	Quarterround	Intact	Wood	Stain	1.15±0.05	NEG	N/A
117	Room 101 (South)	Floor	Intact	Wood	Brown	0.09±0.05	NEG	N/A
118	Room 101 (South)	Chair Rail	Intact	Wood	Stain	0.00±0.00	NEG	N/A
119	Room 101 (East)	Wall	Intact	Plaster	Tan	0.11±0.01	NEG	N/A
120	Room 103	Ceiling D	Intact	Wood	Stain	0.00±0.00	NEG	N/A
121	Room 103 (East)	Ceiling J	Intact	Wood	Stain	0.00±0.00	NEG	N/A
122	Room 103 (East)	Door Frame	Intact	Wood	Stain	0.02±0.01	NEG	N/A
123	Room 103 (East)	Door	Intact	Wood	Stain	0.29±0.06	NEG	N/A
124	Room 103 (East)	Chair Rail	Intact	Wood	Stain	0.02±0.00	NEG	N/A
125	Room 103 (East)	Wall, lower	Intact	Plaster	Green	0.27±0.006	NEG	N/A
126	Room 103 (East)	Fireplace Trim	Intact	Wood	Stain	0.00±0.00	NEG	N/A
127	Room 103 (East)	Fireplace Wall	Intact	Plaster	Tan	0.03±0.00	NEG	N/A
128	Room 103 (South)	Baseboard	Intact	Wood	Brown	0.01±0.00	NEG	N/A
129	Room 103 (South)	Quarterround	Intact	Wood	Raw	0.00±0.00	NEG	N/A
130	Room 103	Floor	Intact	Wood	Brown	0.42±0.01	NEG	N/A
131	Room 103 (West)	Window Frame	Intact	Wood	Stain	0.01±0.00	NEG	N/A
132	Room 103 (West)	Window	Intact	Wood	Stain	0.00±0.00	NEG	N/A
133	Room 103 (North)	Wall	Intact	Plaster	Tan	0.00±0.00	NEG	N/A
134	**Room 103**	**Threshold**	**Intact**	**Wood**	**Brown**	**5.00+0.36**	**POS**	**1 Each**
135	**Room 101**	**Threshold**	**Intact**	**Wood**	**Brown**	**5.00±0.15**	**POS**	**1 Each**
136	**Room 104**	**Threshold**	**Intact**	**Wood**	**Brown**	**5.00±0.23**	**POS**	**1 Each**

LEAD PAINT SURVEY

Project Name: Janis-Ziegler House
Date Collected: August 22, 2023
On-Site Technician: Robert H. Hill II
Project Number: 20389/19203.15
Project Location: 244 Saint Mary's Road
Instrument Used: Olympus Innov-X XRF Analyzer

SAMPLE	LOCATION	COMPONENT	CONDITION	SUBSTRATE	COLOR	RESULTS	POS/NEG	QUANTITY
137	Room 104	Floor	Intact	Wood	Brown	0.57±0.02	NEG	N/A
138	Room 102	Floor	Intact	Wood	Brown	0.35±0.02	NEG	N/A
139	**Exterior (West)**	**Door Frame**	**Intact**	**Wood**	**Black**	**2.91±0.08**	**POS**	**1 Each**
140	**Exterior (West)**	**Door**	**Intact**	**Wood**	**Black**	**5.00±0.29**	**POS**	**1 Each**
141	**Exterior (West)**	**Transom**	**Intact**	**Wood**	**Black**	**2.28±0.07**	**POS**	**1 Each**
142	**Exterior (West)**	**Window Frame**	**Intact**	**Wood**	**Black**	**5.00±0.02**	**POS**	**1 Each**
143	Exterior (West)	Window	Intact	Wood	White	0.00±0.00	NEG	N/A
144	**Exterior (West)**	**Window Sill**	**Intact**	**Wood**	**Stain**	**1.83±0.06**	**POS**	**1 Each**
145	**Exterior (West)**	**Window Shutters**	**Intact**	**Wood**	**Black**	**2.96±0.08**	**POS**	**1 Each**
146	Exterior (West/North)	Door Frame	Intact	Wood	Black	0.00±0.00	NEG	N/A
147	Exterior (West/North)	Door	Intact	Wood	Raw	0.17±0.02	NEG	N/A
148	Exterior Wall Timbers	Wall	Intact	Wood	Raw	0.00±0.00	NEG	N/A
149	**Exterior (West)**	**Chair Rail**	**Intact**	**Wood**	**White**	**5.00±0.33**	**POS**	**1 Each**
150	**Exterior (West)**	**Porch Ceiling D**	**Intact**	**Wood**	**White**	**5.00±0.37**	**POS**	**1 Each**
151	**Exterior (West)**	**Porch Ceiling J**	**Intact**	**Wood**	**Pink**	**5.00±0.17**	**POS**	**1 Each**
152	Exterior (East)	Door Frame	Intact	Wood	Pink	0.04±0.01	NEG	N/A
153	**Exterior (East)**	**Door**	**Intact**	**Wood**	**Black**	**5.00±0.23**	**POS**	**1 Each**
154	**Exterior (East)**	**Transom**	**Intact**	**Wood**	**Black**	**1.88±0.07**	**POS**	**1 Each**
155	Exterior (East)	Door Frame	Intact	Wood	Black	0.24±0.04	NEG	N/A
156	Exterior (East)	Door	Intact	Wood	Black	0.05±0.01	NEG	N/A
157	Exterior (East)	Transom	Intact	Wood	Black	0.00±0.00	NEG	N/A
158	Exterior (East)	Door Frame	Intact	Wood	Black	0.00±0.00	NEG	N/A
159	Exterior (East)	Door	Intact	Wood	Black	0.37±0.05	NEG	N/A
160	**Exterior (East)**	**Transom**	**Intact**	**Wood**	**Black**	**1.39±0.05**	**POS**	**1 Each**
161	Exterior (East)	Window Frame	Intact	Wood	Black	0.06±0.01	NEG	N/A
162	Exterior (East)	Window	Intact	Wood	Black	0.00±0.00	NEG	N/A
163	Exterior (East)	Window Shutters	Intact	Wood	Black	0.04±0.01	NEG	N/A
164	Exterior (East)	Window Sill	Intact	Wood	Black	0.05±0.01	NEG	N/A
165	Exterior (East)	Window Frame	Intact	Wood	Black	0.08±0.06	NEG	N/A
166	Exterior (East)	Window	Intact	Wood	Black	0.00±0.00	NEG	N/A
167	Exterior (East)	Window Shutters	Intact	Wood	Black	0.16±0.01	NEG	N/A
168	Exterior (East)	Window Sill	Intact	Wood	Black	0.16+0.01	NEG	N/A
169	Exterior (East)	Window Frame	Intact	Wood	Black	0.25±0.08	NEG	N/A
170	Exterior (East)	Window	Intact	Wood	Black	0.00±0.00	NEG	N/A

LEAD PAINT SURVEY

Project Name: Janis-Ziegler House
Date Collected: August 22, 2023
On-Site Technician: Robert H. Hill II
Project Number: 20389/19203.15
Project Location: 244 Saint Mary's Road
Instrument Used: Olympus Innov-X XRF Analyzer

SAMPLE	LOCATION	COMPONENT	CONDITION	SUBSTRATE	COLOR	RESULTS	POS/NEG	QUANTITY
171	Exterior (East)	Window Shutter	Intact	Wood	Black	0.30±0.04	NEG	N/A
172	Exterior (East)	Window Sill	Intact	Wood	Black	0.08±0.01	NEG	N/A
173	Exterior (East)	Window Frame	Intact	Wood	Black	0.06±0.01	NEG	N/A
174	Exterior (East)	Window	Intact	Wood	Black	0.00±0.00	NEG	N/A
175	Exterior (East)	Window Shutter	Intact	Wood	Black	0.04±0.01	NEG	N/A
176	Exterior (East)	Window Sill	Intact	Wood	Black	0.07±0.02	NEG	N/A
177	**Exterior (West)**	**Window Frame**	**Intact**	**Wood**	**Black**	**5.00±0.21**	**POS**	**1 Each**
178	Exterior (West)	Window	Intact	Wood	Black	0.00±0.00	NEG	N/A
179	**Exterior (West)**	**Window Shutter**	**Intact**	**Wood**	**Black**	**3.49±0.08**	**POS**	**1 Each**
180	**Exterior (West)**	**Window Sill**	**Intact**	**Wood**	**Black**	**4.68±0.13**	**POS**	**1 Each**
181	**Exterior (West)**	**Window Frame**	**Intact**	**Wood**	**Black**	**5.00±0.16**	**POS**	**1 Each**
182	Exterior (West)	Window	Intact	Wood	Black	0.00±0.00	NEG	N/A
183	**Exterior (West)**	**Window Shutter**	**Intact**	**Wood**	**Black**	**5.00±0.15**	**POS**	**1 Each**
184	**Exterior (West)**	**Window Sill**	**Intact**	**Wood**	**Black**	**3.03±0.12**	**POS**	**1 Each**
185	**Exterior (West)**	**Window Frame**	**Intact**	**Wood**	**Black**	**5.00±0.16**	**POS**	**1 Each**
186	Exterior (West)	Window	Intact	Wood	Black	0.00±0.00	NEG	N/A
187	**Exterior (West)**	**Window Shutter**	**Intact**	**Wood**	**Black**	**3.11±0.08**	**POS**	**1 Each**
188	**Exterior (West)**	**Window Sill**	**Intact**	**Wood**	**Black**	**3.05±0.09**	**POS**	**1 Each**
189	Exterior (South)	Window Frame	Intact	Wood	Black	0.13±0.01	NEG	N/A
190	Exterior (South)	Window	Intact	Wood	Black	0.00±0.00	NEG	N/A
191	Exterior (South)	Window Shutter	Intact	Wood	Black	0.10±0.01	NEG	N/A
192	Exterior (South)	Window Sill	Intact	Wood	Black	0.08±0.01	NEG	N/A
193	Exterior (South)	Window Frame	Intact	Wood	Black	0.23±0.004	NEG	N/A
194	Exterior (South)	Window	Intact	Wood	Black	0.00±0.00	NEG	N/A
195	Exterior (South)	Window Shutter	Intact	Wood	Black	0.07±0.01	NEG	N/A
196	Exterior (South)	Window Sill	Intact	Wood	Black	0.29±0.07	NEG	N/A
197	Basement	FP Foundation	Intact	Plaster	White	0.00±0.00	NEG	N/A
198	Basement East	Floor	Intact	Plaster	White	0.00±0.00	NEG	N/A
199	Basement West	Window Frame	Intact	Plaster	White	0.00±0.00	NEG	N/A
200	Basement North	Window	Intact	Plaster	White	0.00±0.00	NEG	N/A
201	Fireplace	Foundation (N)	Intact	Plaster	White	0.00±0.00	NEG	N/A
202	Calibration	Coin	Intact	Metal	Silver	Pass	N/A	N/A
203	Calibration	SRM 2570	Intact	Plastic	White	0.00±0.00	NEG	N/A
204	Calibration	SRM 2573	Intact	Plastic	Red	1.63±0.08	POS	N/A

APPENDIX D

XRF CERTIFICATE OF CALIBRATION

OLYMPUS®

Your Vision, Our Future

Olympus America, Inc.
110 Magellan Circle
Webster, TX 77598
Tel: (281) 922-9300
Fax: (281) 922-9303
www.olympus-ims.com
ho.ani@olympus-ossa.com





Date Certified:	18-Mar-2019
Certification Number:	190567-01
Serial Number:	501736
Model:	DS-2000
Temperature:	77
Relative Humidity:	38

This instrument was certified according to Olympus Scientific Solutions Americas calibration procedures. The calibration was verified using Certified Reference Materials produced by Analytical Reference Materials International (ARMI), NIST and/or other certified materials. The calibration materials are verified to be traceable and within their expiration date.

This instrument conforms to Olympus Scientific Solutions Americas Quality Assurance Standards.

Analyzer modes are tested to meet the criteria as listed on the associated certification page. OSSA does not require a specific certification interval, however the analyzer may be re-certified on a fixed schedule based on the end-user's requirements.

Joshua E Jongstad

Calibration Technician Signature

Certificates for these materials can be made available upon request.

Certificate Number: 190567-01	Serial Number: 501736
Modes or Methods certified by this document	

Modes / Methods: Soil
Lead Paint

Mining, Mining Plus, Empirical , Fast ID and custom element addtions do not have specific quality control criteria. They have been verified to meet basic calibration standards. Empirial modes are customer configurable and may need reconfiguration after calibration.

Certificates for these materials can be made available upon request.

Soil Environmental/Exploration

Certificate: 190567-01 **Serial Number: 501736**

Standard	Description	Element	Requirement		Assay	±	Reported	P/F
			Min	Max				
RTC-408	Metals in Soil	Ag	400	650	500	15.1	510	Pass
		As	400	650	500	15.1	449	Pass
		Hg	400	600	500	15.1	497	Pass
		Pb	400	600	500	15.1	460	Pass
		Se	350	600	500	15.1	511	Pass
NIST MED 2711a	NIST SRM 2711a Montana Soil	As	50	200	107	5.0	92	Pass
		Cu	105	175	140	2.0	141	Pass
		Pb	1250	1550	1400	10.0	1356	Pass
		Zn	340	488	414	11.0	417	Pass
RTC-407	Metals in Clay	Cr	850	1150	1000	29.1	1035	Pass

Certificates for these materials can be made available upon request.

Lead Paint

Certificate Number: 190567-01 **Serial Number: 501736**

Lead Paint without Shield

Standard	Description	Element	Requirement		Assay	±	Reported	P/F
			Min	Max				
SRM 2575	Green Lead Paint Film SRM 2575	Pb	0.200	0.400	0.307	0.021	0.33	Pass
SRM 2573	Red Lead Paint Film SRM 2573	Pb	0.950	1.140	1.040	0.064	1.06	Pass
SRM 2572	Orange Lead Paint Film SRM 2572	Pb	1.400	1.650	1.527	0.091	1.61	Pass

Lead Paint with Shield

Standard	Description	Element	Requirement		Assay	±	Reported	P/F
			Min	Max				
SRM 2575	Green Lead Paint Film	Pb	0.200	0.400	0.307	0.021	0.35	Pass
SRM 2573	Red Lead Paint Film SRM 2573	Pb	0.950	1.140	1.040	0.064	1.08	Pass
SRM 2572	Orange Lead Paint Film	Pb	1.400	1.650	1.527	0.091	1.63	Pass

Certificates for these materials can be made available upon request.

APPENDIX E

LABORATORY ACCREDITATION AND INDIVIDUAL CERTIFICATIONS

MISSOURI DEPARTMENT OF NATURAL RESOURCES

CERTIFICATION NUMBER:
7118051923MOIR2164
THIS CERTIFIES
Robert H Hill II
HAS COMPLETED THE CERTIFICATION REQUIREMENTS FOR
Inspector



APPROVED: **06/05/2023** TRAINING DATE: **05/19/2023**
EXPIRES: **06/05/2024**
Director of Air Pollution Control Program

June 5, 2023

Robert H Hill II
608 N 43rd St
Belleville, IL 62226

RE: **Missouri Asbestos Occupation Certification Card**

Enclosed is your certification card for Asbestos Inspector, as issued by the Asbestos Unit of the Missouri Department of Natural Resources' Air Pollution Control Program.

Missouri Certification Number: 7118051923MOIR2164
Course Training Date: May 19, 2023
Missouri Certification Approval Date: June 05, 2023
Missouri Certification Expiration Date: June 05, 2024

Note:

- All Missouri-certified asbestos personnel must comply with the following statutes and regulations:
  - Sections 643.225 to 643.250, RSMo;
  - 10 CSR 10-6.241 *Asbestos Projects-Registration, Abatement, Notification, Inspection, Demolition, and Performance Requirements; and*
  - 10 CSR 10-6.250 *Asbestos Projects-Certification, Accreditation and Business Exemption Requirements.*
- To keep your occupation certification up-to-date, you must complete an annual refresher course and submit a renewal application each year.
- In order to be eligible to renew your certification, you must successfully complete a refresher course with a Missouri-accredited training provider within 12 months of the expiration date of your current training certificate. If you exceed this grace period, you will be required to retake a Missouri-accredited initial course in order to be eligible for Missouri certification.

To obtain a copy of the certification renewal application, or review regulations and requirements, please visit our website at http://dnr.mo.gov/env/apcp/asbestos/index.htm.

If you have any questions please call the Air Pollution Control Program at 573-751-4817.

AIR POLLUTION CONTROL PROGRAM

Director of Air Pollution Control Program

MISSOURI DEPARTMENT OF NATURAL RESOURCES

CERTIFICATION NUMBER:
7118052623MOSR2164

THIS CERTIFIES
Robert H Hill II
HAS COMPLETED THE CERTIFICATION REQUIREMENTS FOR
Supervisor



APPROVED: **06/05/2023**
EXPIRES: **06/05/2024**

TRAINING DATE: **05/26/2023**

Director of Air Pollution Control Program

June 5, 2023

Robert H Hill II
608 N 43rd St
Belleville, IL 62226

RE: **Missouri Asbestos Occupation Certification Card**

Enclosed is your certification card for Asbestos Supervisor, as issued by the Asbestos Unit of the Missouri Department of Natural Resources' Air Pollution Control Program.

Missouri Certification Number: 7118052623MOSR2164
Course Training Date: May 26, 2023
Missouri Certification Approval Date: June 05, 2023
Missouri Certification Expiration Date: June 05, 2024

Note:

- All Missouri-certified asbestos personnel must comply with the following statutes and regulations:
  - Sections 643.225 to 643.250, RSMo;
  - 10 CSR 10-6.241 *Asbestos Projects-Registration, Abatement, Notification, Inspection, Demolition, and Performance Requirements; and*
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To obtain a copy of the certification renewal application, or review regulations and requirements, please visit our website at http://dnr.mo.gov/env/apcp/asbestos/index.htm.

If you have any questions please call the Air Pollution Control Program at 573-751-4817.

AIR POLLUTION CONTROL PROGRAM

Director, of Air Pollution Control Program

STATE OF MISSOURI
DEPARTMENT OF HEALTH AND SENIOR SERVICES

LEAD OCCUPATION LICENSE REGISTRATION

Issued to:

Robert H. Hill II

The person, firm or corporation whose name appears on this certificate has fulfilled the requirements for licensure as set forth in the Missouri Revised Statutes 701.300-701.338, as long as not suspended or revoked, and is hereby authorized to engage in the activity listed below.

Lead Risk Assessor
Category of License

Issuance Date:	**5/15/2023**
Expiration Date:	**5/17/2025**
License Number:	**010517-200133036**

Paula F. Nickelson
Acting Director
Department of Health and Senior Services

Lead Licensing Program, PO Box 570, Jefferson City, MO 65102

INSTITUTE OF HAZARDOUS MATERIALS MANAGEMENT

THIS CERTIFIES THAT

Robert H. Hill

HAS SUCCESSFULLY MET ALL THE REQUIREMENTS OF EDUCATION, EXPERIENCE AND EXAMINATION, AND IS HEREBY DESIGNATED A

CERTIFIED HAZARDOUS MATERIALS MANAGER®

CHMM®

INSTITUTE OF HAZARDOUS MATERIALS MANAGEMENT

1/31/2007	14171
DATE OF CERTIFICATION	CREDENTIAL NUMBER
1/31/2028	
CERTIFICATION EXPIRES	

EUGEN[illegible]. GUILFORD, JR.
EXECUTIVE DIRECTOR

INSTITUTE OF HAZARDOUS MATERIALS MANAGEMENT
CERTIFIED HAZARDOUS MATERIALS MANAGER
CHMM
IHMM

VERIFIABLE AS AUTHENTIC AT
https://online.ihmm.org/ihmmssa/ceussacustlkup.query_page

ANAB ACCREDITED PERSONNEL CERTIFICATION BODY

Accredited by the American National Standards Institute and the Council of Engineering and Scientific Specialty Boards

CESB

Your Sole Provider of Environmental Health & Safety Services

October 9, 2024

Lurita McIntosh Blank
Principal
Raths, Raths,& Johnson, Inc.
500 Joliet Road, Suite 200
Willowbrook, IL 60527-5618

RE: Asbestos Bulk Sampling
Janis Zeigler House
244 Saint Mary's Road
Sainte Genevieve, Missouri 63670
SITEX Project No. 22237

Ms. Blank:

As requested, SITEX collected three (3) bulk samples of insulation suspected of containing asbestos from Janis Zeigler House. Mr. Steven Loranger, a Missouri accredited asbestos inspector, under the direction of State of Missouri asbestos inspector Robert Hill II, collected the bulk samples on Friday October 4, 2024. EMSL Inc. a NVLAP accredited laboratory, analyzed the samples on Wednesday, October 9, 2024. The bulk sample results are as follows:

SAMPLE NUMBER	MATERIAL DESCRIPTION	LOCATION	RESULTS
22237-D-01	Debris	Fireplace Bedroom	No Asbestos Detected
22237-D-02	Debris	Fireplace Bedroom	No Asbestos Detected
22237-D-03	Debris	Fireplace Bedroom	No Asbestos Detected

Based on the above sample results, the laboratory reported the debris located in the fireplace bedroom areas did not contain asbestos. Construction/repair activities may proceed in this area as scheduled.

The bulk sample laboratory report is attached to this letter for your files. SITEX appreciates the opportunity to be of service to Raths, Raths, & Johnson, Inc. If you have any questions or need additional information, please do not hesitate to contact me at my cell phone (618) 795-0502.

Sincerely,

Steven Loranger
Asbestos Building Inspector
License # 7118090823MOIR10810

Robert H. Hill II, CHMM
Senior Environmental/IH Project Manager

cc: Ms. Lurita Blank, Raths, Raths, & Johnson, Inc.

Attachments: Bulk Sample Analysis Report
Individual Asbestos Certification
Suspect Material Photographs

EMSL Analytical, Inc.

100 Green Park Industrial Court Saint Louis, MO 63123

Tel/Fax: (314) 577-0150 / (314) 776-3313

http://www.EMSL.com / saintlouislab@emsl.com

EMSL Order:	392405538
Customer ID:	SEI50
Customer PO:	
Project ID:	

Attention:	Steve Loranger	**Phone:**	(314) 421-0600
	Sitex Environmental, Inc.	**Fax:**	(314) 421-0234
	1525 South Broadway Avenue	**Received Date:**	10/04/2024 12:58 PM
	Saint Louis, MO 63104	**Analysis Date:**	10/09/2024
		Collected Date:	
Project:	Janis Ziegler Home /22237		

Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
22237-D-01		White Fibrous	68% Cellulose 28% Fibrous (Other)	4% Non-fibrous (Other)	None Detected
392405538-0001		Homogeneous			
22237-D-02		White Fibrous	69% Cellulose 29% Fibrous (Other)	2% Non-fibrous (Other)	None Detected
392405538-0002		Homogeneous			
22237-D-03		Gray Fibrous	5% Cellulose 75% Fibrous (Other)	20% Non-fibrous (Other)	None Detected
392405538-0003		Homogeneous			

Analyst(s)

Sue Ferrario (2)

Sarah Kuper (1)



Jeff Siria, Laboratory Manager
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method") but augmented with procedures outlined in the 1993 ("final") version of the method. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. Saint Louis, MO NVLAP Lab Code 200742-0, CA 2668, OR 4194-001

Initial report from: 10/09/2024 12:09:32

OrderID: 392405538

Asbestos Chain of Custody (Air, Bulk, Soil)

EMSL Order Number / Lab Use Only: 392405538

EMSL Analytical, Inc.
100 Green Park Industrial Ct
St. Louis, MO 63123

PHONE: (314)-577-0150
EMAIL: saintlouislab@EMSL.com

EMSL ANALYTICAL, INC.
TESTING LABS • PRODUCTS • TRAINING

If Bill-To is the same as Report-To leave this section blank. Third-party billing requires written authorization.

Customer Information		Billing Information	
Customer ID		Billing ID	
Company Name	STBT	Company Name	STBT
Contact Name	Steven Lorenger	Billing Contact	Acct Payable
Street Address	1525 S. Broadway	Street Address	1525 S. Broadway
City, State, Zip	St Louis MO 63104	City State Zip	St Louis MO 63104
Country	USA	Country	USA
Phone	(314) 374-2461	Phone	(314) 421-0600
Email(s) for Report	Steven@siteassolutions.com	Email(s) for Invoice	

Project Information

Project Name/No.	Jane Ziegler House / 22237
Purchase Order	
EMSL LIMS Project ID (If applicable, EMSL will provide)	
US State where samples collected	
State of Connecticut (CT) must select project location	☐ Commercial (Taxable) ☐ Residential (Non-Taxable)
Sampled By Name	
Sampled By Signature	
No. of Samples in Shipment	

Turn-Around-Time (TAT)

☐ 3 Hour ☐ 4-4.5 Hour AHERA ONLY ☐ 6 Hour ☐ 24 Hour ☐ 32 Hour ☐ 48 Hour ☒ 72 Hour ☐ 96 Hour ☐ 1 Week ☐ 2 Week

TEM Air 3-6 Hour, please call ahead to schedule. 32 Hour TAT available for select tests only; samples must be submitted by 11:30 am

Test Selection

PCM Air
- ☒ NIOSH 7400
- ☐ NIOSH 7400 w/ 8hr TWA

PLM - Bulk (reporting limit)
- ☒ PLM EPA 600/R-93/116 (<1%)
- ☐ PLM EPA NOB (<1%)
- ☐ POINT COUNT
  - ☐ 400 (<0 25%) ☐ 1,000 (<0 1%)
- POINT COUNT w/ GRAVIMETRIC
  - ☐ 400 (<0.25%) ☐ 1,000 (<0.1%)
- ☐ NIOSH 9002 (<1%)
- ☐ NYS 198 1 (Friable - NY)
- ☐ NYS 198 6 NOB (Non-Friable - NY)
- ☐ NYS 198.8 (Vermiculite SM-V)

TEM - Air
- ☐ AHERA 40 CFR, Part 763
- ☐ NIOSH 7402
- ☐ EPA Level II
- ☐ ISO 10312*

TEM - Bulk
- ☐ TEM EPA NOB
- ☐ NYS NOB 198 4 (Non-Friable-NY)
- ☐ TEM EPA 600/R-93/116 w Milling Prep (0 1%)

Other Test (please specify)

TEM - Settled Dust
- ☐ Microvac - ASTM D5755
- ☐ Wipe - ASTM D6480
- ☐ Qualitative via Filtration Prep
- ☐ Qualitative via Drop Mount Prep

Soil - Rock - Vermiculite (reporting limit)*
- ☐ PLM EPA 600/R-93/116 with milling prep (<0.25%)
- ☐ PLM EPA 600/R-93/116 with milling prep (<0.1%)
- ☐ TEM EPA 600/R-93/116 with milling prep (<0.1%)
- ☐ TEM Qualitative via Filtration Prep
- ☐ TEM Qualitative via Drop Mount Prep

*Please call with your project-specific requirements.

☐ Positive Stop - Clearly Identified Homogeneous Areas (HA) | Filter Pore Size (Air Samples) ☐ 0.8um ☐ 0.45um

Sample Number	Sample Location / Description	Volume, Area or Homogeneous Area	Date / Time Sampled (Air Monitoring Only)
22237-D-01	Near Fireplace	Debris	X
22237-D-02	" "	Debris	
22237-D-03	" "	Debris	

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Method of Shipment		Sample Condition Upon Receipt	VM OCT 14 2024
Relinquished by	Date/Time 10/4/24 1252	Received by	VM OCT 14 2024 Date/Time 12:58 PM
Relinquished by	Date/Time	Received by	Date/Time

Controlled Document - COC-05 Asbestos R15 10/26/2021

☐ AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc 's Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer

INSTITUTE OF HAZARDOUS MATERIALS MANAGEMENT

THIS CERTIFIES THAT

Robert H. Hill

HAS SUCCESSFULLY MET ALL THE REQUIREMENTS OF EDUCATION, EXPERIENCE AND EXAMINATION, AND IS HEREBY DESIGNATED A

CERTIFIED HAZARDOUS MATERIALS MANAGER®

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1/31/2007	14171
DATE OF CERTIFICATION	CREDENTIAL NUMBER
1/31/2028	
CERTIFICATION EXPIRES	

EUGENE A. GUILFORD, JR.
EXECUTIVE DIRECTOR

INSTITUTE OF HAZARDOUS MATERIALS MANAGEMENT
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ANAB
ANSI National Accreditation Board
ACCREDITED
PERSONNEL CERTIFICATION BODY

Accredited by the American National Standards Institute and the Council of Engineering and Scientific Specialty Boards

CERTIFICATION NUMBER:

7118062124MOIR2164

THIS CERTIFIES

Robert H Hill II

HAS COMPLETED THE CERTIFICATION REQUIREMENTS FOR

Inspector

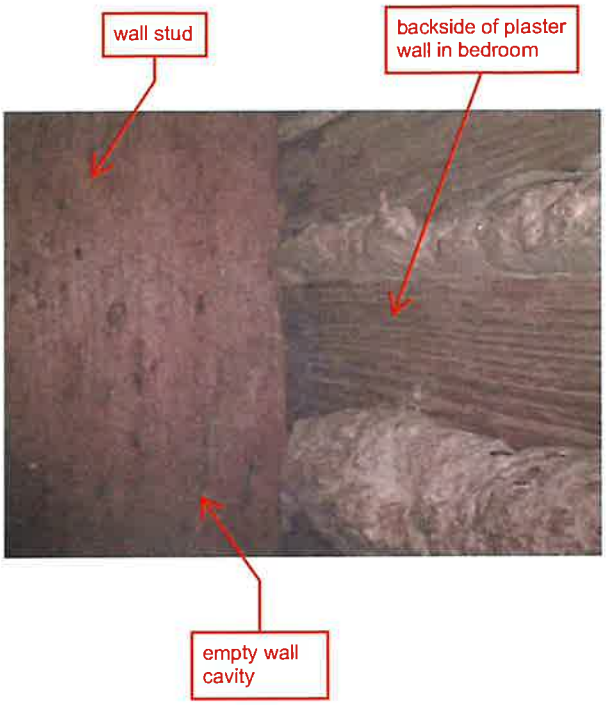


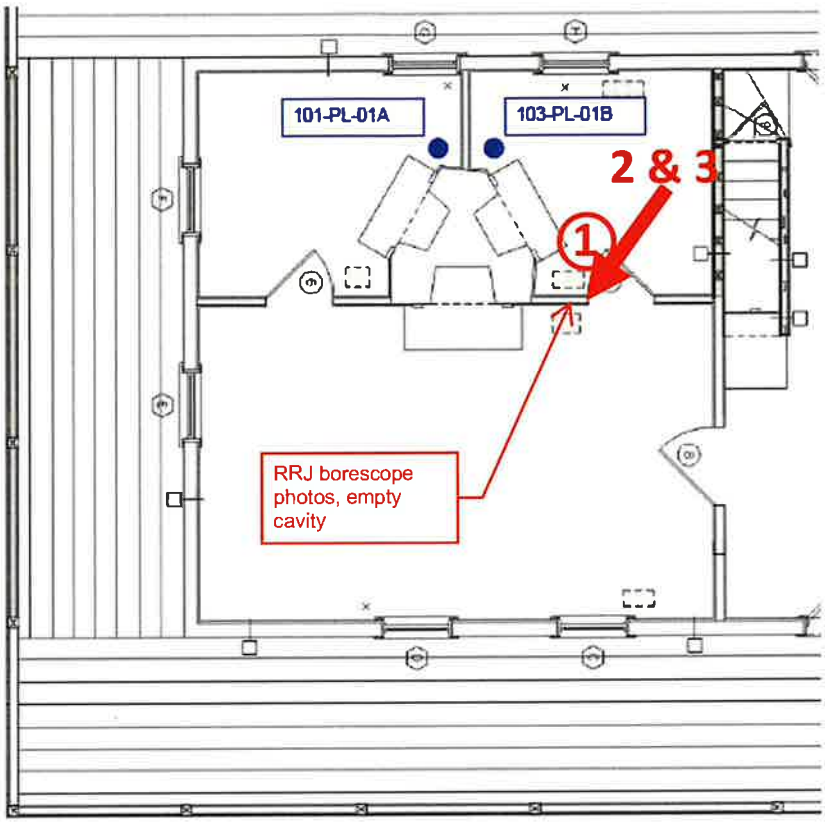
APPROVED: **07/08/2024**

EXPIRES: **07/08/2025**

TRAINING DATE: **06/21/2024**

Director of Air Pollution Control Program





FIRST FLOOR PLAN

3/16" = 1'-0"




2

3

Appendix F:
Historic Finishes Analysis Report



Janis Ziegler House
Historic Finish Study

Ste. Genevieve National Historical Park
Ste. Genevieve, MO

March 2024

HISTORICSURFACES



EXECUTIVE SUMMARY

This study was initiated by Lurita McIntosh Blank, Principal with the Raths, Raths, and Johnson Architects. The main purpose of this study is to understand more about the historic appearance of the interior and finishes at the Janis Ziegler House (aka the Green Tree Tavern). The examinations in this report focused on the six interior spaces of the 1st Floor: Tavern Room, Mason's Room, Parlor, Family Sitting Room, West Bedroom, and East Bedroom. In addition to the paint microscopy some notes have been provided to denote some of the specific issues found in each room as part of a cursory visual examination.

To obtain the information for this study, on-site investigations and paint microscopy were implemented by Anthony Kartsonas of Historic Surfaces LLC between December 2023 and January 2024. Approximately 70 paint samples were extracted to determine the original color and finish of the painted wood and plaster surfaces. They were taken from the most representative elements in the rooms. An additional 8 samples were extracted from the exterior to be examined. The samples were examined using a Leica large field stereo zoom microscope illuminated with a fiber optic ring light adjusted to daylight. The findings listed in the report are the earliest or most historic complete campaigns discovered by way of microscopy and site examinations. These may not represent the original layer but the earliest complete finish system. The layers documented were then matched to the Munsell Color System which measures color in three attributes: hue, value, and chroma. The findings below provide the first two layers / schemes as seen in the microscopy and listed in a chart together with a brief written description.

SUMMARY OF FINDINGS

It is known that the interior of the house has had alterations, some cosmetic while others more significant. These include re-cladding the plaster ceiling and wall surfaces with either newer plaster as well as reconstructing missing elements such as the fireplace surrounds. Fortunately, in most areas, there are remnants of historic plaster and paint. These may be in just small areas or entire wall surfaces.

After reviewing the historic plaster finishes, it is clear that there are different plaster systems found on the walls representing different eras. The plaster type changes from room to room and many times even in the same room. In most rooms the different plaster systems appeared to be either a lime-based finish with little sand, a lime-based system with more sand and brown color base coat, and modern gypsum type plaster. Many of the rooms had plaster ceilings that have been removed. This can be seen from the plaster residue remnants on the underside of the beams. These ceilings were still not likely original and were added at some point, possibly during the early 20th Century. It is believed that many of the walls were replaced or significantly repaired when the ceiling plaster was installed. One way this is illustrated is that the main wall plaster differs from the remnants of plaster in between the beams which appears to be an earlier type of plaster system (lime). It is important to note that our observations and descriptions of the plaster systems are based on what could visually be seen and has not been verified with comprehensive examinations or lab testing.

The lime-based plaster systems are indicative of plasters used from the late Eighteenth Century to Mid-19th Century. The areas with the brown base coat have significant amounts of sand and because of this were typically softer. The two or more lime-based systems were likely completed during different eras. It is believed that there are also a few generations of the Gypsum type systems as well. Some may have occurred during the periods of restoration between the 1960's to the 1990's. For these reasons, not all areas would have remnants of early paint finishes let alone historic ones. The examinations tried to focus on finishes found on the lime-type or earlier plaster systems. In areas where they were found, the findings were reasonably consistent. Most early plaster systems were either bare plaster or in some areas had remnants of what appears to be limewash. This was a common and accessible finish for that era. In other areas the first paint layers were mostly slightly darker Off-white, Tan, and in a few instances Light Pink. Most of the later paint finishes appeared to be Oil base.

The wood on the ceilings is currently painted over in three of the six rooms (Mason's room, Parlor, and West Bedroom). The wood ceilings in the other rooms are exposed wood with virtually no remnants of early finishes. The earliest finish seen on many of the samples was what appears to be a Brown Stain or Oil finish. This finish saturates well into the wood grain and appears to have some color to it suggesting it is a wood stain, but it could possibly be a darkened oil. The current Light Blue paint on the Mason's room ceiling is the earliest while the ceilings in the Parlor and West Bedroom had numerous paint layers, in some cases over the Brown Stain.

Most of the remaining wood trim is exposed wood. This trim is so clean and, in many areas, very smooth to the touch, indicative of a sanded wood surface. This would suggest that the wood has been stripped. However, in a few areas in the Tavern room and Mason's room, there are remnants of a historic painted faux wood grain finish. These show wear and age suggesting they have been exposed for some time.



TAVERN ROOM

This is the main room that was believed to have been part of the historic Tavern. The room does seem to retain some of the historic fabric, but has had many modifications, likely completed not that long ago. The ceiling has wood beams with wide plank beadboard. They have a slightly darkened look to them suggesting they may have an oil or a very light stain finish or may just be dirty. There are two areas of replacement beadboard pieces on the East and West. The very light color of the wood suggests they are newer or have been excessively cleaned or stripped.

The walls are clad with plaster. The North wall is exposed plaster with no paint. It appears to be a modern gypsum type plaster and was likely done when changes were made to enclose the portion of the porch to make a new kitchen. The plaster wall around the fireplace on the NE wall is also exposed with no finish and is more contemporary. It is known that this fireplace was installed in the Twentieth Century to restore the historic fireplace locations. The east wall around the door is modern plaster as is most of south wall. Most of the east wall is modern plaster, however the frieze area from the ceiling boards to the bottom of the beams appears to have historic plaster. This plaster is indicative of traditional lime plaster. There is a rough transition from the lower wall to this frieze area in the plaster. This horizontal line with broken plaster suggests that there may have been a dropped ceiling. It is possible that the lower wall plaster was installed together with the dropped ceiling. There are some recent plaster repairs with an especially large area on the southern portion of the wall.

Immediately below the beam on the upper wall are remnants of a frieze stencil design. It is a two-color stencil of a stylized tree and leaf pattern, done in a folk-art style. The base paint is yellowish off-white. Considering it is applied on what appears to be the modern plaster, the stencil is likely contemporary. The walls below the chair rail appear to be a modern plaster.



Figure 1: Detail photo showing the folk-art style stencil. It is clearly a modern installation and an attempt to re-interpret the interior.

Much of the wood trim in the room does not appear original. They could be historic but based on the installation, they are likely not original to the house. They may be salvaged and reinstalled. The only areas to have older wood trim are the door surround on the south wall and window surround with chair rail section below it on the west wall. These currently have a faux painted wood grain finish. It has some wear and age, suggesting it has been exposed for some time. The remaining wood trim is smooth suggesting it was sanded and prepped as modern wood is treated. It appears to have a natural oil finish on it as found on the ceiling.

Tavern Room Findings

Tavern Room / Area	1st Layer	2nd Layer	Notes
Ceiling Plank - East	Dark Brown Stain 5YR 3/4 - 2/4	N/A	From finish remnant on edge next to wall
Upper Wall – South / between beams	White Limewash N9 – 10YR 9/1	Light Brownish Red Limewash 10R – 2.5YR 5/6	The red layer may be part of the same scheme
Upper Wall – South / next to former partition & at edge	Off-white 2.5Y 8/2 – 7/2	Light Blue 7.5BG 6/4	Found on both locations on main wall section
Upper Wall - West	Lt. Blue 7.5BG 7/4	Off-white 2.5Y 8.5/2	
Lower Wall	N/A	N/A	Modern Plaster
Wall Chair Rail - South	Yellowish Tan Paint 2.5Y 6/6	Dark Brown Glaze 7.5YR 3/4	Painted Faux Wood Finish



Figure 2: Detail photo showing the the remnant of the previous darker stain/oil finish that was on the ceiling boards but has been removed from the majority of the wood.

In only one small area on the Eastern end of the ceiling, there appeared to be a darker finish on the wood. The sample appeared to have a Brown color semi- transparent finish, similar to a wood stain. No other remnants of the stain could be seen. The wall plaster had many different layering sequences and suggests that the room has multiple eras of plaster finishes. The roughest and earliest looking plaster finishes appeared to be in the upper walls in the area between the wood beams. The first finish on those samples was a White Limewash. In two of the samples there were remnants of a Light Brownish Red Limewash on top of the White Limewash. It shows up as a line as if it was a cut-in color or accent. Other wall areas had more contemporary, likely oil paints of Off-white and Light Blue with no Limewash finishes present. Most of the trim was exposed wood but there are good examples of the painted faux wood grain finish on the South wall. This wood grain finish was completed using a Yellowish Tan paint as a base, followed by Dark Brown Glazes, likely Oil.



Figure 3: Detail photo showing the trim with the painted faux grain on the right side of the chair rail. The left side has exposed wood that has been stripped or salvaged from elsewhere.



FREEMASON'S ROOM

This room was also part of the historic tavern but is referred to as the Freemason's room as it was used to hold meetings for the Freemasons as early as 1807. The ceiling also has beams with wide plank bead board above. There is one area of modern infill on the Eastern end of the ceiling. The wood on the ceiling is currently painted in a Turquoise color. It appears to have darkened and is a little soiled suggesting it is older and has been exposed for some time. The finish is mostly stable with only some random losses. Along the bottom of the beams are remnants of a white substance in lines, parallel with the beams. This may be residue from behind lath strips suggesting there was a lower ceiling of plaster below the beams at some point.

The North, East and West walls have a modern type of plaster below the beams while the pockets in between the beams have more of a historic style plaster. There are remnants of a small wallpaper border below the ceiling. This wallpaper has considerable water damage with many areas beginning to delaminate and losses throughout, but the original colors and pattern are still clearly visible. Immediately behind the wallpaper is a Greenish Blue paint that is like the ceiling color. Below the beams are remnants of a frieze stencil border, similar to the tavern room which are a modern finish. The West wall has two vertical stencils up to the frieze as well which is modern. There are numerous recent plaster repairs, especially on the East and West walls. The entire South wall and area around the fireplace is a modern type of plaster. The remaining lower walls under the chair rail are an unpainted modern plaster.



Figure 4: Detail photo showing the wallpaper border remnant. It is likely an early 20th Century Wallpaper.

The North and West walls have remnants of wood trim with an older faux painted wood grain finish. These are found on the chair rail, widow surround, door surround and door. They are considerably worn and have darkened, but where the finishes that remain, are mostly stable. The baseboard on these walls currently has no painted or clearly visible finish. They have heavy water staining which occurred during the most recent flood. The remaining wood trim, including the fireplace, has a modern clear oil finish.

The majority of the chair rail and baseboard on the North, East and South walls appear historic. Most of the chair rail retains the painted faux wood grain finish while the baseboard has little to no remnants because of the flood. All of the door and window trim as well as all the trim on the West wall are exposed wood suggesting they are replacement.

Freemason's Room Findings

Freemason's Room	1st Layer	2nd Layer	Notes
Ceiling Beams & Plank	Light Blue 5BG 7/2	N/A	There is a clear sealant in some areas prior to the Light Blue but likely not part of a finish
Upper Wall – North & West / Between Beams	Off-White Limewash 2.5Y 9/2	Tan Limewash 10YR 7.5/4	There may be at least two layers of the Off-white limewash prior to the Tan
Lower Wall	N/A	N/A	Modern Plaster
Wall Chair Rail & Door-South	Yellowish Tan Paint 2.5Y 6/6	Dark Brown Glaze 7.5YR 3/4	Painted Faux Wood Finish

The current Light Blue paint on the ceiling is the earliest paint scheme. There were remnants of a clear sealant on a few samples that is a sealant for the Light Blue paint. It did not appear to have any tint in it, like the stain found in the Tavern room but it may be a possible earlier finish. The areas with earlier plaster have a few layers of Off-white Limewash as the earliest finishes. In some areas the second finish system was a soft Tan paint, like a Limewash. There are good examples of the painted faux wood grain finish on the North wall. This wood grain finish was completed using a Yellowish Tan paint as a base, followed by Dark Brown Glazes, likely Oil.



PARLOR

The Parlor area is the largest room in the Tavern. The ceiling has wood beams with wide plank boards above. The majority of the ceiling wood is currently painted blue. It is in fair condition. There is a large area of modern infill of planks on the Eastern end of the ceiling. This is in the area believed to have been the opening for the staircase to the upper floor. The beam face on the East wall is not painted in the same Blue as the rest of the ceiling. Also, a portion of the beam has remnants of three different wallpapers. This area had a fireplace surround as seen in the 1980's photos that was believed to be removed in 1990. There is a silhouette of a horizontal line on the upper west wall suggesting that there may have been a dropped plaster ceiling at some time.

The walls have a mixture of plaster from different generations. The East wall has some early lime type plaster but there are multiple large areas of more modern infill. The largest area of infill was the location of a former fireplace. The silhouette of this fireplace and surround can be seen on the floor and ceiling. Some of the best-preserved plaster on this wall is at the location of the original stair where there may be remnants of early limewash.





Figures 5 & 6: The image on the left is a detail of the historic plaster on the east wall. It shows the location of the earlier staircase. The image on the right is a detail from the upper east wall where remnants of an early wallpapers can be seen applied onto the face of the ceiling beam.

The North and South walls have some historic plaster, but it is not certain how early this plaster is. The lower wall below the chair rail has had significant repairs conducted after the flood. The West wall is similar to the North and South with the exception of the modern built stair area. There was speculation that the stair was originally located on the Western end of the room so the previous stair on the East end was removed and reconstructed on the West.



Figure 7: Detail photo showing the lower North wall. The lower half under the chair rail has been replastered in the area damaged from the most recent flood.

Most of the chair rail and baseboard on the North, East and South walls appear historic. The chair rail on these walls still retains the painted faux wood grain finish while the baseboard has little to no remnants which were likely lost during the flood. The door and window trim and all the trim on the West wall are exposed walnut suggesting they are later replacements or stripped.

Parlor Findings

Parlor	1st Layer	2nd Layer	Notes
Ceiling Beams Fascia Board – East / at Original Stair	Dark Brown Stain 5YR 3/4	N/A	
Ceiling Beam Fascia Board – East / Under Wallpaper remnant	Amber / Clear Sealant	Light Greyish Blue 10BG 6.5/0.5	Didi not appear to have the tinted stain
Ceiling Beam Fascia Board – North	Amber / Clear Sealant & Yellowish Light Grey Paint 5Y 6.5/0.5	Light Tan Paint 5Y 7/3	May have remnant of Dark Brown Stain
Ceiling Beam – North	Light Greyish Blue Paint 10B 7/1.5 – 7/2	Light Greyish Tan Paint 10YR 6.5/1	
Ceiling Plank	Dark Brown Stain 5YR 3/4	Light Grey Paint 10YR 6/1	
Upper Wall – East / Wall at original stairs	White Limewash N9	Off-white Limewash 2.5Y 9/1	The lighter Limewash layers are followed by a Bluish Grey Paint (5B 6.5/1), possibly a limewash
Upper Wall – East – Main Field	Tan Paint 10YR – 2.5Y 7/4	Yellowish Tan Paint 5Y 8/4	Neither layer is a limewash / Plaster may be more modern
Lower Wall - East	Light Tan Paint 10YR – 2.5Y 8/4	Light Yellow Paint 2.5Y 8/6	Followed by Light Tan Paint (5Y 7/3)
Lower Wall / North	Off-white Limewash 2.5Y 9/2	Yellowish Tan Paint 5Y – 2.5Y 8/4	
Floorboard	Amber Sealant Oil or Wax	Dark Brown Paint 5YR – 7.5YR 3/2	Initial layer saturates into wood but is not film forming

The ceiling wood elements are currently painted but had remnants of the Brown wood stain as the first finish. In certain samples the next scheme was a Light Grey paint and on others was a Light Greyish Blue paint. The wall plaster has had many repairs and interventions, but it does appear like the wall at the older staircase (East) and wall adjacent the current staircase (North) still retains some historic plaster. In both these areas the first few layers were White and Off-white Limewash. The wood trim in the room is all exposed with no remnants of the painted faux wood grain but there were some small remnants of a clear sealant, similar to a shellac or varnish. A sample from the floorboards was also examined. The first layer was a soft Greyish Amber finish, similar in appearance to a wax. This was followed by two to three layers of Dark Brown Paint.



FAMILY SITTING ROOM

The Family Sitting Room is the other large room in the house. The ceiling has the same wood beams and wide plank as the other areas, but it is not painted. The wood is exposed with no sealant or finish on it. It may have been stripped recently so it is in good condition. There are no replacement area. There are remnants of plaster on the underside of the beams suggesting that there was a plaster ceiling at some point.

The wall plaster does appear historic but not as early as some of the other areas. There are a few random areas of very recent plaster repairs. What is interesting is that the lower walls below the chair rail do not show the signs of damage from the flood as seen in the other rooms, it may all have been replaced after the flood or did not suffer as much damage. Most of the plaster has a very hard finish coat with a soft heavy sand and hair base coat. The hard finish may be a newer veneer over an earlier plaster system. On two areas on the North wall, the base coat appears harder than other areas.

The wood trim in this room is all exposed walnut suggesting it is all replacement or has been stripped. There are a few areas with some remnants of a clear finish.



Figure 8: Detail photo of the door to the Parlor. The darkened lower area of the door shows the line of water from the most recent flooding.

Family Sitting Room Findings

Family Sitting Room	1st Layer	2nd Layer	Notes
Ceiling Beams & Plank	N/A	N/A	Exposed Wood – No finish
Main Wall – East	Yellowish Off-white 5Y 9/4	Green Paint 2.5GY 6/4	In one sample there was a gypsum layer between the Off-white and Green
Lower Wall – North, West & South	Yellowish Off-white 5Y 9/4	Green Paint 2.5GY 6/4	In two samples there was a gypsum layer between the Off-white and Green

It is believed that none of the finish coats of the plaster surfaces are very historic. The earliest paint scheme was a Yellowish Off-white paint followed by a Green paint scheme. The wood trim had some small remnants of a clear finish, similar to a shellac or varnish.



WEST BEDROOM

The West bedroom is a small room. The ceiling has the same beam and plank ceiling and is currently painted Light Blue. There is one area above the fireplace on the Eastern end that has not been painted with the blue exposing an earlier white paint finish.

The East wall has some remnants of historic plaster. This plaster has a hard finish coat with soft base coat that is heavy with sand and hair. The base coat is especially thick with a high hair content around the chimney. The upper walls on the North, West and South elevations are drywall. The lower walls are a similar hard finish coat plaster with a brown sand base coat.

All the trim is exposed walnut suggesting it is not original and likely salvaged. There are small remnants of a clear finish. The side of the door facing the room has heavy marks from possibly stripping and signs from previous burn damage. It also has a blanched appearance with a rougher less sanded surface than the other areas. The other side of the door has more of an even looking finish. This may possibly illustrate the difference between partial and full refinishing where it is possible that the wood was oiled or stained to help with the color saturation.

West Bedroom Findings

West Bedroom	1st Layer	2nd Layer	Notes
Ceiling Beam & Plank	Dark Brown Stain 5YR – 7.5YR 3/4	Greyish Tan 10YR 7.5/2.5	On small, exposed area of ceiling boards the Greyish Tan layer was slightly darker (10YR 6.5/3)
Trim piece below Fascia Board – East	White Limewash N9	Light Pink Paint 10R 7.5/2.5	
Main Wall – East / left of fireplace	Light Blue Paint 10B 8/1.5 (Distemper?)	Gypsum Plaster then Off-white Paint	The Light Blue paint is soft, more similar in appearance to a Distemper than Limewash
Main Wall – East / Above Fireplace	White Limewash N9	Blue 5B 6.5/3	
Upper Wall – East / From under Wallpaper remnant next to ceiling	Off-White 2.5Y 9/2	Reddish Tan Paint 5YR 6/3.5	Initial Off-white is soft, but may not be a Limewash
Lower Wall – North & West	Yellowish Off-white Paint 5Y 9/2.5	Blue 5B 6.5/3	



Figure 9: Detail photo showing the upper East wall. A small area between the ceiling beam and wall has not been painted over with the current blue. The plaster wall above the fireplace is a hard older plaster with significant amounts of hair but also has signs of previous patch repairs.

The ceiling wood elements did have remnants of the Brown Stain as the first finish, followed by a Greyish Tan paint. On samples from the upper East wall near the lower trim piece and from the wall above the fireplace, the first few layers were a White Limewash. In one area the next finish system was a Light Pink paint and the other a Reddish Tan paint, both likely oils. In an area of the wall to the left of the fireplace, the first layer was a Light Blue paint. This paint layer was very soft and chalky, more like a Distemper type paint than a Limewash. Remnants of a darkened clear sealant can be seen on the North wall chair rail and Door.



EAST BEDROOM

The East bedroom is similar in size to the West bed. The ceiling has the same wood beam and plank ceiling, but it is exposed wood and not painted. It was likely stripped. There are signs of plaster residue on the ceiling beams suggesting there was a plaster ceiling at some point.

The North, West and South walls have historic plaster. It has a hard finish coat over a soft brown base coat heavy with sand and hair. Underneath a few layers of a white paint finish is a pink paint which seems to be the earliest. It was found consistently on all the upper walls. The lower walls on these elevations have signs of the current flood that has not been repaired as in other areas. Interestingly, it does not appear to have as much paint build-up as the upper walls. The first layer appears to be a light green with no pink. The entire north wall is modern plaster with no paint finish that appears to be recent. There does not appear to be any historic plaster underneath this finish system. This plaster appears a little thinner than normal standards for 3 coat plaster. The wall has some flex when pressed against. This may suggest that the wood lath is also a little loose. Because of these issues, there are numerous horizontal stress fractures that can be seen in this new plaster system.

All the trim is exposed walnut suggesting it is likely salvaged or has been stripped. There are small remnants of a clear finish. The side of the door facing the room has signs from previous burn damage on one panel but is more uniform is smoothness and finish than the door in the West Bed.



Figure 10: Detail photo showing the lower South wall. The lower half under the chair rail has significant paint loss in the area damaged from the most recent flood.

East Bedroom Findings

East Bedroom	1st Layer	2nd Layer	Notes
Ceiling Beams & Plank	N/A	N/A	Exposed Wood – No finish
Upper Wall – North & West / Between Beams	White Paint N9	White Paint	Initial white is soft, but possibly not a Limewash
Main Wall – North & West at Fireplace	Off-white Paint 2.5Y – 10YR 9/2	Light Pink 10R 6.5/3	
Lower Wall – North & West	Light Blue Paint 5BG 7/1.5	Yellowish Off-white 5Y 9/3.5	In one sample there was a thin layer of gypsum prior to the Light Blue, may be a repair

No remnants of any finish could be seen on the ceiling wood elements. The upper walls varied and had a White paint found in the upper areas between the beams, while the main wall areas had a thin Off-white Paint, followed by a Light Pink.

INTERPRETATION

The examinations revealed many variations of the finishes within the house from room to room. Normally in performing studies these variations and inconsistencies would indicate changes made to an interior such as signs of previous repairs or replacement of interior fabric. The changes in materials are also indicators of remodeling work that any household goes through to repair and/or change an interior. I think in this case the variations are an indication of the many different eras of interventions from residents making renovations during the 19th to early 20th century to efforts of reconstruction and restoration between the 1960's and 1990's.

It was not uncommon for wood in simple cottages / log structures like this to be left untreated or unfinished. Meaning that the wood would have been exposed and not sealed or finished in any way in the interior. If the wood elements were finished, the most common paint that would have been accessible early on would have been a limewash that would have been directly applied onto the logs. This could not be verified as there were no locations to view the interior side of the logs because of all the plaster on lath cladding. As noticed, there are different eras of plaster on lath. This can be seen from an exposed area in the gift shop where two different lath types can be seen, hand split lath strips which are adjacent modern milled lath strip. Fortunately, some of the plaster wall systems are historic and still contain what is believed to be remnants of limewash. These remnants of historic plaster are on the upper wall areas in between the beams but also do exist in certain areas in the wall. We believe that the lath and plaster systems do not date to the original construction and were first installed in the early to mid-19th century. This would then date the first generation of the Limewash finishes to this era. The other painted finishes and remnants of wallpaper are likely from the early 20th century.

Regarding the wood ceilings elements, they are in good condition. Actually, too good of condition to be original. Also, the woodwork on the ceiling is milled and not hand hewn, also suggesting they were installed later in the 19th century. Fortunately, there were enough remnants of what is believed to be a wood stain on the wood ceiling, and this is believed to be the first finish system of the wood. A good majority of the wood trim is exposed with no finishes. It is believed that these pieces of trim are either salvaged and reused or have been stripped of any finishes. We are fortunate that there are remnants of the painted faux wood grain finish and in some areas is amazingly intact. No earlier finish system could be seen under the faux wood grain finish. This type of wood grain finish was indicative of mid to late 19th century aesthetics. Wood graining had existed in the 18th century, but these examples tend to be more primitive in appearance. Because of this, it is believed that the painted faux wood grain system was executed in the 19th century.

Appendix G:
Wood Assessment and Wood Species Identification Report

REPORT

Wood Condition Assessment of the Janis Ziegler House, NPS, Ste. Genevieve, MO



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REPORT:

Wood Condition Assessment of the Janis Ziegler House, NPS, Ste. Genevieve, MO

Background

This work was performed based on information provided by Raths, Raths & Johnson, Inc (RRJ). The site visit was conducted with the RRJ project team on August 22-23, 2023. The purpose of the wood assessment of the Janis Ziegler House was to determine the wood species of selected structural and non-structural members, conduct a wood condition assessment of the vertical wall logs and floor and roof framing members, perform visual in situ grading or roof rafters and provide treatment recommendations. The investigation and data collection were conducted on-site. Wood identification was done at the Ligno Logic lab. Based on the assessment, the RRJ project team should have the necessary information to make informed decisions about structural interventions and treatment recommendations.

Scope of Work

The scope of work for the wood assessment of the Janis Ziegler House was determined after reviewing the existing documentation provided by RRJ and confirmed with the project team during the site visit.

The scope of work included the following tasks:

- Conduct a field investigation of the Janis Ziegler House with members of the RRJ project team.
- Collect samples and perform wood species (or wood species group) identification for up to ten building wood components selected by the project team.
- Conduct a condition assessment of accessible wood members using visual assessment, probing, moisture content measurements, and resistance drilling.
- Perform in situ visual grading of roof rafters.
- Conduct data analysis and summarize the findings in a written report.
- Assist the RRJ project team in formulating appropriate treatment recommendations for the wood members.

Field and Laboratory Procedures

Wood Species Identification

Identifying wood species in building components makes it possible to select compatible materials for repair and replacement interventions. Additionally, knowing the wood species, the structural grade, and the wood condition of structural members allows for determining design properties for conducting engineering analysis.

Samples for wood species identification were removed from the first-floor framing members, exterior wall vertical logs, porch framing, and roof framing. The acquired sample size corresponds to the smallest amount of wood required for analysis (Figure 1). Wood species were identified using standard microscopic and macroscopic wood identification techniques.



Figure 1. Sampling location for the vertical log.



Figure 2. Probing of the wood using an awl.

Visual Assessment

Visual assessment of building elements allows identification of materials that are missing, broken, or in an advanced state of deterioration. Visual assessment also enables the detection of the most common deterioration mechanisms, such as external wood decay and wood-boring insect activity. In addition, current or past moisture problems can be identified, and the moisture sources or areas of potential moisture intrusion that can create favorable conditions for wood deterioration can be determined.

Internal decay and insect damage are often difficult to detect due to insufficient evidence on exposed wood surfaces. Probing the wood with an awl can quickly reveal voids and decay that may not be visible on the surface (Figure 2). Probing can also assess the approximate depth and extent of deterioration visible on the surface. In addition, visual inspection and probing, along

with wood moisture content measurement and mapping, provide a rapid approach to identifying areas that may require further investigation.

Moisture Content Measurements

Prolonged exposure to excessive moisture can create favorable conditions for wood colonization by decay fungi and encourage infestation of wood-boring insects. Typical problems associated with excessive moisture include wood decay, fungal staining, high shrinkage and swelling, checking, loose connections, and galvanic corrosion of ferrous fasteners.

Moisture content measurements identify locations with favorable moisture levels for the growth of wood decay fungi and, in some instances, wood-boring insect infestation. In general, fungi cannot grow in wood with a moisture content below 20%, even if they may be present in the wood. Moisture contents between 20% and 30% indicate areas of concern with sufficient moisture to support fungal growth but insufficient to indicate advanced decay. Moisture contents above 30% often indicate advanced decay with internal voids and/or surface deterioration.

Wood moisture contents were measured with a Delmhorst J-2000 resistance-type moisture meter with regular pins or a hammered insulated pin attachment with a maximum penetration depth of one inch (Figure 3).



Figure 3. Resistance-type moisture meter was used to measure the moisture content of a floor joist.



Figure 4. Resistance drill was used to investigate the internal wood condition of a floor joist.

Resistance Drilling

Resistance drilling is a quasi-nondestructive technique for determining the relative density of wood. The resistance drill measures the torque applied to a 3 mm diameter needle as it penetrates wood at a constant speed. The relative density profile is plotted against the depth of needle penetration. Resistance drilling is best suited for determining internal problems in large wood

cross-sections that do not show obvious signs of deterioration on the surface. Any internal void or early stage of decay at the drilled location can be detected by determining the relative density of the wood.

Limited resistance drilling was used to verify the internal condition of structural members in the Janis Ziegler house. Resistance drilling was done using a Rinntech Resistograph R650-PR Resistance Drill (Figure 4).

The condition of wood seen on the resistance drilling profiles is termed as *solid*, *punky,* or *void.* Solid wood has a resistance drilling (relative density) profile typical for healthy sound wood (free of decay or insect damage). Punky wood is soft and easy to penetrate but has not yet deteriorated to the point where there is a void; its resistance drilling profile has a lower relative density range than sound wood and lacks a sharp definition of wood features such as growth rings. Voids develop when the deterioration of the wood fibers is complete, and the relative density drops to the baseline of the resistance drilling profile.

Resistance drilling profiles are classified as having less or more than 50% of the profile loss relative to the depth of the drill path (element dimension). The distinction between less than or greater than 50% of profile loss is arbitrary and adopted only to sort the more severely deteriorated members. An engineering analysis would allow for determining whether 50% of the remaining solid wood in the members subjected to resistance drilling is sufficient based on anticipated loads, wood species, and structural grade.

Approximate resistance drilling locations are marked on the drawings and photographs with dots representing profiles with higher (red) or lower (blue) than 50% profile loss relative to the dimension of a drilled element. Orange dots mark the profiles that have a punky consistency.

In situ Visual Wood Grading

When the structural grade for lumber and timber of unknown grade is required in existing and especially in historic structures, grading is done visually in situ. Visual grading of structural members is based on the determination of wood species, dimensions, condition of the members, and measurements of grade-limiting growth characteristics such as knots, slope of grain, splits, and holes. This information is used to assign the structural grade based on current grading rules. Wood products are graded per procedures promulgated by one of several forest products industry associations, such as the Southern Pine Inspection Bureau (SPIB).[1]

Through in situ visual grading of the structural logs of interest to the structural engineer, grade information was determined that identifies wood properties (reference design values) necessary for an engineer to conduct structural analysis. A structural analysis can predict the members' ability to support anticipated load requirements and provide information critical for determining the extent of any necessary repairs.

[1] Southern Pine Inspection Bureau (2014). *Standard Grading Rules for Southern Pine Lumber*. Pensacola, Florida.

Slope of grain is the measure of the deviation of the wood fibers from the edge of the piece of lumber (or timber). Slope of grain was measured using transparent acetate with a ½-inch grid by aligning the grid parallel to the edge of the piece and measuring the deviation of grain along 10 inches. Knots were measured using either the transparent acetate with a grid or a tape measure.

NOMENCLATURE

The building nomenclature used in the assessment, data analysis, and presentation was adopted from the RRJ project team or developed for this report as follows:

Basement: Floor joists are labeled J1-J19, with drilling locations identified for south (S) and north (N) joist ends. Framing members surrounding masonry chimneys are labeled D1-D8. Investigated sill plates (S) are labeled for respective elevations ES (East sill plate), NS (North sill plate), and SS (South sill plate). Numbers in the sill plate labels correspond to joist locations.

Exterior log walls: Vertical logs of exterior walls are labeled based on the elevation (S, N, and E) and numbered clockwise. Diagonal corner logs are labeled based on the elevation and the corner orientation. For example, END is the diagonal corner log on the north side of the east wall.

Roof framing: Principal rafters are labeled for RS (south) and RN (north) elevation and numbered from the east to the west gable end. Gallery rafters are labeled GS (south) and GN (north), with numbers corresponding to principal rafters.

FINDINGS

WOOD SPECIES IDENTIFICATION

Findings of wood species identification for the investigated building elements of the Janis Ziegler House are presented in Table 1. Sampling locations are shown in Figures 5-9 and Figures B1-B11 (Appendix B).

White oak was the only wood species group identified in samples collected from the basement joists, exterior wall vertical logs, a diagonal corner brace, bottom sill, porch joist, and the porch top beam. White oaks are designated as a group of different white oak species (species group) since the individual species cannot be separated based on the wood anatomy. The white oak group includes all species of white oaks listed in the 'White Oak' species group under the National Design Specification for Wood Design[2]. White oak *Quercus alba* is the most common white oak species in Missouri.

Southern pine species group was identified in all samples collected from roof framing components, including a gallery rafter, a principal rafter, and a collar tie. The first-floor ceiling beam is also the Southern pine species group. Southern pine species group includes several

[2] National Design Specifications (NDS) Supplement: Design Values for Wood Construction, 2018.

economically important species such as loblolly (*Pinus taeda* L.), longleaf (*P. palustris* Mill.), shortleaf (*P. echinata* Mill.), and slash pine (*P. elliottii* Engelm.), which cannot be separated into individual species based on the wood anatomy. The lumber (and timber) of southern pines is marketed and known in the trade as Southern Yellow Pine (SYP)[3], designated as the 'Southern Pine species group' under the National Design Specifications for Wood Design[4].

White oaks and southern yellow pines are native to North America. Lumber (and timber) of these species is readily available if required to repair or replace the original materials.

Table 1. Wood identification results for samples from Janis Ziegler House, Ste. Genevieve, MO.

Sample number	Component	Location	Wood Species/Species group
1	Floor joist J10	Basement	White oak group (*Quercus* spp.)
2	Floor joist J15	Basement	White oak group (*Quercus* spp.)
3	Vertical log N19	North exterior wall	White oak group (*Quercus* spp.)
4	Vertical log E10	East exterior wall	White oak group (*Quercus* spp.)
5	Diagonal brace ESD	East exterior wall	White oak group (*Quercus* spp.)
6	Sill plate (between S17-S18)	Basement	White oak group (*Quercus* spp.)
7	Porch joist	Porch, south elevation	White oak group (*Quercus* spp.)
8	Porch top beam	Porch, south elevation, at the door	White oak group (*Quercus* spp.)
9	1st floor ceiling beam	Interior, over the stairs	Southern pine group (*Pinus* spp.)
10	Gallery rafter GS16	Roof framing	Southern pine group (*Pinus* spp.)
11	Principal rafter RS15	Roof framing	Southern pine group (*Pinus* spp.)
12	Collar tie (at RN30)	Roof framing	Southern pine group (*Pinus* spp.)

[3] Gaby. L.I. 1985. The Southern Pines. U.S. Department of Agriculture, Forest Service, FS-256.
[4] National Design Specifications (NDS) Supplement: Design Values for Wood Construction, 2018.

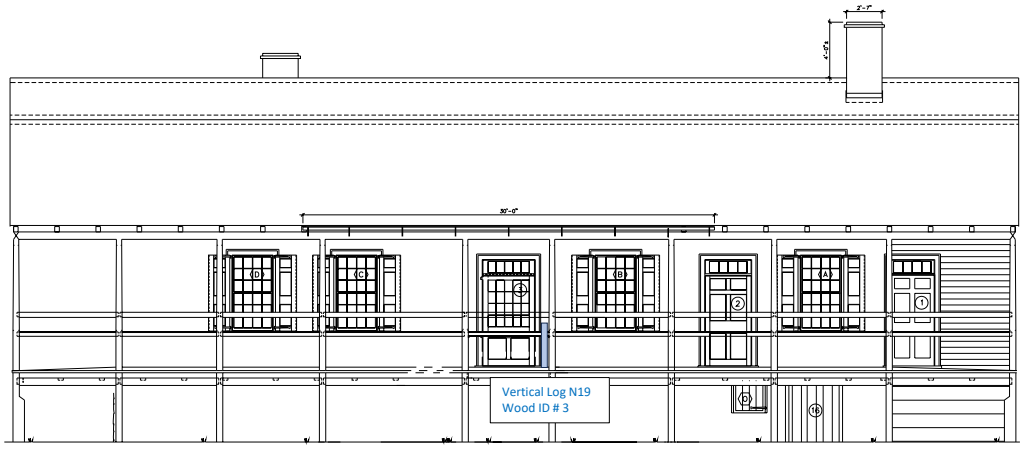


Figure 5. North elevation. Sampling location for Sample 3.

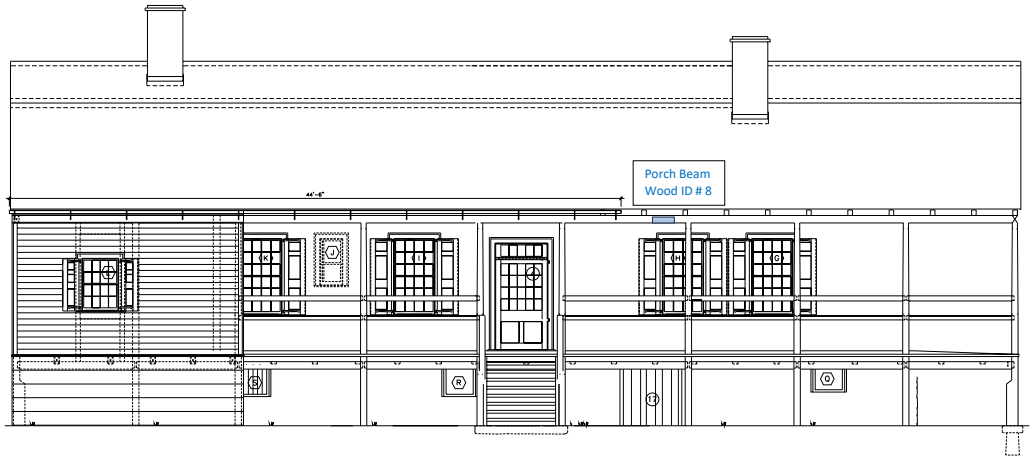


Figure 6. South elevation. Sampling location for Sample 8.

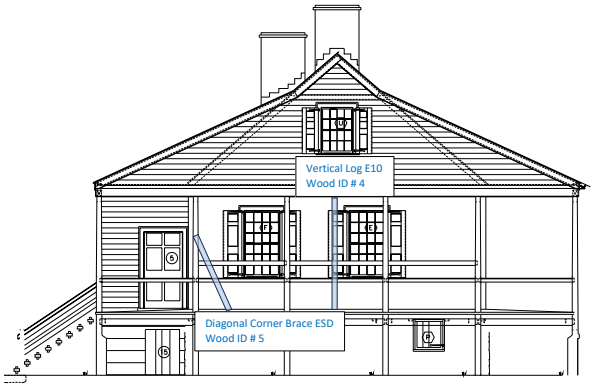


Figure 7. East elevation. Sampling locations for Samples 4 and 5.

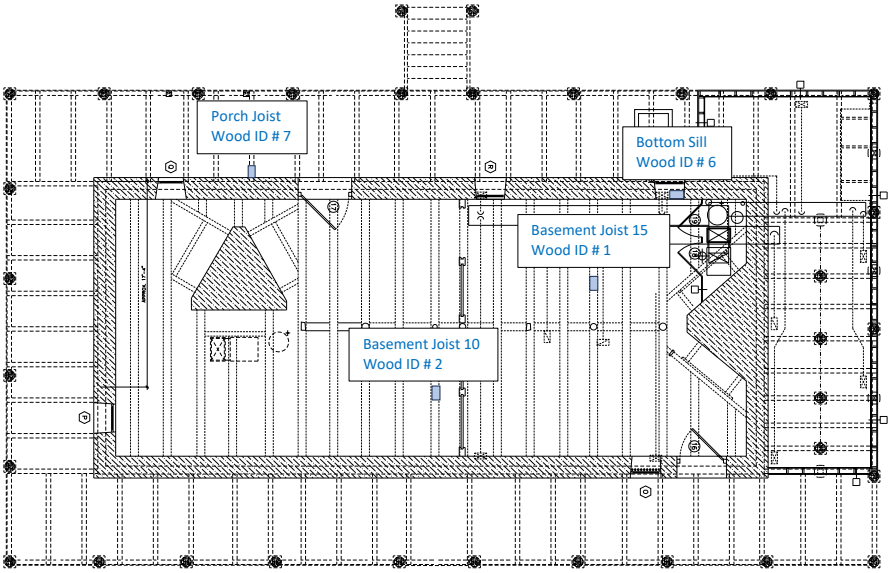


Figure 8. Basement. Sampling locations for Samples 1, 2, 6 and 7.

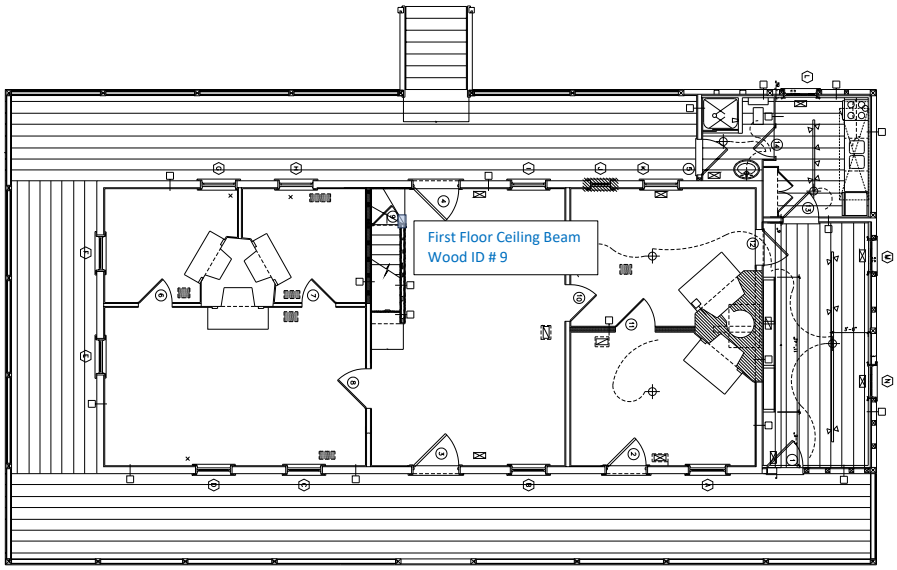


Figure 9. First floor. Sampling location for Sample 9.

Main Deterioration Mechanisms

Wood decay fungi are the principal deterioration agents causing material loss and reduction in structural integrity of vertical wall logs and floor, roof, and porch framing members of the Janis Ziegler House. Surface decay concomitant with the powderpost beetle damage, detected by wood probing and confirmed by resistance drilling, is mainly limited to the sapwood of white oak and southern yellow pine (Figure 10). Internal decay resulting in internal voids was confirmed in white oak members exposed to high moisture levels over time, including exterior wall logs and

the first-floor framing members. Assessment of internal voids in these members required resistance drilling, as the voids cannot readily be detected by visual inspection and surface probing.

Wood-boring insect damage from wood termites, powderpost beetles, and an unidentified species of a large wood-boring beetle is present throughout the building. Insect damage is secondary in significance to wood decay, despite visibly prominent signs of infestation such as beetle emergence holes and termite mud tubes on the wood surfaces.

Termite infestation was confirmed based on mud tubes on the surfaces and termite tunnels in the wood observed during visual inspection and by probing and resistance drilling (Figure 11). Termite damage is most severe in the building basement and often appears to coincide with fungal decay. Termites prefer wood that is already compromised and softened by wood decay fungi. No evidence of presently active infestation was found during the inspection.

Powderpost beetle damage is evidenced by pin-size insect emergence holes (pinholes), powdery frass on the wood surfaces, and a punky consistency of wood upon probing. Signs of powderpost beetle damage are present on white oak and southern yellow pine members, especially on sapwood surfaces (Figure 12). Powderpost beetle emergence holes are characterized by sharply defined round edges and small diameters (1/32 "-3/32"), consistent with Anobiid beetles.[5] Resistance drilling results show that the powderpost beetle damage is restricted to sapwood, measuring approximately ½ -1 ½ inches in width. This deterioration mechanism is typical for white oak and old-growth southern pine with naturally durable heartwood normally resistant to powderpost beetle. Most damage appears to be historic since the conclusive evidence of a currently active infestation, such as recently created pinholes, dead or alive beetles, or fresh frass, was not found during the investigation.



Figure 10. Wood decay and powderpost beetle damage restricted to the sapwood of white oak.



Figure 11. Mud tubes created by termites on the floor joist.

[5] *Anobiid Beetles in Structures,* EB 1577, by Daniel A. Suomi (Washington State University, Pullman, 1991).



Figure 12. Powderpost beetle emergence holes (pinholes) on white oak.



Figure 13. Large wood-boring beetle emergence holes measuring ¼ inch in diameter.

Anobiid beetles cause the greatest damage to wood with a moisture content above 12%, especially in poorly ventilated areas, such as the basement of the Janis Ziegler House. The powderpost beetle has a life cycle of up to eight years and can reinfest wood. The infestations often die out naturally but can persist for many years and cause significant damage. Extensive damage appears in the resistance drilling profiles as a punky region with a lower relative density range (less resistance) than solid wood and was typical for deteriorated sapwood.

The evidence of infestation by a large wood-boring insect such as Cerambycid beetle was found sporadically in most investigated building elements. These wood-boring insects create large round emergence holes measuring approximately ¼ of an inch in diameter (Figure 13). The beetle emergence holes observed at the Janis Ziegler House generally have weathered edges, suggesting that the holes are old. Other signs of an active infestation, including adult insects or larvae, were not observed. The infestation appears less extensive, and the damage is minor compared to other wood deterioration mechanisms.

First Floor Framing Members

Investigation of the first-floor framing members included floor joists, sill plates, and framing surrounding masonry chimneys. All members were accessed from the basement interior, except for the sill plates drilled from the exterior.

White oak is the wood species (group) identified in all sampled floor framing members (Table 1). Floor joists and diagonal members comprise various half-round, square-hewn, partially or fully debarked timbers (Figures 14 and 15). Based on the visual assessment and resistance drilling results, the condition of individual floor joists and diagonal framing members ranges from poor-to-good. The principal deterioration mechanisms are fungal decay and wood-boring insect damage. Past powderpost beetle and termite activity was observed throughout the

structure, but conclusive evidence of presently active insect infestation was not found at the time of assessment.

Wood moisture contents of floor framing members ranged between 10% and 18%. These values are in agreement with respective equilibrium wood moisture contents for the site and weather conditions at the time of assessment and do not pose a risk for active wood decay (wood moisture contents below 20%). Wood moisture levels should be monitored during the wet season and high precipitation events to identify any active moisture sources.



Figure 14. Floor joists comprise half-round, hewn, debarked, or with bark on white oak timbers of various dimensions.



Figure 15. South sill plate, floor joists, and diagonal framing surrounding the masonry chimney in the southeast corner of the basement.



Figure 16. Northeast corner of the basement. North ends of floor joists J1-J3 were drilled beyond the debris.



Figure 17. Termite mud tubes on the partition wall elements in the basement.

Visual assessment confirmed surface wood decay restricted to white oak sapwood, except in severely decayed members where the internal voids extend to the surface and are visible on the exterior. Limited resistance drilling was used to determine internal wood conditions and estimate the size of any internal voids in individual members.

Resistance drilling was done on the south- and north-facing ends of each floor joist unless the access was obstructed (Figure 18). The first drilling was done at the joist end, as close to the sill plate as possible. If a sizeable internal void was detected in the member, subsequent resistance drilling was done to determine the size of the void. Resistance drilling was done upward through the middle of the width for floor joists and diagonal framing members (unless noted otherwise) and horizontally (from the exterior toward the interior) or upward for the sill plate. The resistance drilling results are summarized in Appendix A (Table A1). Approximate resistance drilling locations and the graphical representation of the results for the first-floor framing are shown in Figure 18.

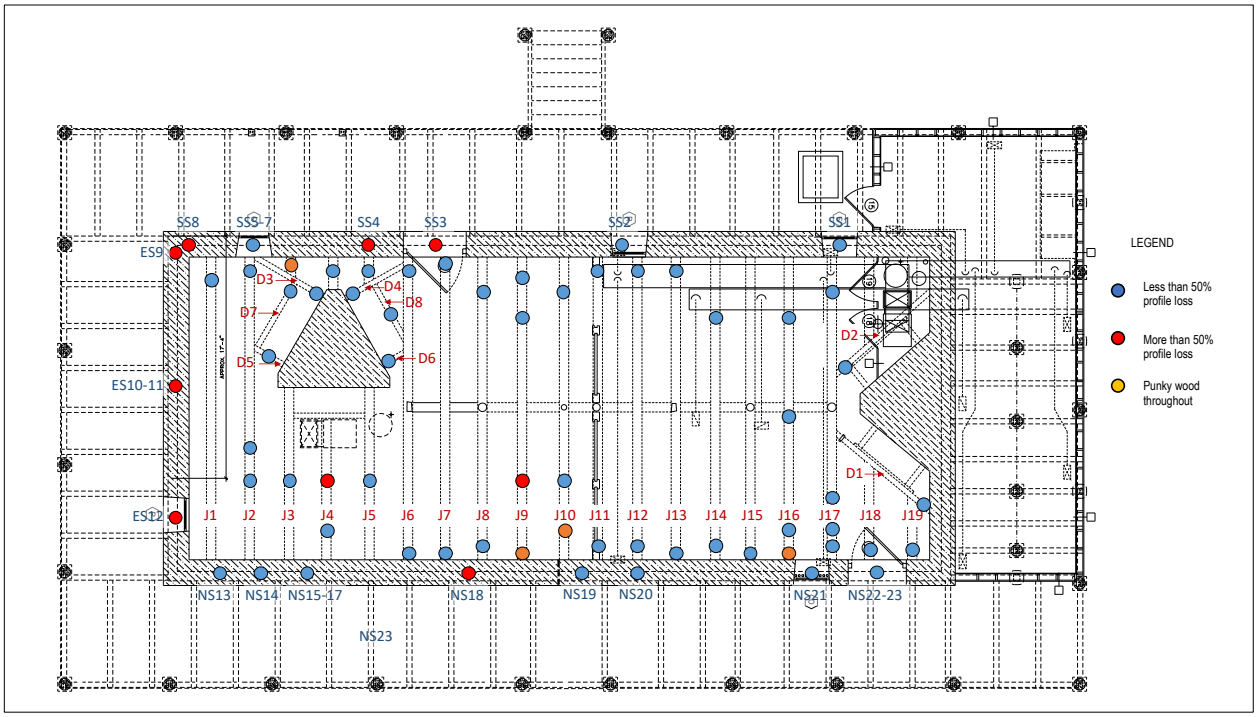


Figure 18. Resistance drilling locations and findings for the 1st floor framing members. Resistance drilling locations are marked as having higher (red dots) or lower (blue dots) than 50% profile loss at that location. Orange dots correspond to punky wood throughout the drilling profile.

Deterioration and associated cross-section losses of the floor framing members are given as less (blue) or more than 50% (red) loss across the resistance drilling profile. Several joists had resistance profiles without voids but showed poorly defined profiles with low resistance typical for "punky" wood. These profiles for joists J3-S, J9-N, J10-N, and J16-N are labeled in orange (Figure 18). Punky regions and overall worse conditions coincide with joist ends, which are more

often exposed to elevated moisture and its absorption through the end grain, leading to wood decay over time. Extensive internal decay resulting in voids that extend beyond 50% of the resistance drilling profiles was found only for J4 and J9. These joists should be evaluated by the structural engineer and considered for reinforcement or replacement.

The entire east sill plate and a section of the south sill plate between joist J8 and the east corner are severely deteriorated, having large internal voids and external decay. North sill plate is sound, with minor cross-section losses, except for a large internal void between joists J7 and J8. Structural capacities of sill plates should be evaluated, and appropriate interventions should be recommended by the structural engineer.

The extensive termite galleries, dark-colored frass, and soil debris observed on wood surfaces are evidence of termite infestation. Specifically, the signs of termite activity were found on the joists J2-S, J10-S, sill plates, and the basement partition wall (Figure 17). Live termites were not observed during the assessment. An assessment by an entomologist would be required to investigate and confirm an active infestation.

Exterior Walls

The Janis Ziegler House is a "post-on-a-sill" (*poteaux-sur-sole*) structure with exterior walls constructed from vertical logs set on a timber sill atop a stone masonry basement foundation. The vertical wall logs are exposed on the south, north, and east building elevations. Gable end walls and the entire west wall and west end sections of the north and south walls are clad in wood clapboard.



Figure 19. Clapboard siding on east and north elevations covering vertical wall logs.



Figure 20. View of the south exterior wall showing debarked hewn vertical white oak logs with spaces between logs filled with *bousillage*. Note that wood-boring insect emergence holes are visible on the log surfaces.

Wall logs are concealed on the building interior by the finishes and were assessed only visually from the exterior and with limited resistance drilling (Table A1, Appendix A). The exterior west wall and sections of the north and south walls covered by the clapboard siding were omitted from the investigation due to lack of access (Figure 19).

Vertical wall logs are hewn flat on the exterior surfaces to an approximate thickness of 5–5 ¾ inches. The infill between the vertical logs is *bousillage* (Figure 20). Based on the wood species identification of two vertical logs and one diagonal corner brace, exterior walls are made with white oak (Table 1).

The condition of the wall logs is generally good, particularly given the age of the building. Deterioration is primarily caused by fungal decay and beetle damage. Wood decay visible on the surface is typically confined to white oak sapwood, while the internal voids, detected with resistance drilling, are located in the central log sections. There are signs of wood-boring insect damage, namely powderpost beetle pinholes, and large wood-boring beetle emergence holes, on many exterior vertical logs (Figures 12 and 13). The insect damage appears of minor significance for the overall conditions of wall logs. Apparent signs of an active infestation, such as fresh frass or adult insects, were not found at the time of assessment, suggesting past insect damage.

SOUTH EXTERIOR WALL

South exterior wall logs numbered S1 (east corner log) to S44, approximate resistance drilling locations, and wood moisture contents of the individual logs are shown in Figure 23. All wall logs appear original to the building, except for S36 and S37, which were repaired with matching log sections inserted in an opening that existed between the two windows on the west end of the wall (Figure 21).



Figure 21. View of the south exterior wall showing repairs of logs S37 and S38.



Figure 22. Vertical log S14 with the damage caused by a large wood-boring insect.

South wall vertical logs are generally in good condition. Wood moisture contents of individual logs ranged between 11% and 27% at the time of assessment. Elevated moisture contents of

20%–27% were found in two wall sections comprising logs S6–S17 and S36–S43, respectively (Figure 23). When the measurements were repeated using longer hammered insulated pins, moisture contents decreased sharply with the depth and reached the values observed in other logs. For example, the moisture content of the log S44 decreased from 23% at a depth of ¼″ to 16% at a depth of ½″. Further investigation identified two basement vents under the porch as the most likely moisture sources contributing to elevated surface moisture levels in the two wall sections. It should be noted that the wood moisture contents were measured using a resistance-type moisture meter with regular pins having a penetration depth of ¼″ instead of longer insulated pins used to determine moisture contents at larger log depths. Their use was avoided since an insulated pin attachment requires hammering, which disturbs the *bousillage*.

Based on the visual assessment, south wall vertical logs are generally free of surface decay and wood-boring insect damage, although insect emergence holes are frequently present on the log surfaces (Figure 20). Vertical log S14 has wood-boring insect damage at the log base, as indicated by insect emergence holes and a punky wood consistency upon probing with an awl. The damage appears limited to the periphery of the log and does not appear to affect its structural capacity (Figure 22). Corner log S1 has an internal void measuring approximately 2-3/4″ x 3-1/2″, resulting in a 20% cross-section reduction at one foot above the porch floor and extending to the height of less than three feet where no void was detected. Corner log S44 has a 2″ deep internal void and a punky ½″ deep section on the interior log surface. All other investigated vertical logs on the south wall are free of large internal voids, as indicated by the resistance profile losses of less than 15% along the drilling path (Table A1, Appendix A).

Resistance drilling of the top plate above log S5 shows a solid profile. However, the exposed end grain in the notch holding the corner brace has a punky profile typical for insect galleries or intermittent wood decay (Table A1, Appendix A).

NORTH EXTERIOR WALL

North wall vertical logs (N1–N45), east (NED), and west (NWD) corner diagonal logs, wood moisture contents, and respective resistance drilling locations are shown in Figure 24.

Wood moisture contents of the individual wall logs ranged between 18% and 25%, averaging 21% at the time of assessment. These values correspond to equilibrium wood moisture contents established over several days before the site visit during extreme humid weather with temperatures exceeding 90°F and relative air humidity of 90%. Wood moisture content higher than 25% over long periods elevates the risk of wood decay and often indicates moisture intrusion. However, in this case, they were caused by high humidity and slower drying on the north elevation.

The visual assessment suggests that the north wall exterior members are in good condition, with surface decay limited to sapwood and superficial wood boring insect damage. Out of six drilled vertical logs, only three (N6, N34, and N43) had resistance drilling profiles with decreased relative density and punky consistency, not exceeding 27% of the profile length (Table 1A, Appendix A).



Figure 23. South exterior wall. Vertical logs (S1–S44) and a diagonal corner log (SED) marked in red. Resistance drilling locations marked with blue circles. Wood moisture contents (%) marked in green.



Figure 24. North exterior wall. Log labels marked red. Vertical logs (N1–N45) and diagonal corner logs (NED and NWD) marked in red. Resistance drilling locations marked with blue circles. Wood moisture contents (%) marked in green.

EAST EXTERIOR WALL

The east wall vertical logs (E1–E21) were assessed visually and using limited resistance drilling (Figure 25). Based on the assessment, east wall vertical logs and windowsills appear to be in sound condition.



Figure 25. East exterior wall. Vertical logs (E1–S21) and diagonal corner logs (ESD and END) marked in red. Resistance drilling locations are marked with blue circles. Wood moisture contents (%) marked in green.



Figure 26. A void in the vertical log E21 confirmed by probing with an awl. Resistance drilling above the void shows the sound interior of the log.



Figure 27. Gap filling with an unidentified material in the top plate on the east elevation.

The average wood moisture content of vertical logs was 16% (13%–18%) at the time of assessment, confirming a low risk of wood decay. The presence of large insect exit holes is noted on most logs, but no evidence of significant internal damage was found with wood probing and resistance drilling. Vertical log E21 has a large void visible on the exterior surface at approximately one foot above the porch deck (Figure 26). Resistance drilling of the log several inches above the void shows only a sporadic decrease in relative density, which can be attributed to insect galleries, suggesting that the damage is localized to the vicinity of the externally visible void. Resistance drilling of other east wall vertical logs shows internal checks, minor internal voids, and punky interior surfaces that do not exceed 20% of the profile depth (Table A1, Appendix A).

The top plate was not closely investigated, although a gap filling with an unidentified material is present on the south side of the top plate extending between the vertical logs E14 and E21 (Figure 27).

Roof Framing

The investigation of roof framing of the Janis Ziegler house included visual assessment and limited resistance drilling of principal rafters, gallery rafters, collar ties, horizontal rails, and gable end framing, and in situ visual wood grading of the principal roof rafters (Figure 28).

Wood moisture contents of all roof framing members were uniform and low, ranging between 10% and 11%, except for the members of the east gable framing, which had an average moisture content of 9%.

Based on wood identification of roof framing members, including a principal rafter, a gallery rafter, and a collar tie, the roof framing appears to be constructed exclusively with Southern pine (Table 1).

Principal rafters comprise small diameter round logs of approximately 5-6 inches in diameter, surfaced on the upper and bottom sides to the thickness of around 4 inches. Gallery rafters are constructed with round peeled southern pine logs, with diameters between 4 and 5 inches. All rafters appear to be in very good condition with no apparent external decay and no internal decay based on the limited resistance drilling (Table A1, Appendix A). There is a minor and isolated powderpost beetle damage restricted to the sapwood of some members (Figure 29). Two rafters are missing on the south elevation near the chimney (RS-9 and RS30). Horizontal rails are decayed in several locations, and are broken or missing between RN-10–RN-11, RN-26–RN-27, and RN-31–RN-32 (Figures 30 and 31).

Principal roof rafters were graded visually, in situ. The structural grade was determined based on the growth characteristics, primarily maximum knot size and slope of grain. The roof rafters were graded as Structural Joists and Planks using *Standard Grading Rules for Southern Pine Lumber*.[6] The structural analysis should account for the "shaved" cross section to take advantage

[6] Southern Pine Inspection Bureau (2014). *Standard Grading Rules for Southern Pine Lumber*. Pensacola, Florida.

of the entire section modulus rather than using a square or rectangular profile inscribed in the existing shape of the log cross-section. Based on observed characteristics, the principal roof rafters can be classified as Select Structural Southern Pine, except for the principal rafter RN-26, which can be classified as No. 1 Southern Pine.



Figure 28. Interior view of roof framing at the Janis Ziegler House.



Figure 29. Powderpost beetle emergence holes on the gallery rafter.



Figure 30. Broken horizontal rail.



Figure 31. Wood decay in the horizontal rail.

SUMMARY

- Exterior vertical logs, first floor, and porch framing members are identified as white oak species group (*Quercus* spp.). Roof framing members, including principal and gallery rafter and collar tie, and the first-floor ceiling beam are identified as Southern pine species group. All identified wood species are native and were locally available during construction.
- The condition of first-floor framing members ranges from poor-to-good, with fungal decay and wood-boring insect damage as primary deterioration mechanisms.
- Wood moisture contents of first-floor framing members ranged between 10% and 18%, suggesting a low risk of wood decay at the time of assessment.
- First-floor joists and diagonal members are generally in good condition, with only two joists (J4 and J9) having more than 50% resistance drilling profile loss due to internal decay, and four joist ends (J3-S, J9-N, J10-N, and J16-N) with a punky section throughout the drilling profile. These should be evaluated by the structural engineer and considered for reinforcement or partial replacement, accordingly.
- Sill plates are in poor-to-good condition. The east sill plate is severely deteriorated, with internal decay exceeding 50% of the drilling profile length. The south sill plate is deteriorated between joists J8 and the east corner of the building. The north sill plate has a deteriorated section with a large internal void between joists J7 and J8. It is recommended that deteriorated sill plates be further evaluated by the structural engineer and reinforced or replaced.
- Powder post beetle and termite activity in the basement should be monitored for the signs of an active infestation.
- Exterior vertical logs are in good condition with minor deterioration evidenced by external decay and insect damage restricted to sapwood (punky consistency) and limited internal voids.
- Wood moisture contents of exterior wall vertical logs ranged between 11% and 27% at the time of the investigation. High wood moisture content values (above the threshold of 20% required for wood decay) were caused by extremely humid conditions before and during the site visit and not by active moisture sources. It is recommended that the wood moisture contents are monitored during high precipitation season. Any areas with active moisture intrusion should be identified, and the sources of moisture should be eliminated.
- Air vents under the porch, identified as moisture sources for vertical logs in their vicinity, should be relocated away from the north wall.

- Roof framing elements are generally in good condition, with minor damage by powder post beetle and free of internal or external decay.
- The average wood moisture content of roof framing members was around 10%, suggesting dry conditions and a low risk of wood decay.
- Principal rafters can be classified as Select Structural Southern Pine except for the RN-26, which can be classified as No. 1 Southern Pine.
- Horizontal rails supporting gallery rafters are decayed, broken, or cut in several locations, specifically between RN-10–RN-11, RN-26–RN-27, and RN-31–RN-32. They can remain in service with minor repairs if determined by the structural engineer to have adequate structural capacity.

APPENDIX A: RESISTANCE DRILLING RESULTS

Table 1A. Findings of resistance drilling investigation for the Janis Ziegler House, Ste. Genevieve, MO.

Drilling number	Member type	Member label	Drilling Location	Drilling direction	Wood Moisture Content (%)	Findings/Condition Summary	% Profile loss
90047	Principal rafter	RN-1	middle	int. → ext.	10	solid	undetected
90048	Principal rafter	RN-10	2' from floor	int. → ext.	11	solid	undetected
90049	Gallery rafter	GN-20	1' from horizontal rail	int. → ext.	11	solid	undetected
90050	Principal rafter	RS-20	middle	int. → ext.	11	solid	undetected
90051	Gallery rafter	GS-20	1' from horizontal rail	int. → ext.	11	solid	undetected
90052	Floor joist	J2-N	6' from N wall	↑	13	1/2" punky, 5" solid	<50
90053	Floor joist	J2-N	8' from N wall	↑	n/a	1/2" punky, 5" solid	<50
90054	Floor joist	J3-N	6' from N wall	↑	n/a	solid	undetected
90055	Floor joist	J4-N	6' from N wall	↑	12	1/2" punky, 2 " solid, 2-1/2"intermittent decay	>50
90056	Floor joist	J4-N	3' from N wall	↑	n/a	solid	undetected
90057	Floor joist	J5-N	6' from N wall	↑	n/a	1/2" punky, 6-1/2" solid	<50
90058	Floor joist	J6-N	4" from N wall	↑	12	1/2" punky, 6-1/2" solid	<50
90059	Floor joist	J7-N	4" from N wall	↑	n/a	solid	undetected
90060	Floor joist	J8-N	1' from N wall	↑	13	solid	undetected
90064	Floor joist	J9-N	6" from N wall	↑	n/a	2" solid, 4" void, 3" solid	<50
90065	Floor joist	J9-N	6' from N wall	↑	n/a	2" solid, 4-1/2" void, 2" solid	>50
90066	Floor joist	J9-S	6' from S wall	↑	12	solid	undetected
90067	Floor joist	J9-S	1' from S wall	↑	12	solid	undetected
90068	Floor joist	J10-N	3' from N wall	↑	n/a	punky throughout	n/a
90069	Floor joist	J10-N	6' from N wall	↑	n/a	1/2" punky, 6-1/2" solid	<50
90070	Floor joist	J1-S	18" from S wall	↑	11	1/2" punky, 7-1/2" solid	<50
90071	Floor joist	J2-S	1' from S wall	↑	13	solid	undetected
90072	Floor joist	J3-S	1' from S wall (middle of short member)	↑	11	punky throughout	n/a
90073	Floor joist	J4-S	1' from S wall	↑	10	1/2" punky, 7" solid	<50
90074	Floor joist	J5-S	1' from S wall	↑	11	1/2" punky, 7-1/2" solid	<50
90075	Floor joist	J6-S	1' from S wall	↑	11	3/4" punky, 7-1/2" solid	<50
90076	Floor joist	J7-S	4" from S wall	↑	12	3" punky, 4" solid	<50
90077	Floor joist	J8-S	2' from S wall	↑	n/a	1/2" punky, 7-1/2" solid	<50
90078	Floor joist	J10-S	2' from S wall	↑	n/a	1/2" punky, 6-1/2" solid	<50
90079	Floor joist	J11-S	1' from S wall	↑	12	solid	undetected
90080	Floor joist	J11-N	1' from N wall	diagonal	n/a	solid	undetected
90081	Floor joist	J12-S	1' from S wall	↑	n/a	solid	undetected
90082	Floor joist	J13-S	1' from S wall	↑	13	solid	undetected
90083	Floor joist	J14-S	3' from S wall	↑	n/a	solid	undetected
90084	Floor joist	J16-S	3' from S wall	↑	n/a	solid	undetected
90085	Floor joist	J17-S	2' from S wall	↑	13	solid	undetected
90086	Floor joist	J12-N	1' from N wall	↑	14	1" punky, 8-1/2" solid	<50
90098	Floor joist	J13-N	6" from N wall	↑	n/a	solid	undetected

90099	Floor joist	J14-N	1' from N wall	↑	n/a	solid	undetected
90100	Floor joist	J15-N	6" from N wall	↑	n/a	solid	undetected
90101	Floor joist	J16-N	6" from N wall	↑	14	punky throughout	n/a
90102	Floor joist	J16-N	2-1/2' from N wall	↑	n/a	solid	undetected
90103	Floor joist	J16-N	mid-span	↑	n/a	1/2" punky, 6" solid	<50
90104	Floor joist	J17-N	1' from N wall	↑	n/a	4-1/2" solid, 2" void, 2" solid	<50
90105	Floor joist	J17-N	4' from N wall	↑	n/a	1/2" punky, 9" solid	<50
90106	Floor joist	J17-N	2-1/2' from N wall	↑	n/a	1" punky, 8 1/2" solid	<50
90107	Floor joist	J18-N	6" from N wall	↑	15	solid	undetected
90108	Floor joist	J19-N	6" from N wall	↑	17	solid	undetected
90109	Floor diagonal	D1	4" from West end	↑	n/a	solid	undetected
90110	Floor diagonal	D5	mid-point	↑	n/a	1/2" punky, 3" solid	<50
90111	Floor diagonal	D7	South end	↑	n/a	solid	undetected
90112	Floor diagonal	D3	West end at masonry	↑	n/a	solid	undetected
90113	Floor diagonal	D3	West end at masonry	↑	n/a	solid	undetected
90114	Floor diagonal	D4	East end at masonry	int. → ext.	n/a	solid	undetected
90115	Floor diagonal	D8	Mid-point	↑	n/a	solid	undetected
90116	Floor diagonal	D6	East end at masonry	↑	n/a	1/2" punky, 4" solid	<50
90117	Floor diagonal	D2	East end	↑	n/a	solid	undetected
90118	South Sill	SS1	Above opening	ext. → int.	n/a	2" solid, 2" void, 7-1/2" solid	<50
90119	South Sill	SS2	Above opening, East of center	ext. → int.	n/a	solid	undetected
90120	South Sill	SS3	Center over door		15	3" solid, 9" punky	>50
90121	South Sill	SS3	Center over door	↑	n/a	1" solid, punky, void	>50
90122	South Sill	SS4	Above opening		n/a	1" solid, then void	>50
90123	South Sill	SS5	Center over opening, center of sill	↑	n/a	solid	undetected
90124	South Sill	SS6	Center over opening, 1" from bottom of sill	↑	n/a	solid, internal checks	<50
90125	South Sill	SS7	Center over opening, 2" from top of sill	↑	n/a	solid	undetected
90126	South Sill	SS8	2' from East end, center of sill	ext. → int.	n/a	1" solid, 9" void	>50
90127	East Sill	ES9	1' from S end, center of sill	ext. → int.	n/a	1-1/2" solid, 8" void, 1" solid	>50
90128	East Sill	ES10	Center of sill	ext. → int.	n/a	1" solid, then void	>50
90129	East Sill	ES11	1" from bottom of sill	ext. → int.	n/a	2' solid, 9-1/2" void	>50
90130	East Sill	ES12	Center over opening, center of sill	↑	n/a	1" punky, 10" void	>50
90131	North Sill	NS13	Center of sill	↑	n/a	5" solid, 4" void, 2-1/2" solid	<50
90132	North Sill	NS14	Center of sill	↑	n/a	2-1/2" solid, 2" void, 2" solid, 2" void, 3"solid	<50
90133	North Sill	NS15	Center of sill	↑	n/a	4" solid, 3" void, 4" solid	<50
90134	North Sill	NS16	1" from bottom of sill	ext. → int.	n/a	solid, 1" void in the center	<50
90135	North Sill	NS17	Close to top of sill	ext. → int.	n/a	solid, intermittent checks	<50
90136	North Sill	NS18	Center of sill	ext. → int.	n/a	2' solid, intermittent decay throughout	>50
90137	North Sill	NS19	West of splice, center of sill	ext. → int.	n/a	solid	undetected

90138	North Sill	NS20	Center of sill	ext. → int.	n/a	solid, 1/2' void or check in the center	<50
90139	North Sill	NS21	Center above window	ext. → int.	n/a	solid	undetected
90140	North Sill	NS22	Center of sill, center above door	ext. → int.	n/a	9" solid, 1" void, 1" solid	<50
90141	North Sill	NS23	Center of sill, upper third of ledger	ext. → int.	n/a	solid, intermittent checks and 1" decay in the center	<50
90142	Wall log	S44	1' from bottom	ext. → int.	23	1" solid, 2" void, 2" solid, 1/2" punky	<50
90143	Wall log	S41	1' from bottom	ext. → int.	22	5" solid, 3/4" void	<20
90144	Wall log	S39	1' from bottom	ext. → int.	20	solid, 1/2" void in the center	<20
90145	Wall log	S33	1.5' from bottom	ext. → int.	17	solid	undetected
90146	Wall log	S21		ext. → int.	15	solid	undetected
90147	Wall log	S17	1' from bottom	ext. → int.	21	solid	undetected
90148	Wall log	S14	1' from bottom	ext. → int.	20	4-3/4" solid, 3/5" decay	<20
90155	Wall log	S1	1' from bottom (on S face)	ext. → int.	11	2" solid, 2" void, 1-1/2" punky	63
90156	Wall log	S1	3' from bottom (on S face)	ext. → int.	11	4-3/4" solid, 3/4" punky	<20
90157	Wall log	S1	1' from bottom (on East face)	ext. → int.	11	4-3/4" solid, 2-3/4" void, 2-1/2" solid	<30
90158	Wall log	E21	2' from bottom (directly above void)	ext. → int.	17	solid, large insect galleries	<50
90159	Wall log	E17	1' from bottom	ext. → int.	18	solid, check in the center	<50
90160	Wall log	E10	2' from bottom	ext. → int.	18	2-1/2" solid, 3/4" void, 1-1/2" solid	<50
90161	Wall log - diagonal	END	1' from bottom	ext. → int.	13	4-1/2" solid, 1" punky	<50
90162	Wall log	N43	1' from bottom	ext. → int.	24	4-1/2" solid, 1" punky	<20
90163	Wall log	N34	1' from bottom	ext. → int.	20	1" punky, 4" solid, 1/2" punky	<30
90164	Wall log	N24	1.5' from bottom	ext. → int.	21	solid	undetected
90165	Wall log	N12	2' from bottom	ext. → int.	20	solid	undetected
90166	Wall log	N6	1' from bottom	ext. → int.	20	4-1/2" solid, 1' punky	<20
90167	Wall log - diagonal	NWD	1' from bottom	ext. → int.	21	solid	undetected
90168	Top plate	TP1	Above S5	ext. → int.	n/a	solid	undetected
90169	Top plate	TP2	Above S5 at end grain corner brace	ext. → int.	n/a	punky throughout	n/a

* - profile loss is expressed as the percentage of void along the path of resistance drill at that location

APPENDIX B: WOOD IDENTIFICATION SAMPLING LOCATIONS



Figure B 1. Basement. Floor joist J10. White oak.



Figure B 2. Exterior wall. Vertical log N19. White oak.



Figure B 3. Exterior wall. Vertical log E10. White oak.



Figure B 4. Exterior wall. Diagonal brace ESD. White oak.



Figure B 5. Basement. Bottom sill between S17 and S18. White oak.



Figure B 6. Porch, south elevation. Porch joist. White oak.



Figure B 7. Porch, south elevation. Porch top beam. White oak.



Figure B 8. 1st floor ceiling beam. Southern pine.



Figure B 9. Roof. Gallery rafter at RS-16. Southern pine.



Figure B 10. Roof. Principal rafter RS-15. Southern pine.



Figure B 11. Roof. Collar tie at RN-30. Southern pine.

Appendix H:
Treatment Workshop Meeting Minutes

JANIS-ZIEGLER HOUSE TREATMENT WORKSHOP

IDIQ Contract No.: 140P6020D0002 **Task Order No.:** 140P6023F0027
Project: Janis-Ziegler House Historic Structures Report
RRJ Project No.: 19203.15
Date: June 6, 2024 – 9:00 AM to 12:00 PM

WORKSHOP ATTENDEES		
CONTACT	**FIRM AND ROLE**	**EMAIL**
Lurita Blank	Raths, Raths, and Johnson, Inc. (RRJ) Project Manager I Historical Architect	lmblank@rrj.com
Racheal Lute	RRJ | Technical Staff	rdlute@rrj.com
Liz Sargent	Liz Sargent HLA (LSHLA) | Historical Landscape Architect	lizsargenthla@gmail.com
Jane Jacobs	LSHLA | Historical Landscape Architect	janejacobshla@gmail.com
Christina Osborn	LSHLA | Historical Landscape Architect	cosbornhlp@gmail.com
Bob Foust	Alvine Engineering | MEP Engineer	bfoust@alvine.com
Mike Gregory	Alvine Engineering | MEP Engineer	mgregory@alvine.com
John Rosemurgy	NPS MWRO Cultural Resources | COR/Historical Architect	john_rosemurgy@nps.gov
David Newman	NPS Ste. Genevieve NHP | Program Manager	
Anderson Newman-Johnson	NPS Ste. Genevieve NHP | Supervisory Facilities Operations Specialist	anderson_newman-johnson@nps.gov
Josh Helper	NPS Ste. Genevieve NHP | Facilities	joshua_hepler@nps.gov
Leah Edwards	NPS | Landscape Architect	leah_edwards@nps.gov
Eden Hemming	Osage Nation | Archeologist	eden.hemming@osagenation-nsn.gov
Burgundy Fletcher	Peoria Nation | Historic Preservation Specialist	bfletcher@peoriatribe.com
Melissa Dirr-Gengler	Historic Resources Group | Historian	melissa@hrg-nebraska.com
Jim Baker	Missouri DNR Felix Vallé House State Historic Site | Site Manager (retired)	jbaker363@att.net

WORKSHOP MEETING MINUTES

The Workshop was held on June 6, 2024, from 9:00 AM – 12:15 PM CDT via Microsoft Teams. In attendance were representatives of NPS representing multiple departments and areas of technical expertise, NPS park staff, the consultant team for the Janis-Ziegler House (JZH), and select community stakeholders. The following meeting minutes are provided to summarize discussions and decisions made during this meeting for the project record. Should there be any questions or additions to these minutes, RRJ would appreciate the opportunity to update this document, as appropriate.

A. Project Overview

1. Meeting attendees provided short introductions and are documented for the record in the table above.

2. An overview of the workshop agenda and goals was given by Lurita Blank with RRJ.

B. History and Overview

1. Lurita Blank with RRJ summarized the social history and changes over time as presented in 50% Historic Structure Report (HSR). Liz Sargent and Jane Jacobs of LSHLA summarized

analysis of the historic landscape. Bob Foust and Mike Gregory summarized analysis of the MEP systems and recommendations.

2. The working Period of Significance (POS) is stated to be c. 1790 – 1938, encompassing the estimated date of construction and extending to the end of the Ziegler family ownership. Further discussion on the POS and character-defining features was conducted later in the workshop agenda.

3. Discussion – *Period of Significance*

    i. Eden Hemmings with the Osage Nation supports an earlier start date for the period of significance to better acknowledge Native American history in the area. The Osage have considered the area significant for centuries and it is important to acknowledge that there were already people living in the area when European settlers arrived and that is part of the reason why they chose the area as a place to settle.

    ii. Liz Sargent with LSHLA and Leah Edwards with NPS provided some insight into the work being done on the Ste Genevieve Cultural Landscape Report. This work is looking to understand the broader context of the area. The earlier date will be included as part of the period of significance for the CLR.

    iii. Attendees reached a general consensus that the end date of 1939 seemed reasonable.

C. Physical Investigation Overview

1. Lurita Blank briefly summarized the findings of the physical investigation of the Janis-Ziegler House, as discussed in the 50% HSR provided for this workshop. The following items were discussed:

    i. Architectural features and interior finishes.

    ii. Enclosure and structural systems.

    iii. Site and landscape.

    iv. Code, accessibility, and MEP systems

D. Treatment Alternates

1. Lurita Blank provided an overview of the project goals.

    i. The project team proposed a Rehabilitation approach with aspects of Preservation, Restoration, and Reconstruction as appropriate. Attendees reached a consensus that Rehabilitation is the appropriate preservation treatment approach.

    ii. A list of necessary repairs to address structural deficiencies, performance issues, and/or life safety issues were provided.

iii. A general discussion was held of the treatment of the exterior walls. Historically the logs would not have been exposed. The bousillage is brittle and weathered and in need of repair. RRJ recommends that whitewash or plaster and whitewash be applied to the walls to protect the logs.

a) Jim Baker stated that limewash was best practice as it gives ability to still see bousillage, but there is a need to test bond between logs and limewash.

b) Currently the exposed logs provide an interpretative opportunity for tour guides. David Newman with STGE asked if it was possible to keep a portion of the east wall exposed for future interpretive opportunities. The roman numerals and diagonal logs are current topics of discussion in this area.

c) Lurita Blank mentioned that the window replacement at the south wall also offers a good opportunity for keeping some logs exposed. Jim Baker also suggested the interior west wall as an option.

d) A general consensus was reached that the logs should not be left exposed for the preservation of the structure. A limewash coating appeared to be the preferred treatment.

iv. A general discussion of the windows was held. Jim Baker asked if the windows at the west wall are appropriate replicas. The original windows were possibly casement units. The earliest photographs of the house (c. 1870s) show the windows as 6-over-6 double hung sashes. The current windows are 12-over-12s and are 20th century replacement units; several units were replaced in 1999.

a) Attendees discussed if the existing windows are appropriate to the proposed period of significance. A general consensus was reached that global window replacement was not preferred at this time. RRJ will continue to research the history of the window configuration and update the HSR with additional information as it is available.

2. Landscape and accessibility recommendations were presented by Liz Sargent and Jane Jacobs of LSHLA.

i. Two potential parking options were proposed by the project team.

a) Option 1: Limited assessable parking at southeast side of the house with accessible pathways from parking to south gallery.

b) Option 2: Parking at Jour de Fete Park with no parking on the JZH site.

ii. Challenges regarding accessible access to the House were discussed due to the significant change in grade around the House. Options for construction of a hydraulic lift or a ramp were provided.

iii. Potential locations for interpretive nodes for the site were presented.

iv. Discussion

a) Attendees generally agreed that parking option 1 would be most compatible with the existing landscape and goals for the site. It was also noted that NPS does not own Jour de Fete park so reliance on that lot is not ideal as its use is subject to change.

b) A general discussion was held on the challenges of connecting the proposed parking area in Jour de Fête Park and the park site.

   a. The wooden bridge over South Gabouri Creek is maintained by the City of Ste. Genevieve and is in need of repairs.

   b. There is no marked pedestrian crossing across a busy roadway and near a road turn with limited visibility.

   c. There are no paved sidewalks.

c) Jim Baker mentioned that the lot behind the house along Seraphine street could possibly be used as a parking lot. This is privately held and would require a cooperative or lease agreement between the park and the owner. The park preferred to consider on-site parking options wherever possible.

d) Attendees agreed that construction of a hydraulic lift is not an appealing option due to maintenance requirements.

e) Attendees were not satisfied with the ramp configurations presented in the workshop. Concerns were raised that the proposed ramp at the west elevation would block off the use of the stone steps rom St. Marys Street, which should remain open to use. RRJ will consider the ramp configuration and make adjustments as needed to ensure this circulation path is not impeded.

3. Lurita Blank with RRJ presented architectural treatment recommendations, which all included options for accessibility from the site to the building. All approaches included the accessible entrance on the south elevation of the structure.

   i. Necessary preservation maintenance tasks were discussed for structure, envelope, and interiors.

   ii. Options for the interpretation of the interiors were provided.

   iii. Discussion:

      a) David Newmann mentioned that the current interpretation is focused on the Janis and Ziegler time periods, but there is no set interpretation scheme.

      b) Jim Baker stated that the house has the most intact interior of all the buildings in Ste. Genevieve. He suggested emphasizing the original fabric that still exists in the interpretation scheme. Lurita Blank described the restoration work performed in 1999 and that much of the interior rooms have been restored then or during earlier periods of work.

c) Eden Hemming suggested that the period of interpretation for the home and interior should be late 1700s to early 1800s before native people were forced to leave the area to allow for more inclusive narratives.

d) David mentioned that the influx of German settlers and fact that the town now has a large German influence should also be included in the interpretation.

e) RRJ will consider the period of interpretation and prepare a recommendation for inclusion in the HSR.

4. Utilities recommendations were discussed by Bob Foust and Mike Gregory of Alvine Engineering. Treatment options for water, sewer, electrical power, and telecommunications were presented.

   i. City water does not connect to the property. Fire suppression and potable water will require a new water supply. It needs to be determined if existing municipal lines can handle the volume needed at house. A storage tank and fire pump are not expected to be required.

   ii. Current electrical service is adequate and can handle upgrades to HVAC.

   iii. The HVAC is conditioning the space adequately but is undersized for the square footage. The service could be expanded to reduce the load on the single existing unit.

5. Consensus and Preferred Treatment Options

   i. Landscape: Workshop attendees indicated a preference for the site access and parking locations presented in Option 1 with further refinement of the site circulation and accessible path.

      a) Ground and site disturbances should be kept to a minimum to respect the wishes of the Osage Nation.

E. Summary and Closing

1. Lurita Blank with RRJ briefly reviewed the action items for the project team and thanked the workshop participants.

2. The workshop concluded at approximately 12:00 pm.

Appendix I:
Treatment Cost Estimate

United States Department of the Interior
National Park Service
Class A Construction Cost Estimate

LINE ITEM COST SUMMARY

Class C Construction Cost Estimate Template

National Park Service (NPS) - Denver Service Center (DSC) | 5-27-21

By using this Construction Cost Estimate template, you acknowledge you read and understand the corresponding Inst

PROJECT INFORMATION

Project:	Janis-Ziegler House
Park:	St. Genevieve National Historic Park
Park Apha:	STGE
PMIS:	311239
Estimate Date:	10/18/2024
Prepared By:	Lurita Blank
Company:	Raths, Raths and Johnson, Inc.
Address:	500 Joliet Road, Suite 200
City, State Zip:	Willowbrook, IL 60526
Phone:	630.325.6160

BACKGROUND SUPPORTING MATERIAL (Scope of Work):

Preferred treatment and treatment recommendations for the Janis-Ziegler House (Gree Tree Tavern) Historic Structure Report.

SOURCE OF COST DATA:

Historic data, RS Means, and current pricing from active projects.

ESTIMATE ASSUMPTIONS:

Class C estimate level.

MAJOR CHANGES FROM PREVIOUS ESTIMATE:

Historic preservation factor added to markups.
Inflation rate adjusted based CPI projections for 2025.
Project midpoint reduced to 12 months.

United States Department of the Interior
National Park Service
Class A Construction Cost Estimate

LINE ITEM COST SUMMARY

PROJECT INFORMATION

Project:	Janis-Ziegler House
Park:	St. Genevieve National Historic Park
Park Apha:	STGE
PMIS:	311239
Estimate Date:	10/18/2024

DESCRIPTION OF MARK-UP & ADD-ONS:

Design Contingency:	30.00%	This is due to the unforseen conditions on the project, percentage aligns with recommendation per the NPS Cost Estimating Handbook.
Historic Preservation Factor:	7.50%	Moderate extant historic finishes; compatible replacement materials generally readily available; no speciality coordination, access, or protection requirements beyond standard general conditions
Location Factor:	7.00%	
State and Local Taxes:	9.23%	Missouri State, Ste. Genevieve County, and City of Ste. Genevieve sales taxes
Standard. General Conditions:	10.00%	
Government General Conditions:	5.00%	
Contractor Overhead:	15.00%	
Contractor Profit:	10.00%	
Contracting Method Adjustment:	8.00%	Standard competitive bid without SBA set-asides. Includes 3% bonds.
Annual Inflation Escalation Factor:	3.50%	Projected annual inflation rate based on CPI of 2.5% to 4.5% for 2025 per the Federal Reserve
Time Until Project Midpoint (Months)	12	Number of months from estimate (or data) date until the projects midpoint of construction.

OTHER COMMENTS:

United States Department of the Interior
National Park Service
Class A Construction Cost Estimate

LINE ITEM COST SUMMARY

Project: Janis-Ziegler House
Park: St. Genevieve National Historic Park
Park Alpha: STGE
PMIS Number: 311239

Estimate By: Lurita Blank
Date: 10/18/24
Reviewed By:
Date:

Bid Item No.	Bid Item Description	Total Material Cost	Total Labor Cost	Total Equipment Cost	Total Direct Construction Costs	Design Contingency 30.00%	Historic Preservation Factory 7.50%	Location Factor 7.00%	State and Local Taxes 9.23%	General Conditions 15.00%	General Contractor Overhead 15.00%	General Contractor Profit 10.00%	Contracting Method Adjustment 8.00%	Inflation Escalation APR 3.50%	Inflation Escalation Months 12	Bid Item Total
Bid Item:														TOTAL VALUE OF GOVERNMENT FURNISHED PROPERTY (if any):		$ -
1	Exteriors	$ 41,031	$ 50,326	$ 4,599	$ 95,956											
2	Structure	$ 41,498	$ 109,022	$ 6,798	$ 157,318											
3	Site Features	$ 18,060	$ 29,490	$ 4,025	$ 51,575											
4	Plumbing	$ 2,773	$ 15,075	$ 5,655	$ 23,503											
5	Electrical	$ 23,112	$ 53,673	$ 2,000	$ 78,785											
6	HVAC	$ 20,767	$ 3,580	$ 109	$ 24,456											
7	Interiors	$ 8,027	$ 40,147	$ -	$ 48,174											
8	Accessibility	$ 6,576	$ 14,150	$ 139	$ 20,866											
9	Fire Suppression	$ 72,794	$ 57,715	$ 4,325	$ 134,833											
Total - Bid Item 0	0	$ 234,638	$ 373,178	$ 27,650	$ 635,465	$ 190,640	$ 47,660	$ 44,483	$ 21,657	$ 140,986	$ 162,134	$ 108,089	$ 108,089	$ 51,072		$ 1,510,274
Total Bid Items 1-10		$ 234,638	$ 373,178	$ 27,650	$ 635,465	$ 190,640	$ 47,660	$ 44,483	$ 21,657	$ 140,986	$ 162,134	$ 108,089	$ 108,089	$ 51,072		$ 1,510,274

United States Department of the Interior
National Park Service
Class A Construction Cost Estimate

LINE ITEM COST SUMMARY

Project: Janis-Ziegler House
Park: St. Genevieve National Historic Park
Park Alpha: STGE
PMIS Number: 311239

Estimate By: Lurita Blank
Date: 10/18/24
Reviewed By:
Date:

Bid Item Number	Asset / Project Element / Description	Size/Count	Units
BID ITEM	Asset / Project Element / Description	5,871	SF

Item No.	WBS	Description	Material Cost/Unit	Total Material Cost	Labor Cost/Unit	Total Labor Cost	Equipment Cost/Unit	Total Equipment Cost	Direct Cost/Unit	Total Direct Costs	NET Cost/Unit	Total NET Costs
1		Foundations	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2		Basement Construction	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		
3	B10	Superstructure	$ 3.16	$ 18,554.55	$ 6.37	$ 37,388.50	$ 0.53	$ 3,122.50	$ 10.06	$ 59,065.55		
4	B20	Enclosure	$ 10.02	$ 58,848.38	$ 17.12	$ 100,530.88	$ 1.23	$ 7,217.25	$ 28.38	$ 166,596.50		
5	B30	Roofing	$ -	$ -	$ 1.01	$ 5,927.50	$ 0.08	$ 488.20	$ 1.09	$ 6,415.70		
6	C10	Interior Finishes	$ 1.75	$ 10,295.01	$ 8.93	$ 52,401.72	$ 0.02	$ 102.00	$ 10.70	$ 62,798.73		
7	B10	Stairs	$ 0.87	$ 5,125.88	$ 2.64	$ 15,501.25	$ 0.10	$ 569.38	$ 3.61	$ 21,196.50		
8		Interior Construction	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		
9		Conveying Systems	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		
10	D40	Plumbing Systems	$ 0.47	$ 2,772.50	$ 2.57	$ 15,075.00	$ 0.96	$ 5,655.00	$ 4.00	$ 23,502.50		
11	D30	HVAC	$ 3.54	$ 20,767.00	$ 0.61	$ 3,580.00	$ 0.02	$ 109.00	$ 4.17	$ 24,456.00		
12	D40	Fire Protection	$ 9.99	$ 58,657.50	$ 7.29	$ 42,800.00	$ 0.27	$ 1,556.50	$ 17.55	$ 103,014.00		
13	D50	Electrical	$ 3.94	$ 23,112.25	$ 9.14	$ 53,672.75	$ 0.34	$ 2,000.00	$ 13.42	$ 78,785.00		
14		Equipment	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		
15		Furnishings	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		
16		Special Construction	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		
17		Selective Building Demolition	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		
18		Site Preparation	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		
19	G20	Site Improvements	$ 3.06	$ 17,975.00	$ 5.50	$ 32,290.00	$ 0.25	$ 1,455.00	$ 8.81	$ 51,720.00		
20	G30	Site Mechanical Utilities	$ 3.16	$ 18,530.00	$ 2.39	$ 14,010.00	$ 0.92	$ 5,375.00	$ 6.46	$ 37,915.00		
21		Site Electrical Utilities	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		
22		Other Site Construction	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		
23		Special Use - 1	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		
24		Special Use - 2	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		
25		Special Use - 3	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		
		Subtotal Direct Construction Costs	**$ 40**	**$ 234,638**	**$ 64**	**$ 373,178**	**$ 5**	**$ 27,650**	**$ 108**	**$ 635,465**	$ -	$ -
		Total Value of Government Furnished Property (GFP) Inc. in Direct Cost		**$0.00**		**$ -**		**$ -**	**$ -**	**$0**		
		Direct Cost Subtotal without GFP	$ 234,638			$ 373,177.60		$ 27,649.83		**$635,465**		
		Design Contingency	30.00%							$190,640		
		Total Direct Construction Costs								**$826,105**		
		Location Factor	7.00%	Applied to Total Direct Construction Cost less GFP						$44,483		
		State and Local Taxes	9.23%	Applied to Total Direct Construction Cost less GFP						$21,657		
		Standard General Conditions	10.00%	Applied to Total Direct Construction Cost less GFP						$89,224		
		Government General Conditions	5.00%	Applied to Total Direct Construction Cost less GFP						$44,612		
		Subtotal NET Construction Cost								**$1,026,082**		
		Overhead	15.00%							$153,912		
		Profit	10.00%							$102,608		
		Estimated NET Construction Cost								**$1,282,602**		
		Contracting Method Adjustment	8.00%	includes bonds						$102,608		
		Inflation Escalation	12	Months	Annual Rate =	3.50%				$48,482		
		Total Estimated NET Cost of Construction								**$1,433,692**		

In most cases GFP is normally zero - see footnote-

GFP costs only apply when the Government pre-purchases items, or provides other materials out of Government inventory, to be installed by contractor. Adjustments and Markup on GFP only include Inflation Escalation; No other adjustment factors or O&P markup have been applied.

United States Department of the Interior
National Park Service
Class A Construction Cost Estimate

LINE ITEM COST SUMMARY

Project:	Janis-Ziegler House	**Estimate By:**	Lurita Blank
Park:	St. Genevieve National Historic Park	**Date:**	10/18/24
Park Alpha:	STGE	**Reviewed By:**	
PMIS:	311239	**Date:**	

Summary Item: 1 Exteriors **Total Cost:** $97,663

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		LABOR		EQUIPMENT		TOTALS	
				Material Cost/Unit	Total Material Cost	Labor Cost/Unit	Total Labor Cost	Equipment Cost/Unit	Total Equipment Cost	Total Cost/Unit	Total Cost
B3010	**ROOFING**										
B3010	Repoint brick joints at chimneys in attic and above roof line	100	SF	$ 5.00	$500	$ 17.00	$1,700	$ 1.50	$150	$ 23.50	$2,350
B3010	Clean wood shakes and apply a water repellant treatment (2 year cycle, one application included)	3382	SF	$ 0.35	$1,184	$ 1.25	$4,228	$ 0.10	$338	$ 1.70	$5,749
				$ -	$0	$ -	$0	$ -	$0	$ -	$0
SUBTOTAL	**ROOFING**	**5871**	**SF**	**$5**	**Moderate exta**	**$18**	**$5,928**	**$2**	**$488**	**$25**	**$8,099**

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		LABOR		EQUIPMENT		TOTALS	
				Material Cost/Unit	Total Material Cost	Labor Cost/Unit	Total Labor Cost	Equipment Cost/Unit	Total Equipment Cost	Total Cost/Unit	Total Cost
B2030	**EXTERIOR WINDOWS**										
B2030	Repair broken shutter hinges and replace missing hardware	12	EA	$ 22.00	$264	$ 5.50	$66	$ -	$0	$ 27.50	$330
B2030	Replace exterior sills in kind, cedar 1x	12	LF	$ 9.25	$111	$ 27.50	$330	$ 0.50	$6	$ 37.25	$447
B2030	Replace exterior trim in kind	10	LF	$ 9.25	$93	$ 27.50	$275	$ 0.50	$5	$ 37.25	$373
B2030	Replace mesh screens at basement windows	15	3.50%	$ 1.50	Projected annua	$ 12.25	$184	$ -	$0	$ 13.75	$206
B2030	Replace missing attic window sashes with new double hung sashes	2	EA	$ 750.00	$1,500	$ 225.00	$450	$ -	$0	$ 975.00	$1,950
B2030	Restore existing deteriorated window sashes	3	EA	$ 1,200.00	$3,600	$ 559.00	$1,677	$ -	$0	$ 1,759.00	$5,277
B2030	Replace glazing putty at all units	15	EA	$ 40.00	$600	$ 280.00	$4,200	$ -	$0	$ 320.00	$4,800
				$ -	$0	$ -	$0	$ -	$0	$ -	$0
SUBTOTAL	**EXTERIOR WINDOWS**	**5871**	**SF**	**$2,032**	**$6,168**	**$1,137**	**$7,182**	**$1**	**$11**	**$3,170**	**$13,383**

United States Department of the Interior
National Park Service
Class A Construction Cost Estimate

LINE ITEM COST SUMMARY

Project:	**Janis-Ziegler House**	**Estimate By:**	Lurita Blank
Park:	**St. Genevieve National Historic Park**	**Date:**	10/18/24
Park Alpha:	**STGE**	**Reviewed By:**	
PMIS:	**311239**	**Date:**	

Summary Item: **1 Exteriors** **Total Cost:** $97,663

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		LABOR		EQUIPMENT		TOTALS	
				Material Cost/Unit	Total Material Cost	Labor Cost/Unit	Total Labor Cost	Equipment Cost/Unit	Total Equipment Cost	Total Cost/Unit	Total Cost
B2030	**EXTERIOR DOORS**										
B2030	Repair exterior basement doors and replace deteriorated framing	2	EA	$ 250.00	$500	$ 220.00	$440	$ -	$0	$ 470.00	$940
B2030	Perform minor repairs to exterior doors in Room 105 and 108, repair hardware	2	EA	$ 35.00	$70	$ 220.00	$440	$ -	$0	$ 255.00	$510
B2030	Replace glazing putty at all units	3	EA	$ 40.00	$120	$ 280.00	$840	$ -	$0	$ 320.00	$960
B2030	Refinish or repaint door exteriors and trim, 2 coats	147.5	SF	$ 1.25	$184	$ 3.25	$479	$ 0.50	$74	$ 5.00	$738
				$ -	$0	$ -	$0	$ -	$0	$ -	$0
SUBTOTAL	**EXTERIOR DOORS**	**5871**	**SF**	**$326**	**$874**	**$723**	**$2,199**	**$1**	**$74**	**$1,050**	**$3,148**

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		LABOR		EQUIPMENT		TOTALS	
				Material Cost/Unit	Total Material Cost	Labor Cost/Unit	Total Labor Cost	Equipment Cost/Unit	Total Equipment Cost	Total Cost/Unit	Total Cost
B2011	**EXTERIOR WALLS**										
B2011	Bousillage repair with new bousillallge to match existing, excludes repairs due to structural work	250	SF	$ 5.00	$1,250	$ 32.50	$8,125	$ -	$0	$ 37.50	$9,375
B2011	Repoint open and deteriorated mortar joints on the exterior and interior sides of stone foundation wall	500	SF	$ 5.00	$2,500	$ 17.00	$8,500	$ -	$0	$ 22.00	$11,000
B2011	Apply limewash treatment to exterior logs and gallery framing, 3 coats, brush applied	2600	SF	$ 0.35	$910	$ 3.25	$8,450	$ 0.50	$1,300	$ 4.10	$10,660
B2011	Apply limewash treatment to siding, 3 coats, brush applied	1330	SF	$ 0.35	$466	$ 3.25	$4,323	$ 0.50	$665	$ 4.10	$5,453
B2011	Replace wood siding, cedar weatherboard	1330	SF	$ 21.50	$28,595	$ 3.45	$4,589	$ 1.55	$2,062	$ 26.50	$35,245
B2011	Install new lead drip caps over doors and windows	25	LF	$ 10.75	$269	$ 41.25	$1,031	$ -	$0	$ 52.00	$1,300
SUBTOTAL	**EXTERIOR WALLS**	**5871**	**SF**	**$43**	**$33,989**	**$101**	**$35,017**	**$3**	**$4,027**	**$146**	**$73,033**

Summary Item: **1 Exteriors**

United States Department of the Interior
National Park Service
Class A Construction Cost Estimate

LINE ITEM COST SUMMARY

Project:	Janis-Ziegler House	**Estimate By:**	Lurita Blank
Park:	St. Genevieve National Historic Park	**Date:**	10/18/24
Park Alpha:	STGE	**Reviewed By:**	
PMIS:	311239	**Date:**	

Summary Item: 1 Exteriors **Total Cost:** $97,663

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		LABOR		EQUIPMENT		TOTALS	
				Material Cost/Unit	Total Material Cost	Labor Cost/Unit	Total Labor Cost	Equipment Cost/Unit	Total Equipment Cost	Total Cost/Unit	Total Cost
1	Exteriors	5871	SF	$ 6.99	$41,031	$ 8.57	$50,326	$ 0.78	$4,599	$ 16.63	$97,663

United States Department of the Interior
National Park Service
Class A Construction Cost Estimate

LINE ITEM COST SUMMARY

Project: Janis-Ziegler House
Park: St. Genevieve National Historic Park
Park Alpha: STGE
PMIS: 311239

Estimate By: Lurita Blank
Date: 10/18/24
Reviewed By:
Date:

Summary Item: 2 Structure

Total Cost: $157,340

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		LABOR		EQUIPMENT		TOTALS	
				Material Cost/Unit	Moderate extant historic finishes;	Labor Cost/Unit	Total Labor Cost	Equipment Cost/Unit	Total Equipment Cost	Total Cost/Unit	Total Cost
B1013	GALLERIES										
B1013	Replace deteriorated gallery floor beams in kind, 5x3.5 white oak, hewn finish	15	LF	$ 16.90	$254	$ 65.00	$975	$ 7.50	$113	$ 89.40	$1,341
B1013	Gallery beam repair, shoring	1	EA	$ 1,500.00	$1,500	$ 4,500.00	$4,500	$ 1,200.00	$1,200	$ 7,200.00	$7,200
B1013	Replace deteriorated gallery josts in kind, 5x3.5 white oak, hewn finish	24	LF	$ 16.90	$406	$ 27.50	$660	$ -	$0	$ 44.40	$1,066
B1013	Remove and reinstall decking for joist repair, not including planks requiring replacement	38	SF	$ 0.10	$4	$ 4.50	$171	$ -	$0	$ 4.60	$175
B1013	Splice base of deteriorated gallery posts in kind, 12x15-ft post, carved, white oak	2	EA	$ 99.20	$198	$ -	$0	$ -	$0	$ 99.20	$198
B1013	Gallery post repair, shoring	2	EA	$ 10.00	$20	$ 350.00	$700	$ 15.00	$30	$ 375.00	$750
B1013	Repair loose gallery rails	10	3.50%	$ 2.25	Projected annua	$ 27.50	$275	$ -	$0	$ 29.75	$298
B1013	Install missing gallery rails in kind, 4x5 white oak	16	LF	$ 16.25	$260	$ 27.50	$440	$ -	$0	$ 43.75	$700
B1013	Install additional course of railing, 4x5 white oak	153	LF	$ 16.25	$2,486	$ 27.50	$4,208	$ -	$0	$ 43.75	$6,694
B1013	Replace warped or deteriorated decking boards in kind, 1x mixed widths, white oak	625	SF	$ 14.60	$9,125	$ 27.50	$17,188	$ -	$0	$ 42.10	$26,313
B1013	Stabilize open ceiling beam splice joints	3	EA	$ 12.00	$36	$ 82.50	$248	$ -	$0	$ 94.50	$284
B1013	Replace deteriorated ceiling beam at east gallery, 5x7 white oak, hewn finish	15	LF	$ 31.60	$474	$ 65.00	$975	$ 12.00	$180	$ 108.60	$1,629
B1013	Gallery ceiling beam repair, shoring	1	EA	$ 3,500.00	$3,500	$ 6,500.00	$6,500	$ 1,500.00	$1,500	$ 11,500.00	$11,500
B1013	Replace deteriored gallery ceiling planks, 1x mixed widths, white oak	20	SF	$ 14.60	$292	$ 27.50	$550	$ 5.00	$100	$ 47.10	$942
SUBTOTAL	GALLERIES	5871	SF	$ 3.16	$18,555	$ 6.37	$37,389	$ 0.53	$3,123	$ 10.06	$59,088

United States Department of the Interior
National Park Service
Class A Construction Cost Estimate

LINE ITEM COST SUMMARY

Project: Janis-Ziegler House
Park: St. Genevieve National Historic Park
Park Alpha: STGE
PMIS: 311239

Estimate By: Lurita Blank
Date: 10/18/24
Reviewed By:
Date:

Summary Item: 2 Structure **Total Cost:** $157,340

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		LABOR		EQUIPMENT		TOTALS	
				Material Cost/Unit	Total Material Cost	Labor Cost/Unit	Total Labor Cost	Equipment Cost/Unit	Total Equipment Cost	Total Cost/Unit	Total Cost
B2011	EXTERIOR WALLS										
B2011	East Wall Repairs - Shoring for gallery, roof, and floor framing, shared cost with gallery ceiling beam repair shoring	1	EA	$ 2,500.00	$2,500	$ 4,500.00	$4,500	$ 1,000.00	$1,000	$ 8,000.00	$8,000
B2011	East Wall Repairs - Top plate replacement in kind, 8x12 white oak, hewn finish	25	LF	$ 72.00	$1,800		$0		$0	$ 72.00	$1,800
B2011	East Wall Repairs - Sill plate replacement in kind, 10x12 white oak, hewn finish	25	LF	$ 81.25	$2,031		$0		$0	$ 81.25	$2,031
B2011	East Wall Repairs - Gallery framing remove/reinstall	250	LF	$ 2.50	$625	$ 27.50	$6,875	$ 1.50	$375	$ 31.50	$7,875
B2011	East Wall Repairs - Gallery decking remove/reinstall (Excluding gallery planks to be replaced)	115	SF	$ 0.10	$12	$ 4.50	$518	$ -	$0	$ 4.60	$529
B2011	East Wall Repairs - Gallery ceiling remove/reinstall	295	SF	$ 0.10	$30	$ 4.50	$1,328	$ 1.50	$443	$ 6.10	$1,800
B2011	Petrographic analysis of existing mortar	1	EA	$ -	$0	$ 15,000.00	$15,000	$ -	$0	$ 15,000.00	$15,000
B2011	East Wall Repairs - Repairs to masonry foundation wall	50	SF	$ 5.00	$250	$ 17.00	$850	$ -	$0	$ 22.00	$1,100
B2011	East Wall Repairs - Interior finishes restoration, plaster repairs and trim removal/reinstallation, excludes repainting	50	SF	$ 3.50	$175	$ 27.50	$1,375	$ -	$0	$ 31.00	$1,550
B2011	Petrographic analysis of existing bousillage	1	EA	$ -	$0	$ 8,000.00	$8,000	$ -	$0	$ 8,000.00	$8,000
B2011	East Wall Repairs - Bousillage repairs	100	SF	$ 5.00	$500	$ 32.50	$3,250		$0	$ 37.50	$3,750
B2011	First Floor Framing - sister floor joists with new 8x8 white oak joists	88	LF	$ 40.00	$3,520	$ 82.50	$7,260	$ 4.50	$396	$ 127.00	$11,176
B2011	Roof Framing - Reset loose or missing trenail connections at rafters and collar ties	6	EA	$ -	$0	$ 27.50	$165	$ -	$0	$ 27.50	$165
B2011	Roof Framing - Sister existing rafters that have split, 6x4 white oak, sawn finish	155	LF	$ 25.00	$3,875	$ 27.50	$4,263	$ 3.50	$543	$ 56.00	$8,680
B2011	Roof Framing - Stabilize rafters that are unsupported at chimneys	100	LF	$ 25.00	$2,500	$ 27.50	$2,750	$ 3.50	$350	$ 56.00	$5,600
					$0		$0		$0	$ -	$0
SUBTOTAL	**EXTERIOR WALLS**	**5871**	**SF**	**$ 3.03**	**$17,817**	**$ 9.56**	**$56,133**	**$ 0.53**	**$3,106**	**$ 13.12**	**$77,056**

United States Department of the Interior
National Park Service
Class A Construction Cost Estimate

LINE ITEM COST SUMMARY

Project: Janis-Ziegler House
Park: St. Genevieve National Historic Park
Park Alpha: STGE
PMIS: 311239

Estimate By: Lurita Blank
Date: 10/18/24
Reviewed By:
Date:

Summary Item: 2 Structure **Total Cost:** $157,340

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		LABOR		EQUIPMENT		TOTALS	
				Material Cost/Unit	Total Material Cost	Labor Cost/Unit	Total Labor Cost	Equipment Cost/Unit	Total Equipment Cost	Total Cost/Unit	Total Cost
B1013	EXTERIOR STAIRS										
B1013	South Stairs - Reconstruct south stairs with regular tread height, white oak treads and stringers 2x12	60.5	LF	$ 16.25	$983	$ 27.50	$1,664	$ 1.25	$76	$ 45.00	$2,723
B1013	South Stairs - Post and rails, white oak, 2x4 rails and 4x4 posts	65	LF	$ 6.15	$400	$ 27.50	$1,788	$ 1.25	$81	$ 34.90	$2,269
B1013	South Stairs - New concrete footings	2	EA	$ 12.00	$24	$ 75.00	$150	$ 1.25	$3	$ 88.25	$177
B1013	North Stairs - Reinstall north gallery split stairs - white oak treads and stringers, 2x12	125	LF	$ 16.23	$2,029	$ 27.50	$3,438	$ 1.25	$156	$ 44.98	$5,623
B1013	North Stairs - Post and rails, white oak, 2x4 rails and 4x4 posts	145	LF	$ 6.15	$892	$ 27.50	$3,988	$ 1.25	$181	$ 34.90	$5,061
B1013	North Stairs - New landing, 1x white oak planks and 4x framing	50	SF	$ 14.00	$700	$ 75.00	$3,750	$ 1.25	$63	$ 90.25	$4,513
B1013	North Stairs - Modify north gallery railing	5	LF	$ 0.50	$3	$ 25.00	$125	$ -	$0	$ 25.50	$128
B1013	North Stairs - concrete footings	8	EA	$ 12.00	$96	$ 75.00	$600	$ 1.25	$10	$ 88.25	$706
SUBTOTAL	**EXTERIOR STAIRS**	**5871**	**SF**	**$ 0.87**	**$5,126**	**$ 2.64**	**$15,501**	**$ 0.10**	**$569**	**$ 3.61**	**$21,197**

Summary Item: 2 Structure

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		LABOR		EQUIPMENT		TOTALS	
				Material Cost/Unit	Total Material Cost	Labor Cost/Unit	Total Labor Cost	Equipment Cost/Unit	Total Equipment Cost	Total Cost/Unit	Total Cost
2	**Structure**	**5871**	**SF**	**$ 7.07**	**$ 41,497.68**	**$ 18.57**	**$ 109,022.25**	**$ 1.16**	**$ 6,797.88**	**$ 26.80**	**$ 157,340.30**

United States Department of the Interior
National Park Service
Class A Construction Cost Estimate

LINE ITEM COST SUMMARY

Project:	Janis-Ziegler House	**Estimate By:**	Lurita Blank
Park:	St. Genevieve National Historic Park	**Date:**	10/18/24
Park Alpha:	STGE	**Reviewed By:**	
PMIS:	311239	**Date:**	

Summary Item: 3 Site Features **Total Cost:** $51,575

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		LABOR		EQUIPMENT		TOTALS	
				Material Cost/Unit	Total Material Cost	Labor Cost/Unit	Total Labor Cost	Equipment Cost/Unit	Total Equipment Cost	Total Cost/Unit	Total Cost
G3013	**WELL SYSTEMS**										
G3013	Decommission/backfill cistern, clean common fill	75	CY	$ 72.00	$5,400	$ 62.00	$4,650	$ 35.00	$2,625	$ 169.00	$12,675
SUBTOTAL	**WELL SYSTEMS**	**5871**	**SF**	**$ 0.92**	**$5,400**	**$ 0.79**	**$4,650**	**$ 0.45**	**$2,625**	**$ 2.16**	**$12,675**

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		LABOR		EQUIPMENT		TOTALS	
				Material Cost/Unit	Total Material Cost	Labor Cost/Unit	Total Labor Cost	Equipment Cost/Unit	Total Equipment Cost	Total Cost/Unit	Total Cost
G2055	**LANDSCAPING AND SOIL**										
G2055	Regrade soil sloping away from foundation wall and gallery post bases	1600	SF	$ 0.25	$400	$ 2.25	$3,600	$ -	$0	$ 2.50	$4,000
G2055	Reseed with turf grass blend	1600	SF	$ 0.10	$160	$ 0.15	$240	$ -	$0	$ 0.25	$400
SUBTOTAL	**LANDSCAPING AND SOIL**	**5871**	**SF**	**$ 0.10**	**$560**	**$ 0.65**	**$3,840**	**$ -**	**$0**	**$ 0.75**	**$4,400**

United States Department of the Interior
National Park Service
Class A Construction Cost Estimate

LINE ITEM COST SUMMARY

Project: Janis-Ziegler House
Park: St. Genevieve National Historic Park
Park Alpha: STGE
PMIS: 311239

Estimate By: Lurita Blank
Date: 10/18/24
Reviewed By:
Date:

Summary Item: 3 Site Features **Total Cost:** $51,575

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		LABOR		EQUIPMENT		TOTALS	
				Material Cost/Unit	Total Material Cost	Labor Cost/Unit	Total Labor Cost	Equipment Cost/Unit	Total Equipment Cost	Total Cost/Unit	Total Cost
G2049	SITE CIRCULATION AND PARKING										
G2049	Regrade and pave driveway, concrete on crushed gravel base	1400	SF	$ 4.00	$5,600	$ 7.50	$10,500	$ 0.50	$700	$ 12.00	$16,800
G2049	Paved accessible parking, concrete on crushed gravel base	500	SF	$ 4.00	$2,000	$ 7.50	$3,750	$ 0.50	$250	$ 12.00	$6,000
G2049	Provide new accessible site walkways, 4-ft paved walkways, concrete slab-on-grade, pebbledash finish	900	SF	$ 5.00	$4,500	$ 7.50	$6,750	$ 0.50	$450	$ 13.00	$11,700
SUBTOTAL	**SITE CIRCULATION AND PARKING**	**5871**	**SF**	**$ 2.06**	**$12,100**	**$ 3.58**	**$21,000**	**$ 0.24**	**$1,400**	**$ 5.88**	**$34,500**

Summary Item: 3 Site Features

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		LABOR		EQUIPMENT		TOTALS	
				Material Cost/Unit	Total Material Cost	Labor Cost/Unit	Total Labor Cost	Equipment Cost/Unit	Total Equipment Cost	Total Cost/Unit	Total Cost
3	**Site Features**	**5871**	**SF**	**$ 3.08**	**$18,060**	**$ 5.02**	**$29,490**	**$ 0.69**	**$4,025**	**$ 8.78**	**$51,575**

United States Department of the Interior
National Park Service
Class A Construction Cost Estimate

LINE ITEM COST SUMMARY

Project:	Janis-Ziegler House	**Estimate By:**	Lurita Blank
Park:	St. Genevieve National Historic Park	**Date:**	10/18/24
Park Alpha:	STGE	**Reviewed By:**	
PMIS:	311239	**Date:**	

Summary Item: 4 Plumbing **Total Cost:** $23,503

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		LABOR		EQUIPMENT		TOTALS	
				Material Cost/Unit	Total Material Cost	Labor Cost/Unit	Total Labor Cost	Equipment Cost/Unit	Total Equipment Cost	Total Cost/Unit	Total Cost
D2010	DOMESTIC WATER SUPPLY										
D2010	Restore water utility to house, extend service from city main, provide new buried domestic supply, assume partial HDD and partial trenching/recover, clean fill	75	LF	$ 35.30	$2,648	$ 135.00	$10,125	$ 66.40	$4,980	$ 236.70	$17,753
D2010	Interior plumbing work for domestic supply	50	LF	$ 2.50	$125	$ 65.00	$3,250	$ 3.50	$175	$ 71.00	$3,550
SUBTOTAL	DOMESTIC WATER SUPPLY	5871	SF	$ 0.47	$2,773	$ 2.28	$13,375	$ 0.88	$5,155	$ 3.63	$21,303

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		LABOR		EQUIPMENT		TOTALS	
				Material Cost/Unit	Total Material Cost	Labor Cost/Unit	Total Labor Cost	Equipment Cost/Unit	Total Equipment Cost	Total Cost/Unit	Total Cost
D2020	DOMESTIC SEWER										
D2020	Interior plumbing work for sanitary sewer, line clean out and inspection, excludes costs for accecssible bathroom remodel	1	EA		$0	$ 1,200.00	$1,200	$ 350.00	$350	$ 1,550.00	$1,550
SUBTOTAL	DOMESTIC SEWER	5871	SF	$ -	$0	$ 0.20	$1,200	$ 0.06	$350	$ 0.26	$1,550

United States Department of the Interior
National Park Service
Class A Construction Cost Estimate

LINE ITEM COST SUMMARY

Project:	Janis-Ziegler House	**Estimate By:**	Lurita Blank
Park:	St. Genevieve National Historic Park	**Date:**	10/18/24
Park Alpha:	STGE	**Reviewed By:**	
PMIS:	311239	**Date:**	

Summary Item: 4 Plumbing **Total Cost:** $23,503

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		LABOR		EQUIPMENT		TOTALS	
				Material Cost/Unit	Total Material Cost	Labor Cost/Unit	Total Labor Cost	Equipment Cost/Unit	Total Equipment Cost	Total Cost/Unit	Total Cost
D2030	PLUMBING EQUIPMENT										
D2030	Service water heater prior to returning to use, flush and remove scale	1	EA		$0	$ 500.00	$500	$ 150.00	$150	$ 650.00	$650
SUBTOTAL	PLUMBING EQUIPMENT	5871	SF	$ -	$0	$ 0.09	$500	$ 0.03	$150	$ 0.11	$650

Summary Item: 4 Plumbing

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		LABOR		EQUIPMENT		TOTALS	
				Material Cost/Unit	Total Material Cost	Labor Cost/Unit	Total Labor Cost	Equipment Cost/Unit	Total Equipment Cost	Total Cost/Unit	Total Cost
4	Plumbing	5871	SF	$ 0.47	$2,773	$ 2.57	$15,075	$ 0.96	$5,655	$ 4.00	$23,503

United States Department of the Interior
National Park Service
Class A Construction Cost Estimate

LINE ITEM COST SUMMARY

Project: Janis-Ziegler House
Park: St. Genevieve National Historic Park
Park Alpha: STGE
PMIS: 311239

Estimate By: Lurita Blank
Date: 10/18/24
Reviewed By:
Date:

Summary Item: 5 Electrical

Total Cost: $78,785

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		LABOR		EQUIPMENT		TOTALS	
				Material Cost/Unit	Total Material Cost	Labor Cost/Unit	Total Labor Cost	Equipment Cost/Unit	Total Equipment Cost	Total Cost/Unit	Total Cost
D5011	ELECTRICAL SERVICE AND DISTRIBUTION										
D5011	Ground the existing load center/main panel	1	EA	$ 3,200.00	$3,200	$ 8,500.00	$8,500	$ -	$0	$ 11,700.00	$11,700
D5011	Provide new AFCI circuit breakers	1	EA	$ 756.00	$756	$ 550.00	$550	$ -	$0	$ 1,306.00	$1,306
D5011	Provide new surge protection device	1	EA	$ 220.00	$220	$ 185.00	$185	$ -	$0	$ 405.00	$405
D5011	Electrical demo, allowance per SF	1634	SQFT	$ -	$0	$ 2.50	$4,085	$ -	$0	$ 2.50	$4,085
D5011	Replace existing NMC with MC wiring, remove abandoned wiring systems, throughout building, SF allowance	1634	SQFT	$ 1.00	$1,634	$ 8.50	$13,889	$ -	$0	$ 9.50	$15,523
D5011	Repair historic finishes disturbed by electrical replacement work	350	SQFT	$ 1.25	$438	$ 15.00	$5,250	$ -	$0	$ 16.25	$5,688
D5011	Replace all non-metallic cable with EMT in basement and attic, SF allowance	4247	SF	$ 0.25	$1,062	$ 1.25	$5,309	$ -	$0	$ 1.50	$6,371
D5011	Replace all receptacles and switches, provide grounded and GFCI receptacles	38	EA	$ 21.00	$798	$ 27.50	$1,045	$ -	$0	$ 48.50	$1,843
SUBTOTAL	DISTRIBUTION	5871	SF	$ 1.38	$8,107	$ 6.61	$38,813	$ -	$0	$ 7.99	$46,920

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		LABOR		EQUIPMENT		TOTALS	
				Material Cost/Unit	Total Material Cost	Labor Cost/Unit	Total Labor Cost	Equipment Cost/Unit	Total Equipment Cost	Total Cost/Unit	Total Cost
D5090	LIGHTNING PROTECTION SYSTEM										
D5090	Install new lightning protection system	1	EA	$ 1,800.00	$1,800	$ 4,250.00	$4,250	$ 1,850.00	$1,850	$ 7,900.00	$7,900
SUBTOTAL	LIGHTNING PROTECTION SYSTEM	5871	SF	$ 0.31	$1,800	$ 0.72	$4,250	$ 0.32	$1,850	$ 1.35	$7,900

United States Department of the Interior
National Park Service
Class A Construction Cost Estimate

LINE ITEM COST SUMMARY

Project: Janis-Ziegler House
Park: St. Genevieve National Historic Park
Park Alpha: STGE
PMIS: 311239

Estimate By: Lurita Blank
Date: 10/18/24
Reviewed By:
Date:

Summary Item: 5 Electrical **Total Cost:** $78,785

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		LABOR		EQUIPMENT		TOTALS	
				Material Cost/Unit	Total Material Cost	Labor Cost/Unit	Total Labor Cost	Equipment Cost/Unit	Total Equipment Cost	Total Cost/Unit	Total Cost
D5030	TELECOMMUNICATIONS										
D503201	Extend fiber optic service into building, provide new patch panel in Room 108	1	EA	$ 3,825.00	$3,825	$ 3,750.00	$3,750	$ 150.00	$150	$ 7,725.00	$7,725
D503801	Provide a new intrusion alarm system	1	EA	$ 2,550.00	$2,550	$ 3,300.00	$3,300	$ 650.00	$0	$ 6,500.00	$6,500
SUBTOTAL	TELECOMMUNICATIONS	5871	SF	$ 1.09	$6,375	$ 1.20	$7,050	$ 0.03	$150	$ 2.42	$14,225

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		LABOR		EQUIPMENT		TOTALS	
				Material Cost/Unit	Total Material Cost	Labor Cost/Unit	Total Labor Cost	Equipment Cost/Unit	Total Equipment Cost	Total Cost/Unit	Total Cost
D5092	ELECTICAL FIXTURES										
D5092	Replace existing incadescent fixtures with LED fixtures/bulbs	100	EA	$ 1.10	$110	$ 3.50	$350	$ -	$0	$ 4.60	$460
D5092	Provide new low-profile, ceiling mounted LED lighting in Rooms 101-108, 2 per room, with new EMT wiring in attic	14	EA	$ 405.00	$5,670	$ 165.00	$2,310	$ -	$0	$ 570.00	$7,980
D5092	Provide battery-backup exit lighting/egress lighting	6	EA	$ 175.00	$1,050	$ 150.00	$900	$ -	$0	$ 325.00	$1,950
SUBTOTAL	ELECTICAL FIXTURES	5871	SF	$ 1.16	$6,830	$ 0.61	$3,560	$ -	$0	$ 1.77	$10,390

Summary Item: 5 Electrical

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		LABOR		EQUIPMENT		TOTALS	
				Material Cost/Unit	Total Material Cost	Labor Cost/Unit	Total Labor Cost	Equipment Cost/Unit	Total Equipment Cost	Total Cost/Unit	Total Cost
5	Electrical	5871	SF	$ 3.94	$23,112	$ 9.14	$53,673	$ 0.34	$2,000	$ 13.42	$78,785

United States Department of the Interior
National Park Service
Class A Construction Cost Estimate

LINE ITEM COST SUMMARY

Project: Janis-Ziegler House
Park: St. Genevieve National Historic Park
Park Alpha: STGE
PMIS: 311239

Estimate By: Lurita Blank
Date: 10/18/24
Reviewed By:
Date:

Summary Item: 6 HVAC **Total Cost:** $24,456

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		LABOR		EQUIPMENT		TOTALS	
				Material Cost/Unit	Total Material Cost	Labor Cost/Unit	Total Labor Cost	Equipment Cost/Unit	Total Equipment Cost	Total Cost/Unit	Total Cost
D3040	HVAC DISTRUBUTION SYSTEM										
D3040	Replace gas-fired, forced air furnace with AC system, increased capacity to serve entire house	1	EA	$ 19,450.00	$19,450	$ 1,550.00	$1,550	$ 50.00	$50	$ 21,050.00	$21,050
D3040	Furnace controls/thermostat	1	EA	$ 225.00	$225	$ 65.00	$65	$ 50.00	$50	$ 340.00	$340
D3040	Extend duct work to Rooms 101 through 103	240	LF	$ 1.50	$360	$ 7.50	$1,800	$ -	$0	$ 9.00	$2,160
D3040	Install return air registers to Rooms 101 through 103	3	EA	$ 122.00	$366	$ 27.50	$83	$ 1.50	$5	$ 151.00	$453
D3040	Install new supply registers in Rooms 101 through 103	3	EA	$ 122.00	$366	$ 27.50	$83	$ 1.50	$5	$ 151.00	$453
SUBTOTAL	HVAC DISTRUBUTION SYSTEM	5871	SF	$ 3.54	$20,767	$ 0.61	$3,580	$ 0.02	$109	$ 4.17	$24,456

Summary Item: 6 HVAC

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		LABOR		EQUIPMENT		TOTALS	
				Material Cost/Unit	Total Material Cost	Labor Cost/Unit	Total Labor Cost	Equipment Cost/Unit	Total Equipment Cost	Total Cost/Unit	Total Cost
6	HVAC	5871	SF	$ 3.54	$20,767	$ 0.61	$3,580	$ 0.02	$109	$ 4.17	$24,456

United States Department of the Interior
National Park Service
Class A Construction Cost Estimate

LINE ITEM COST SUMMARY

Project: Janis-Ziegler House
Park: St. Genevieve National Historic Park
Park Alpha: STGE
PMIS: 311239

Estimate By: Lurita Blank
Date: 10/18/24
Reviewed By:
Date:

Summary Item: 7 Interiors **Total Cost:** $48,174

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		LABOR		EQUIPMENT		TOTALS	
				Material Cost/Unit	Total Material Cost	Labor Cost/Unit	Total Labor Cost	Equipment Cost/Unit	Total Equipment Cost	Total Cost/Unit	Total Cost
C1011	INTERIOR FINISHES										
C1011	Perform plaster stabilization and repairs in all rooms	600	SF	$ 3.50	$2,100	$ 13.75	$8,250	$ -	$0	$ 17.25	$10,350
C1011	Remove non-contributing wall paper	25	SF	$ -	$0	$ 65.00	$1,625	$ -	$0	$ 65.00	$1,625
C1011	Repaint historic rooms (101 through 107) in historically appropriate colors, primer and top coat	2677.25	SF	$ 1.35	$3,614	$ 6.25	$16,733	$ -	$0	$ 7.60	$20,347
C1011	Perform limited areas of wood trim repair or replacement (101 through 107)	10	LF	$ 34.50	$345	$ 3.50	$35	$ -	$0	$ 38.00	$380
C1011	Repaint other rooms (108 through 110), primer and top coat	722.125	SF	$ 1.35	$975	$ 6.25	$4,513	$ -	$0	$ 7.60	$5,488
C1011	Perform small repairs to wood mantels	3	EA	$ 5.00	$15	$ 450.00	$1,350	$ -	$0	$ 455.00	$1,365
C1011	Repaint ceiling boards in historically appropriate colors (102, 105, and 106), primer and top coat	605.5	SF	$ 1.35	$817	$ 8.25	$4,995	$ -	$0	$ 9.60	$5,813
C1011	Clean and refinish interior doors in 101 through 105, except at Room 103	196	SF	$ 0.35	$69	$ 6.25	$1,225	$ -	$0	$ 6.60	$1,294
C1011	Clean and refinish interior wood trim in Rooms 101 through 105	227.25	SF	$ 0.35	$80	$ 6.25	$1,420	$ -	$0	$ 6.60	$1,500
C1011	Perform minor repairs to interior doors, rehang doors to eliminate floor drag	1	EA	$ 12.50	$13	$ 82.50	$0	$ -	$0	$ 95.00	$95
SUBTOTAL	**INTERIOR FINISHES**	**5871**	**SF**	**$ 1.37**	**$8,027**	**$ 6.84**	**$40,147**	**$ -**	**$0**	**$ 8.22**	**$48,257**

Summary Item: 7 Interiors

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		LABOR		EQUIPMENT		TOTALS	
				Material Cost/Unit	Total Material Cost	Labor Cost/Unit	Total Labor Cost	Equipment Cost/Unit	Total Equipment Cost	Total Cost/Unit	Total Cost
7	**Interiors**	**5871**	**SF**	**$ 1.37**	**$8,027**	**$ 6.84**	**$40,147**	**$ -**	**$0**	**$ 8.21**	**$48,174**

United States Department of the Interior
National Park Service
Class A Construction Cost Estimate

LINE ITEM COST SUMMARY

Project:	Janis-Ziegler House	**Estimate By:**	Lurita Blank
Park:	St. Genevieve National Historic Park	**Date:**	10/18/24
Park Alpha:	STGE	**Reviewed By:**	
PMIS:	311239	**Date:**	

Summary Item: 3 Site Features **Total Cost:** $20,866

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		LABOR		EQUIPMENT		TOTALS	
				Material Cost/Unit	Total Material Cost	Labor Cost/Unit	Total Labor Cost	Equipment Cost/Unit	Total Equipment Cost	Total Cost/Unit	Total Cost
C1011	**ABAAS RESTROOM**										
C1011	Demo existing restroom, fixtures, flooring, wall tile, plumbing	42	SF		$0	$ 15.00	$630	$ 1.00	$42	$ 16.00	$672
C1011	Provide new plumbing, reroute supply and waste lines	42	SF	$ 5.00	$210	$ 15.00	$630	$ 1.00	$42	$ 21.00	$882
C1011	New ABAAS fixtures: lavatory, water closet, hand dryer, etc	1	EA	$ 600.00	$600	$ 1,500.00	$1,500	$ -	$0	$ 2,100.00	$2,100
C1011	New subflooring, cementboard	42	SF	$ 1.10	$46	$ 2.50	$105	$ -	$0	$ 3.60	$151
C1011	Replace flooring with new ceramic tile, underlayment, threshold, and accessories	42	SF	$ 1.10	$46	$ 18.00	$756	$ -	$0	$ 19.10	$802
C1011	New wall splash tile	105	SF	$ 1.10	$116	$ 22.00	$2,310	$ -	$0	$ 23.10	$2,426
C1011	Prep and finish cementboard walls	105	SF	$ 0.50	$53	$ 4.50	$473	$ -	$0	$ 5.00	$525
C1011	Paint walls and trim	84.84	SF	$ 2.25	$191	$ 3.50	$297	$ -	$0	$ 5.75	$488
SUBTOTAL	**ABAAS RESTROOM**	**5871**	**SF**	**$ 0.21**	**$1,261**	**$ 1.14**	**$6,700**	**$ 0.01**	**$84**	**$ 1.37**	**$8,046**

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		LABOR		EQUIPMENT		TOTALS	
				Material Cost/Unit	Total Material Cost	Labor Cost/Unit	Total Labor Cost	Equipment Cost/Unit	Total Equipment Cost	Total Cost/Unit	Total Cost
G2049	**ACCESSIBLE RAMP**										
G2049	New wood ABAAS ramp at south gallery, pressure treated pine, painted	385	SF	$ 12.50	$4,813	$ 12.50	$4,813	$ -	$0	$ 25.00	$9,625
G2049	New concrete footings	30	EA	$ 12.00	$360	$ 75.00	$2,250	$ 1.25	$38	$ 88.25	$2,648
G2049	Ramp landing pad, concrete slab on grade	35	SF	$ 4.00	$140	$ 7.50	$263	$ 0.50	$18	$ 12.00	$420
G2049	Modify south gallery railing	5	LF	$ 0.50	$3	$ 25.00	$125	$ -	$0	$ 25.50	$128
SUBTOTAL	**ACCESSIBLE RAMP**	**5871**	**SF**	**$ 0.91**	**$5,315**	**$ 1.27**	**$7,450**	**$ 0.01**	**$55**	**$ 2.18**	**$12,820**

Summary Item: 3 Site Features

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		LABOR		EQUIPMENT		TOTALS	
				Material Cost/Unit	Total Material Cost	Labor Cost/Unit	Total Labor Cost	Equipment Cost/Unit	Total Equipment Cost	Total Cost/Unit	Total Cost
3	**Site Features**	**5871**	**SF**	**$ 1.12**	**$6,576**	**$ 2.41**	**$14,150**	**$ 0.02**	**$139**	**$ 3.55**	**$20,866**

United States Department of the Interior
National Park Service
Class A Construction Cost Estimate

LINE ITEM COST SUMMARY

Project: Janis-Ziegler House
Park: St. Genevieve National Historic Park
Park Alpha: STGE
PMIS: 311239

Estimate By: Lurita Blank
Date: 10/18/24
Reviewed By:
Date:

Summary Item: 3 Fire Suppression

Total Cost: $134,833

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		LABOR		EQUIPMENT		TOTALS	
				Material Cost/Unit	Total Material Cost	Labor Cost/Unit	Total Labor Cost	Equipment Cost/Unit	Total Equipment Cost	Total Cost/Unit	Total Cost
G3910	FIRE WATER LINE										
G3010	Cutting and patching municipal roadway for new connection	1	EA	$ 500.00	$500	$ 4,500.00	$4,500	$ 1,500.00	$1,500	$ 6,500.00	$6,500
G3010	Trenching and 4" line	80	LF	$ 36.00	$2,880	$ 12.00	$960	$ 9.00	$720	$ 57.00	$4,560
G3010	Backfill and reseed at trench	80	LF	$ 0.50	$40	$ 1.25	$100	$ 0.25	$20	$ 2.00	$160
G3010	Connection to main and new valve	1	EA	$ 9,400.00	$9,400	$ 3,600.00	$3,600	$ 500.00	$500	$ 13,500.00	$13,500
G3010	Fittings, accessories, and misc	1	EA	$ 310.00	$310	$ 200.00	$200	$ 10.00	$10	$ 520.00	$520
G3010	FDC			$ 750.00	$0	$ 275.00	$0	$ 50.00	$0	$ 1,075.00	$0
SUBTOTAL	**FIRE WATER LINE**	**6633**	**SF**	**$2**	**$13,130**	**$1**	**$9,360**	**$0**	**$2,750**	**$3**	**$25,240**

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		LABOR		EQUIPMENT		TOTALS	
				Material Cost/Unit	Total Material Cost	Labor Cost/Unit	Total Labor Cost	Equipment Cost/Unit	Total Equipment Cost	Total Cost/Unit	Total Cost
D4010	FIRE PROTECTION										
D4010	Sprinkler Heads - 1st Floor	24	EA	$ 28.00	$672	$ 40.00	$960	$ 1.75	$42	$ 69.75	$1,674
D4010	Sprinkler Heads - Attic	14	EA	$ 28.00	$392	$ 40.00	$560	$ 1.75	$25	$ 69.75	$977
D4010	Sprinkler Heads - Basement	32	EA	$ 28.00	$896	$ 40.00	$1,280	$ 1.75	$56	$ 69.75	$2,232
D4010	Wet Pipe - 1st Floor	375	LF	$ 14.00	$5,250	$ 30.00	$11,250	$ 1.00	$375	$ 45.00	$16,875
D4010	Dry Pipe - Attic	240	LF	$ 14.00	$3,360	$ 30.00	$7,200	$ 1.00	$240	$ 45.00	$10,800
D4010	Dry Pipe - Basement	425	LF	$ 14.00	$5,950	$ 30.00	$12,750	$ 1.00	$425	$ 45.00	$19,125
D4010	Water Service to Fire Service Room	1	EA	$ 4,700.00	$4,700	$ 900.00	$900	$ 120.00	$120	$ 5,720.00	$5,720
D4010	Repair historic finishes disturbed by electrical replacement work	150	SQFT	$ 1.25	$188	$ 15.00	$2,250	$ -	$0	$ 16.25	$2,438
SUBTOTAL	**FIRE PROTECTION**	**6633**	**SF**	**$4,827**	**$21,408**	**$1,125**	**$37,150**	**$128**	**$1,283**	**$1**	**$59,840**

United States Department of the Interior
National Park Service
Class A Construction Cost Estimate

LINE ITEM COST SUMMARY

Project: Janis-Ziegler House
Park: St. Genevieve National Historic Park
Park Alpha: STGE
PMIS: 311239

Estimate By: Lurita Blank
Date: 10/18/24
Reviewed By:
Date:

Summary Item: 3 Fire Suppression **Total Cost:** $134,833

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		LABOR		EQUIPMENT		TOTALS	
				Material Cost/Unit	Total Material Cost	Labor Cost/Unit	Total Labor Cost	Equipment Cost/Unit	Total Equipment Cost	Total Cost/Unit	Total Cost
D4010	FIRE PROTECTION										
D4010	Fire pump, 500 GPM.100 psi	1	EA	$ 28,000.00	$28,000	$ 3,900.00	$3,900	$ 230.00	$230	$ 32,130.00	$32,130
D4010	Air compressor for dry pipe	1	EA	$ 1,650.00	$1,650	$ 500.00	$500	$ -	$0	$ 2,150.00	$2,150
D4010	Dry pipe valves and controls	2	EA	$ 3,800.00	$7,600	$ 625.00	$1,250	$ 22.00	$44	$ 4,447.00	$8,894
SUBTOTAL	FIRE PROTECTION	6633	SF	$5.0	$37,250	$1	$5,650	$0	$274	$6	$43,174

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		LABOR		EQUIPMENT		TOTALS	
				Material Cost/Unit	Total Material Cost	Labor Cost/Unit	Total Labor Cost	Equipment Cost/Unit	Total Equipment Cost	Total Cost/Unit	Total Cost
C1011	FIRE SERVICE ROOM										
C1011	Framed partition wall with 2x drywall, fire rated partition, fire rated door	180	SF	$ 4.50	$810	$ 27.50	$4,950	$ -	$0	$ 32.00	$5,760
C1011	Housekeeping pad, 4" concrete on crushed gravel base	36	SF	$ 4.00	$144	$ 9.50	$342	$ 0.50	$18	$ 14.00	$504
C1011	Extend HVAC service/ductwork to fire service room for heat/conditioning	35	LF	$ 1.50	$53	$ 7.50	$263	$ -	$0	$ 9.00	$315
SUBTOTAL	FIRE SERVICE ROOM	6633	SF	$0.0	$1,007	$0	$5,555	$0	$18	$0	$6,579

Summary Item: 3 Fire Suppression

Uniformat II WBS Code	Description	Quantity	Unit	MATERIAL		LABOR		EQUIPMENT		TOTALS	
				Material Cost/Unit	Total Material Cost	Labor Cost/Unit	Total Labor Cost	Equipment Cost/Unit	Total Equipment Cost	Total Cost/Unit	Total Cost
3	Fire Suppression	6633	SF	$ 10.97	$72,794	$ 8.70	$57,715	$ 0.65	$4,325	$ 20.33	$134,833