

HISTORIC STRUCTURAL ASSESSMENT

1013 LaFARGE AVENUE, LOUISVILLE, COLORADO

September 23, 2025



Evaluated by:

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1.0 INTRODUCTION

1.1 RESEARCH BACKGROUND / PROJECT PARTICIPANTS

DAJ Design conducted a Historic Structural Assessment for the structure located at 1013 LaFarge Avenue, Louisville, Colorado to determine its feasibility as a candidate for historic landmark designation as defined under the Historic Preservation program of the City of Louisville. The structure is a residential property. The City of Louisville Historic Preservation Commission found probable cause that the building may be eligible for landmarking under criteria in section 15.36.050 of the Louisville Municipal Code. Therefore, the Commission approved the Historic Structural Assessment to be paid for by the Louisville Preservation Fund grant.



The primary purpose of this HSA is to evaluate the property's current condition and to identify preservation priorities for the best use of rehabilitation funds. DAJ Design inspected 1013 LaFarge visually to identify areas of necessary maintenance and repair. It is possible that complications exist that were not visible and therefore it is recommended that the property owner includes contingency funding in any repair budget.

DAJ Design inspected 1013 LaFarge Avenue on August 28th, 2025, with GFE Structural. The weather for the site visit was warm with overcast skies. Adequate access to the basement and attic were available, though not all areas were entirely visible.

LIST OF CONSULTANTS AND SOURCES:

STRUCTURAL ENGINEER

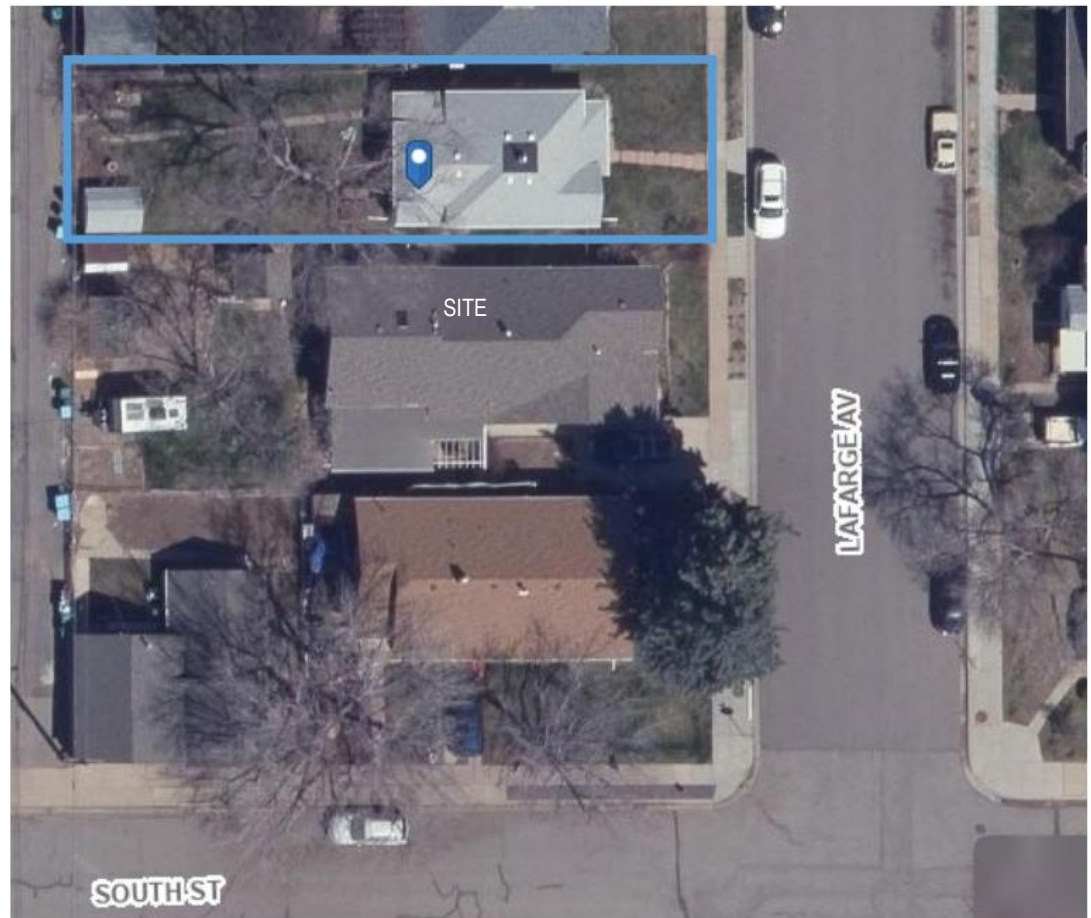
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SOURCES

"Louisville Historic Preservation Commission Staff Report," September 15, 2025.

1.2 BUILDING LOCATION

VICINITY MAP



LEGAL DESCRIPTION

Lot 5 & South 8 feet of Lot 6 Block 4, Barclay Place

2.0 HISTORY AND USE

The following report was written by Gigi Yang of the Louisville Historical Museum.

1013 LaFarge History

Legal Description: LOT 5 & S 8 FT LOT 6 BLK 4 BARCLAY PLACE

Year of Construction: 1906



Summary: 1013 La Farge shares an unusual history with several houses on the block that were built by E.J. Di Francia as dowries for his daughters. The home's history also contributes to the story of property ownership by families of Italian heritage in the neighborhood and along La Farge. Also notable is ownership by only two families over its 120-year history including the Di Francia family and the extended Giorzelli, Enrietto, and DiSalle families. The unique architectural style and "sister" homes are also referenced in the 2018 report "Stories in Places: Putting Louisville's Residential Development in Context."

Development of Barclay Place

The Colorado Mortgage and Investment Co., Limited, a corporation organized under the laws of Great Britain and doing business in Colorado, in 1897 platted the Barclay Place subdivision in which this building is located.

Di Francia Family Ownership, 1905-1928

The following summary of DiFrancia family ownership is excerpted from a report written by Bridget Bacon in 2016 on 1029 LaFarge which shares the history of 1013 LaFarge since the initial purchase of property by Eusebio Di Francia included Lots 5-8, Block 4 of Barclay Place. Additional information on 1013 La Farge is added to this report.

Eusebio Giuseppe "Joe" Di Francia (often referred to as E.J. Di Francia) purchased a parcel consisting of Lots 5-8, Block 4, Barclay Place by a deed recorded in 1905.

The history of this particular house comes with a family story, which is that descendants of the Di Francia family, whose primary home in the early 1900s was the large brick house next door at 1045 La Farge, years ago told the current owners of 1045 La Farge that the three small houses all in a row to the south, consisting of 1013, 1021, and 1029 La Farge, were built by E.J. Di Francia for three of his daughters.

Based on observation of the three houses today, they do bear a strong resemblance to one another, are of similar sizes, are set back from the street at similar distances, and appear to have been constructed at around the same time. The three small houses were built on the four lots (Lots 5-8). (By comparison, the houses at 1005 and 1009 La Farge to the south are each situated on two lots and the Di Francia house at 1045 La Farge sits on four lots.)

E.J. Di Francia appears to have been living in Louisville by 1891 and opened his first saloon on Front Street at around that time. (The Di Francia name has had such different spellings and usages as DiFrancia, deFrancia, De Francia, Di Franzia, Di Frangia, Di Frangio, DiFrenchy, Francia, and Franzia.) E.J. Di Francia was born in Italy in 1863; he is believed to have come from Castiglione di Carovilli, Isernia, in Italy. He came to the U.S. in

1883 and married Marie Di Domenico, who was a young widow, in 1890. She was born in Italy in 1869 and immigrated in about 1880. Eusebio and Maria Di Francia built their home at 1045 La Farge, just to the north of 1029 La Farge, in circa 1902-04 (though research has not been conducted to verify the accuracy of this estimated construction date). In circa 1904, E.J. Di Francia opened the saloon, Di Francia's, in the historic building that has the address of 740 Front in Louisville and is the current location of the restaurant called 740 Front.

E.J. and Maria Di Francia had seven children (one son and six daughters) who grew to adulthood. A photo of the family from the collection of the Louisville Historical Museum, is shown below and was taken in circa 1914. At the rear, left to right, are: Margaret, Nicholas, Rose, and Theresa; in the center is Philomena; and in the front are Caroline, mother Maria, father Eusebio, and Catherine.



Additional research also appears to answer the question of why Di Francia apparently had houses built for only three of his six daughters. It was found that he also purchased other residential properties in Louisville, including 1034 La Farge across the street. Perhaps his goal was to acquire houses for all six of his daughters, not just three of them.

Research in Louisville directories and in census records shows that the only Di Francia daughter who married before the death of E.J. Di Francia in 1918 was the oldest, Margaret. She married Camillo Domenico. The 1916 directory for Louisville, which used an earlier address system, shows them to be living in one of the three houses to the south of 1045 La Farge. Based on an analysis of who lived in the other houses in 1916, it appears that Margaret and Camillo Domenico lived in the house at 1029 La Farge.

A look at census records and directories shows that the three houses were rented out to other families, sometimes for years at a time to one family, before Maria Di Francia sold them in the 1920s. The family has also confirmed that they were rented out. The houses would have brought in rental income before the plan could be in place for other Di Francia daughters to marry and live in them.

E.J. Di Francia passed away in January 1918. His children were between the ages of about 10 and 27 at the time of his death. His death in 1918 came soon after the beginning of Prohibition in Colorado in 1916. These events placed a financial burden on his widow and their children. Sadly, his widow had to sell all of the properties in Louisville that he had purchased. 1029 La Farge appears to have been the first, or one of the first, that Maria sold off.



Residents of 1013 La Farge:

1013 La Farge was sold by Maria Di Francia in 1928. Prior to that, census and directory records show several rental tenants between 1906 when the house was built, until its sale in 1928. The 1910 Census shows James Kilker, his wife May, and son Sydney living at 1013 Main. Kilker was of Irish descent and was listed as an overseer at one of the coal mines. Photos from the Museum's collection identifies him as being on the 1913 Fire Hose Team as the lead man.



James Kilker is the lead man in front, c. 1913.

The 1916 City Directory lists Camillo and Margaret Di Francia Domenico living at 518 La Farge which could be an early address for 1013 La Farge. Margaret Di Francia was Maria and Eusebio's eldest daughter. She married Camillo Domenico in 1912 and appears to be the only Di Francia daughter to live in one of the "dowry" houses. Later directories indicate that she may have also lived at 1029 La Farge before it was sold in 1921.

Pictured right: Margaret Di Francia and Camillo Domenico wedding portrait c. 1912.

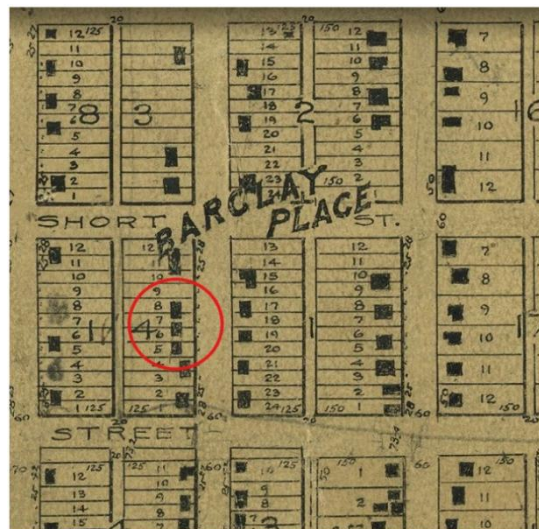
By 1918, Thomas and Bessie Clift are listed in the city directory as renting 516 La Farge (another early address for 1013 La Farge). Thomas was working as an engineer at the Sentinel Mine and a photo from the Museum's collection indicates that he also served as Town Marshal at some point. By the 1920 census, the Clifts have moved from La Farge and are living on Jefferson.

Charles Liley, his wife Rose Fenolia Liley, and their three sons – William, Louis, and Kenneth rented the house at 1013 La Farge in the 1920s and Charles worked as a superintendent at a coal mine. Charles was born in Lafayette to English parents William and Mary Ann Liley. William came to the US first in 1886 to work as a coal miner. Mary Ann came to the US in 1887.

Charles and Rose married around 1915. Rose was born in Colorado and grew up in Louisville with her four siblings. Rose Fenolia's parents were Baptist and Louisa Buffo Fenolia. They came from Italy in 1873 and 1880 where Baptist found work in the coal mines. Charles and Rose Liley moved to Frederick after 1928.

Date of Construction

The 1948 Boulder County Assessor card for this property and the Boulder County Assessor's Office website both give 1906 as the date of construction of this house. Boulder County has sometimes been found to be in error with respect to the date of construction of Louisville buildings, so other evidence is looked to. In this case, County Assessor records show the construction of the other two houses at 1021 and 1029 as falling between 1920 and 1935. These dates are likely in error since E.J. Di Francia died in 1918 and had already purchased the lots for all three houses in 1905. The date of construction for 1013 La Farge is likely the earliest and most accurate date of construction for all three buildings. The Drumm's Wall Map of 1909 also shows three houses built on site, further evidence that the Boulder County dates of construction for 1021 and 1029 are incorrect.



1909 Drumm's Wall Map showing Lot 5, Block 4 and two similar houses on Lots 6-8.



Giorzelli/ Enrietto/ DiSalle Family Ownership, 1928-2025

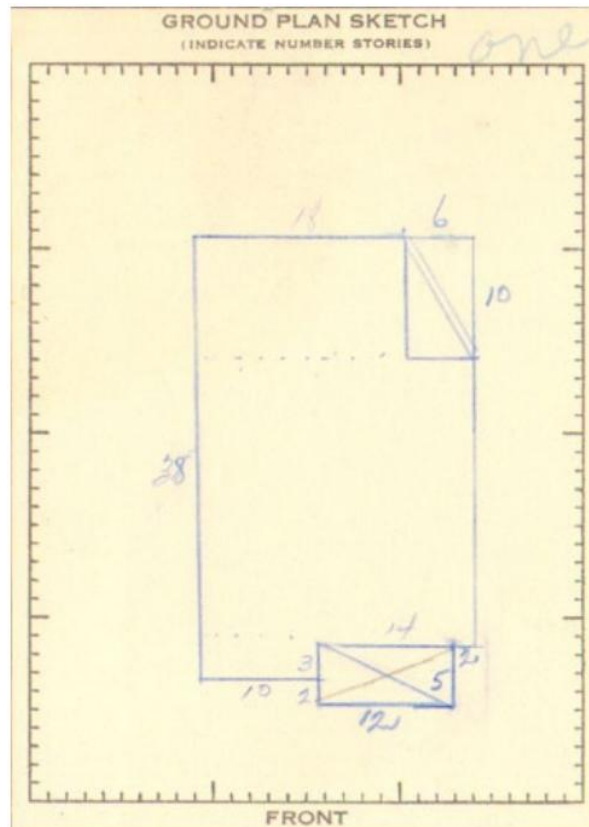
In 1928, Maria Di Francia sold 1013 La Farge to Joseph Giorzelli (1897-1953) and Estella (Stella) Bottinelli Giorzelli (1906-2006). Both Joseph and Stella grew up in Louisville with Joseph actually living just down the street at 1000 La Farge. Stella Bottinelli's family lived a few blocks away on Front Street. They married in 1925 and their daughter, June, was born in 1926.

Both the Giorzelli and Bottinelli families were early residents in Louisville. Peter and Antonia Giorzelli came to the US from northern Italy in 1892. In the 1910 census, Peter was working as a coal miner, and had built the first house on the block at 1000 La Farge in 1903. He and Antonia raised their three children, John (1888-1935), Joseph, and Emma (1899-1951) on La Farge.

Right: 1978 Louisville Times feature on the Giorzelli Family.



1948 Boulder County Assessor Card photo and floorplan for 1013 La Farge.



Stella Bottinelli's parents, Angelo (1875-1952) and Maria (Mary) Corone Bottinelli (1875-1939) came to the US from Milan, Italy in 1903 with their oldest son Atilio (Tealie). They moved to Louisville where Angelo worked in the coal mines and where Stella and her younger brother Charlie were born.

Left: Angelo Bottinelli family, with Stella as a small child; 1978 Louisville Times article.

Census records and City Directories from 1930 and later show Joseph Giorzelli working as a clerk for the Columbine mine and Crown Mine, as a foreman for street construction in 1940, and with stockroom supply for Esquire magazine in 1950. He was also first elected as Town Treasurer in 1926 and continued in that position in 1928, and again in 1952. Joseph Giorzelli died suddenly after a surgery in 1953.

After Joseph's death, Stella Giorzelli went to work at Neodata until 1971, remained active in the St. Louis Church, local Louisville events and card clubs and gained a reputation for being an excellent storyteller.

She was featured several times in the Louisville Times over the years. In 1998, she regaled community members with stories about Louisville during a Downtown Business Association event. Her granddaughter Missy Diehl also noted in another article upon June's death in 2006, "I think everyone remembers her being a great storyteller. The kids on the block loved it when granny would baby-sit us."

In 1955, Stella Giorzelli signed a joint tenancy deed with her daughter, June Enrietto for 1013 La Farge and began using the property for rental income. A number of tenants are mentioned in the *Louisville Times* as living at this address throughout the 1950s-1970s. Some of those include:



- 1955 – Mr. and Mrs. Dave Kerr
- 1958 – Margaret Dover Sneddon and Robert Sneddon
- 1961 – Mrs. and Mrs. Charles Kranker (formerly living at 1013 La Farge)
- 1975 – Diane and Ron Buffo
- 1989 – Ted and Christine Ryan Chavez

While the 1013 La Farge remained primarily as a rental property, descendants of the Giorzelli family lived nearby at the original Giorzelli home at 1000 La Farge and still live there today.



1013, 1021, and 1029 La Farge in 1999.

Current Ownership

In 2000, June Enrietto transferred ownership of 1013 La Farge to her daughter, Barbara DiSalle. June passed away in 2023 and in 2025, Barbara DiSalle sold the property to Craig Thompson who is the current owner.



Current assessor photo of 1013 LaFarge

Recent Architectural Analysis

This section is excerpted from a report written by Bridget Bacon in 2022 on the history of 1021 La Farge and is also relevant to 1013 La Farge.

According to the 2018 report “Stories in Places: Putting Louisville’s Residential Development in Context” ([Microsoft Word – Final Louisville Residential Context 111918 \(louisvilleco.gov\)](#)) written by PaleoWest Archaeology for the City of Louisville, “A distinctive type of house present in Barclay Place is a Pyramidal/Hipped-roof cottage with a small gabled-front projection on the side (Figure 140). Four are located on the same block at 1013, 1021, 1029, and 1040 La Farge Avenue” (p. 134).

The Residential Context Report featured this photo of 1021 La Farge and its two “sister” homes on its cover:

Stories in Places:
Putting Louisville’s Residential Development in Context
Boulder County, Colorado





The Residential Context Report also states: “[T]he houses located at 822, 1013, 1021, 1029, and 1040 La Farge and 548 Lincoln Avenue have a very distinctive form comprising a pyramidal – or hipped-roof main portion and a small, front-gabled room on the side.... All of these houses date between 1903 and 1912. PaleoWest recommends.... further investigating the origins of these house plans. E.J. Di Francia reportedly purchased or constructed the houses at 1013, 1021, and 1029 La Farge Avenue for his daughters (Bacon 2016d). These houses appear similar or identical (i.e., 1021 La Farge Avenue) to the Northern Coal and Coke Company’s coal camp house Type C (Figure 145). In the early 1900s, that company and the Rocky Mountain Fuel Company constructed many different types of houses for mine workers. When the Rocky Mountain Fuel Company consolidated ownership of several mines after the Long Strike of 1910-1914, and again after most mines closed in the 1930s, mining companies sold many houses to private owners (Conarroe 2017:3; Lewis 2011:2). The three Di Francia houses were in place before 1910, and possibly as early as 1906 (Bacon 2016d:4), making it unlikely that they originated at a coal mine. However, it is possible that private builders copied or borrowed from the coal companies’ house plans (Doug Conarroe personal communication, October 10, 2017). PaleoWest recommends that further research be conducted into why the aforementioned houses on La Farge and Lincoln Avenues and the Type C coal company house are so similar” (page 151).

The preceding research is based on a review of relevant and available online County property records, census records, oral history interviews, Louisville directories, and Louisville Historical Museum maps, files, and obituary records.

2.1 ARCHITECTURAL SIGNIFICANCE & CONSTRUCTION HISTORY

The residential property at 1013 LaFarge Avenue was constructed around 1906 and is a typical early-1900's wood frame vernacular house of the Louisville area. The house closely resembles two neighboring houses to the north and was built around the same time as those houses, all three under a single owner. The primary façade faces east towards LaFarge avenue and the original form is apparent when viewed from the street. There are three small additions all to the rear of the house. These additions were constructed early in the lifespan of the house, all three prior to 1948. The house footprint, form, and size are unchanged since 1948.

In 2025 the house is clad in steel siding, but evidence exists indicating that the original painted wood siding is beneath the current siding. Some of the windows are in original locations and are the original size though a few of the windows are replacements that do not match the original sizes. There are two exterior doors that are in original locations, but the doors are replacements. Other elements that have been added over the years include an asphalt shingle roof, gutters, and trim. The foundation appears to be original as is the floor, wall, and roof structure.

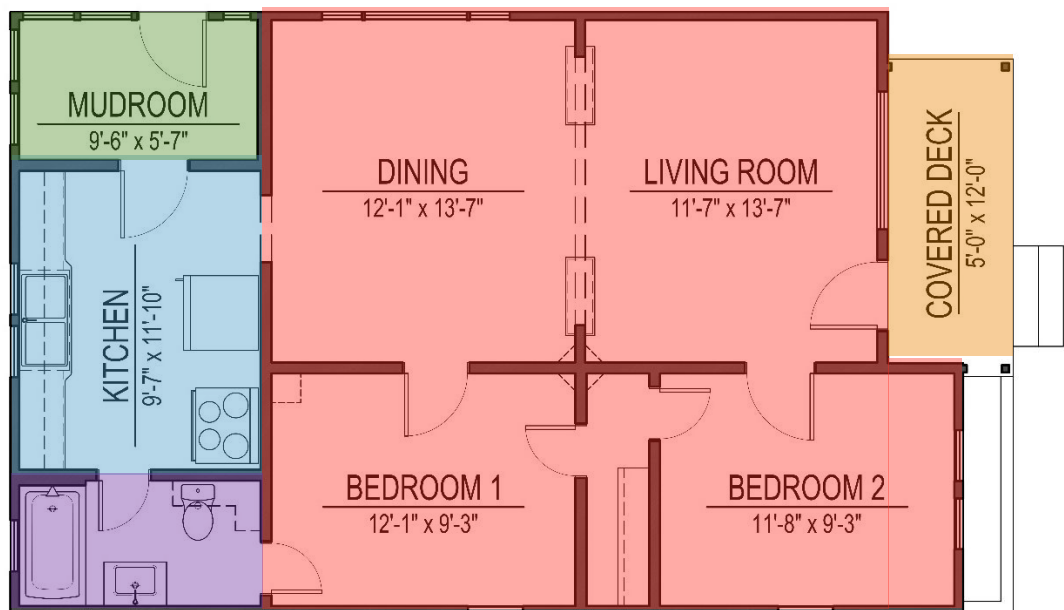
1013 LaFarge Avenue has the potential to be restored to a high degree of architectural integrity when compared to historic photos dated to 1948. Overall, the home is well maintained but has a few items that require prioritization, as outlined in the analysis of this report. There is sufficient evidence that the original wood siding and any other original features like trim work and original window sizes still exist beneath the current steel siding. Further investigative deconstruction has the potential to reveal a larger extent of original materials.

1013 LaFarge is not listed on the National, State, or Local Register.

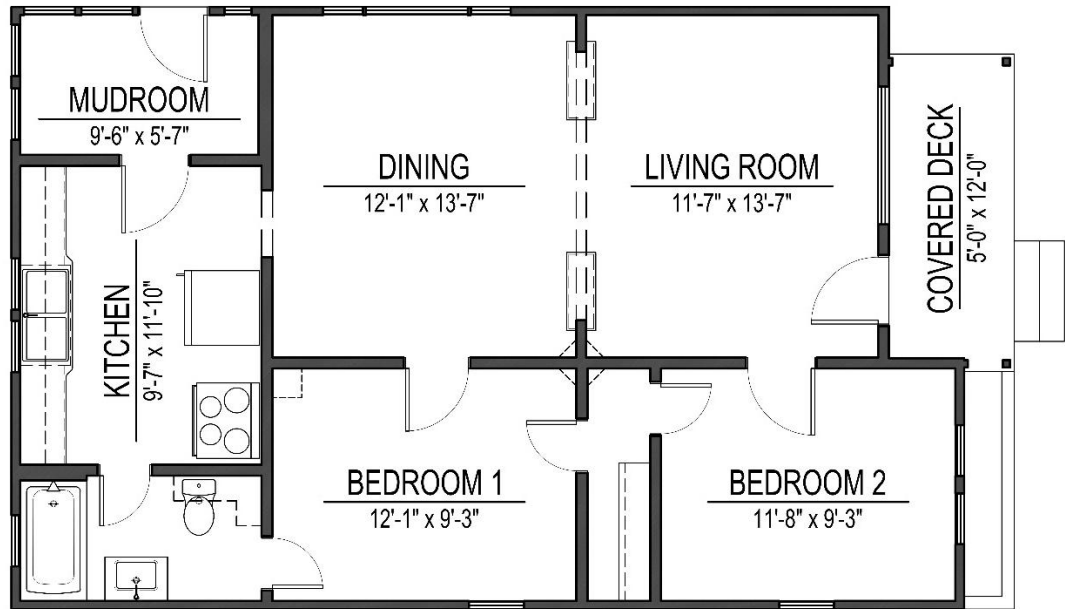


Primary Changes Occurring Over Time:

- Original house (RED): ca. 1906, on site by 1909
- Covered Deck (ORANGE): ca. 1906
- West Addition (BLUE): Unknown, prior to 1948
- Bathroom Addition (PURPLE): Unknown, prior to 1948
- Mudroom Addition (GREEN): Unknown, prior to 1948
 - Originally an enclosed porch
 - Fully enclosed and finished:
- Metal Siding: After 1948
- New Asphalt Roof: Unknown, likely ca. 1980
- : 2018



2.2 FLOOR PLANS



Main Level Floor Plan

2.3 PROPOSED USE

There is no proposed change of use at this time.

3.0 STRUCTURE CONDITION ASSESSMENT

3.1 SITE

ASSOCIATED LANDSCAPE FEATURES

Description:

1013 LaFarge is set on a typical lot in downtown Louisville that is approximately 33 feet wide by 125 feet deep, running lengthwise in the east-west direction and totaling approximately 4,135 sf. The property is bordered on the east by LaFarge Avenue, on the west by an alley, and by residential properties on the north and south. The property is enclosed along the north, west, and south sides by chain-link fences installed at an unknown date.

Approximately one quarter of the lot is covered by the footprints of the house and a shed in the southwest property corner. The house sits in the eastern half of the lot, approximately 25 feet from the east property line. There is a sandstone paver walkway from the public sidewalk at LaFarge Avenue. The sandstone walkway also leads around the north side of the house to a mudroom entrance in the northwest corner of the house. There is also a concrete walkway from the west side of the house to the alley.

Most of the site is grass with some areas of wood mulch. There is a large maple tree central on the property and another mature tree at the west end of the property. There are shrubs along the north property line and vines growing along the chain-link fences throughout. Additionally, there are small ground-cover plantings adjacent to the house at the northeast corner.



Looking west from the northwest corner of the house.



Condition Evaluation:

Overall, the landscape features are in good condition. The large trees appear to be well maintained and healthy. The small shrubs and vines along the property lines appear to be well managed and do not encroach upon the house. There is some smaller landscaping adjacent to the house foundation, but this is minimal, well established, and does not appear to pose a threat to the house structure.



Looking west from above LaFarge Avenue.

Recommendations:

1. Work with a licensed arborist to maintain the mature trees and shrubs. Ensure that growth does not interfere with the house roof, siding, or foundation.
2. Keep overgrowth trimmed away from the house and overhead electrical lines and remove any overhead branches to eliminate the risk of damage to the structure.

GRADING

Description:

Overall, the site is relatively flat with a slight downward slope to the east. Grading around the house appears to drain away from the foundation, though minimally in most areas. Grading around the house is also highest at the northwest corner where finish materials meet grade and lowest in the southeast corner. There are landscaping features including pavers, ground covers, and a brick planter that make it difficult to determine the height of the foundation relative to grade along the north and east sides of the house. The foundation is exposed in the southwest corner and along the length of the south wall. The top of the foundation on the south side sits a minimum of four inches above grade.

Condition Evaluation:

The overall site grading is in poor condition. It is important that the grading around the house should be a minimum of six inches below the top of the foundation and slope away from the foundation for at least the first five feet. Due to the nature of the lot, it is difficult to meet these requirements without a large amount of regrading or lifting the building and pouring a new foundation.



The effects of poor grading are difficult to determine in one site visit, and some areas require deconstructive investigation. Landscaping and siding would need to be partially removed to determine the height of the foundation relative to grade in some areas along the west, north, and east sides of the house. Evidence of water infiltration into the crawlspace and basement was not observed. However, not all areas are visible and therefore structural damage may be present in the non-visible areas and require further investigation.



Grade is highest at the northwest corner of the house where finish materials are in contact with grade.

Recommendations:

1. Continue to monitor the drainage around the perimeter of the house. The perimeter should be observed after snow and significant rain events to assess all areas of pooling water.
2. The top of the foundation relative to the top of grade should be determined around the entire perimeter of the house. If the top of the foundation is determined to be at or below the existing grade, new grading should occur to bring the grade down below the top of the foundation, as prescribed by a licensed structural engineer.
3. Finished grade around the house perimeter should be re-graded to create positive drainage away from the house. The top of finished grade should be a minimum of six inches below the top of the foundation and slope away from the foundation for at least the first five feet. Coordinate slope with a licensed geotechnical engineer.
4. The house foundation should be replaced to bring the top of foundation at least six inches above finished grade. Coordinate with a licensed structural engineer and a licensed geotechnical engineer.
5. The wood floor framing members including the sill plate, rim board, floor joists, and floor sheathing should be inspected for rot caused by poor drainage. If rot is found in any of these members, the affected flooring should be replaced as prescribed by a licensed structural engineer.

PARKING

Description:

There is no on-site parking, nor any evidence of on-site parking having existed in the past. Additionally, building records do not indicate that there was ever a garage associated with this site.

1013 LaFarge is roughly a 33-foot-wide lot with parking available on the street.

Condition Evaluation:

We do not have a condition evaluation at this time as there is no on-site parking.

Recommendations:

No recommendations at this time.

3.2 STRUCTURAL SYSTEM

FOUNDATION SYSTEMS

Description:

The house foundation was observed from beneath the main floor within a dug-out basement area and in various locations outside of the house. What is referred to as 'basement' in this report does not meet the minimum height to be considered as such, but the term is used for the clarity of this report. Access to the basement is through an interior wood stair beneath a floor hatch in the mudroom. This part of the house is the northwest addition that was originally constructed as a porch. Stairs to a basement may have existed prior to this addition, but the original location could not be determined and may have been removed with any of the house additions.

The foundation consists of crawlspaces and basements built of varying depths and materials. The variation in depths and materials correspond with additions to the original house. There is crawlspace at the perimeter with a small basement area centrally located north to south and at the west end of the original construction, where it meets the kitchen. The basement area is not original and would have been dug out to accommodate a coal-fired furnace, typical of many houses throughout Louisville. Building records state that in 1976, work was to be done that included "additional excavating of crawl space – crawl space is surrounded by unsupported earthen walls and is hazardous due to possible spall off or collapse of walls." However, it does not appear that this work was ever completed as the shear-cut walls are still unsupported with several areas of spalling and undermining.

The original house foundation is constructed of stacked stone, approximately 1'-6" tall but possibly extending further below grade to an unknown depth. The presence of an original footing could not be determined without deconstructive investigation. The west side of the original foundation was removed when the kitchen addition was added. The kitchen is a very early addition with a foundation constructed of stacked stone that is indistinguishable from the original house foundation.

The bathroom addition has a poured concrete foundation. This part of the house is entirely over a shallow crawlspace with limited access. The depth and thickness of the poured concrete foundation wall could not be determined nor the presence of a footing. The south foundation wall of the kitchen abuts the bathroom addition with some of the stone wall being removed to run plumbing lines.



Original stone foundation undercut by sluffing soil.



The mudroom addition also has a poured concrete foundation. This area is also inaccessible and there is limited visibility of this foundation from the exterior as the steel siding runs to grade in the northwest corner of the house. The depth and thickness of the mudroom concrete foundation wall could not be determined but is likely similar in construction to the bathroom addition foundation and the front porch foundation. The front porch foundation is poured concrete that is probably not original and may have been poured at the same time as either the bathroom addition, the mudroom addition, or both.

The floor in the basement is a poured concrete slab of unknown thickness. There is also dirt throughout the basement floor from sluffing of the basement walls. The dirt on the floor covers the concrete slab in many areas and it is difficult to determine the extent of the concrete slab.

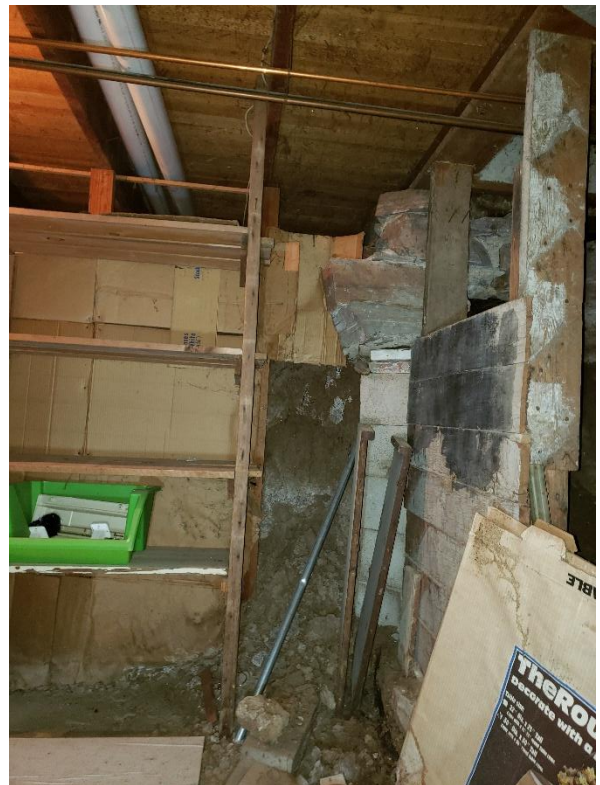


Condition Evaluation:

The entire foundation is in fair to poor condition and a large portion of the construction was not visible or discoverable without destructive testing or the removal of soil along the perimeter of the building. However, the non-visible areas are likely constructed in a manner similar to those areas that are exposed. Further analysis should be done to determine the full extent of the foundation and the size and construction of any footings beneath grade.

There are several areas where the basement was dug out directly beneath or near to the original crawlspace depth foundation walls. These areas are not properly supported and undermine the original foundations. Some of these locations have sheer cut soil where sluffing has occurred, completely undermining the foundation, particularly along the north and south walls of the original house.

The poured concrete floor in the basement is in poor condition. Large cracks were observed and the extent, thickness, and reinforcement of the slab could not be determined without deconstructive investigation. Several columns that support the main floor and roof bear directly on the concrete slab and likely do not have any footings.



Attempt at soil retention using wood framing and cardboard.

Finally, there is no waterproofing or insulation at any of the foundation walls.

Recommendations:

1. The basement and crawlspace foundation walls showed various signs of damage that require further evaluation. No additional load should be added to the existing foundation system without a full analysis of the current foundation walls/footings.
2. A licensed structural engineer and contractor should be contracted to evaluate and repair the existing stone foundation walls. This work could include tuck-pointing of the existing stone and/or the systematic removal and replacement with a modern concrete wall.
3. Continually monitor the main floor walls for signs of foundation distress such as cracking or improper door operation. If signs of cracking are detected, these areas should be evaluated by a licensed engineer and repaired as needed.
4. Retaining walls and foundation repair is necessary to address the areas where the foundation has been undermined by sheer cut soil to create the basement area. Work with a licensed structural engineer for further evaluation and a design strategy that will likely include the construction of new retaining walls. The soil cut portion should be temporarily braced until a retaining wall can be designed and built.
5. Alternatively, the foundation walls (including the perimeter and interior walls) should be replaced with a new concrete foundation at either a basement or crawlspace depth below frost, or a combination of basement and crawlspace depths. New foundation walls should be designed by a licensed structural engineer and supported with proper footings.
 - a. A new foundation should be set high enough to allow for proper drainage away from the foundation as prescribed by a geotechnical engineer. To pour a new concrete foundation, the house will need to be temporarily lifted or moved to a temporary location by a licensed house mover. Once returned, the location of the house on the site should not vary from the current, historic location.
6. New footings are likely needed to support the point and distributed loads from the roof and floor framing as specified in the recommendations below. New foundation support below any new beam and posts supporting the floor and roof framing should be coordinated with a licensed structural engineer.
7. Foundation wall and crawlspace insulation should be added to achieve an R-value as close as possible to current code standards.



Exterior view of transition from stone foundation (left) to concrete foundation (right).

FLOOR & CEILING SYSTEMS

Description:

The main floor framing is visible from within the basement with visibility to most, but not all areas. Some of the crawlspace areas have limited access for evaluation, but it is likely that these areas are constructed in a similar manner to those areas that are visible. The framing techniques and materials vary to some extent, indicating the different phases of construction and changes that were made to support sagging floors and the dig out of the basement. Overall, the floor framing further supports the construction timeline as outlined above.



The original house floor framing is constructed of 2x8 floor joists at 24-inches on-center spacing spanning in the north-south direction for the entire width of the house. The floor joists bear on the original foundation walls with 2x sill plates and rim boards. The floor joists are notched to the depth of the sill plate. There are three beam lines within the basement area that support the original floor joists. The beam lines stop at the west end of the original house and at the east end where the basement transitions to crawlspace. The floor joists within the crawlspace are supported by various stacked materials and 1x boards that are in-line with the three beam lines. The north beam line is constructed of a double 2x6 beam supported by wood columns. The center beam line is two flat 2x8's that are supported by a wood column and two steel adjustable pipe columns. All the columns bear directly on the concrete slab floor and do not appear to have footings. The center beam line also supports the main floor bearing wall which supports the ceiling joists above. The south beam line is constructed of 2x4's at each joist that together somewhat act as a retaining wall for the soil though this is primarily accomplished by the use of cardboard.



Wood and steel columns bear on the concrete slab floor.

The bathroom addition floor framing is constructed of 2x4 joists running north-south at 16-inches on-center spacing. These joists bear on a double sill plate on the south foundation wall. The bearing of these joists on the north end could not be determined due to limited access.

The mudroom addition was originally constructed as a deck and has 2x6 floor joists running north-south at 16-inches on-center spacing. These floor joists also bear on a sill plate on the concrete foundation wall and appear to bear on the stone foundation wall to the south.

Floor sheathing of the original house, the kitchen addition, and the bathroom addition is constructed of 1x3 tongue-and-groove hardwood. This sheathing would have been the original finish flooring though it has since been covered by additional layers of finish flooring. The 1948 Boulder County Assessor's card indicates that the house did not have a subfloor at that time and likely never did. The floor sheathing in the mudroom addition is 1x6 tongue-and-groove hardwood. This sheathing likely replaced the original deck boards when this part of the house was enclosed. Apart from the original wood flooring, it does not appear that any of the wood framing elements are nailed to one another.

There is no insulation at the main floor rim joist nor in the floor cavity of the crawlspace. The basement and crawlspace areas do not appear to be conditioned spaces.

Condition Evaluation:

The floor joists throughout are in fair condition and are typical construction for houses built around the same time in the Louisville area. The joist sizing and spacing do not meet minimum IRC code requirements for today's standards. The main level floor felt like homes of this era, and no significant areas of bulging or sagging were observed.

The beams supporting the floor joists are in poor condition. The spacing and sizing of the beams are not adequate for the current loads that they are supporting. The beams are not properly attached to their supports nor extend the full length of the floor system. The beam sizing, spacing, and spans do not meet minimum IRC code requirements for today's standards.

The various beam supports are in poor condition as well. The beam supports consist of wood and various stacked materials and it is unclear if any of these elements are supported by footings. There are also similar floor joist supports that do not appear to have footings, are not properly attached, and are therefore in poor condition.

The floor sheathing appears to be in fair condition. The sheathing appears to be performing adequately, but the extent of the sheathing and the number of layers on top of the sheathing could not be determined. The floor sheathing does meet minimum IRC code requirements for today's standards and appears to be performing adequately.



Steel column supporting a flat wood beam.

Recommendations:

1. The beams and beam supports should be replaced or reinforced as prescribed by a licensed structural engineer. The best method is to construct new beams and beam supports that support the existing floor joists and remove the existing beams and beam supports as prescribed by a licensed structural engineer. These new supports should bear on footings, or any other type of foundation as prescribed by a licensed structural engineer and located at a depth and soil bearing capacity as specified by a licensed geotechnical engineer.
2. The floor framing should be observed by a licensed engineer and repaired as needed. The existing floor joists are over spanned per current IRC code. New floor joists could be sistered to the existing floor joist or new beam lines should be added to the main floor system to support the existing floor joists as mentioned above. Special attention should be given to the connections between the foundation walls, floor joists, beams, and beam supports. The floors are not suitable for additional load resulting from a remodel or addition.
3. It is likely that the non-visible portions of the floor structure are constructed in a similar manner to those areas that are exposed. However, the entire floor structure should be verified and evaluated by a licensed structural engineer prior to any remodel or addition.
4. If the main floor deflection is inadequate, consult a licensed structural engineer for additional support design options.
5. New beams may need to be added to support the point and distributed loads from the roof framing as specified in the recommendations of the 'Roof Framing Systems' section of this report.
6. Rim joist insulation should be added to achieve an R-value as close as possible to current code standards. Verify that the crawlspace is a conditioned area otherwise insulation should be added to achieve an R-value as close as possible to current code standards.

ROOF FRAMING SYSTEMS

Description:

Access to view the roof framing is through an interior attic hatch in the ceiling of the original house. However, not all areas of the roof framing were visible from this location. The northwest and southwest additions as well as the front deck roofs do not have attic spaces and therefore some assumptions have been made as to the construction based on the available information. It is likely that the non-visible portions of the roof are constructed in a similar manner to those that are visible, as common materials and techniques are found on many houses built around the same time in the Louisville area.



The roof framing of the original house and the kitchen addition both form hip roofs. The kitchen addition roof is framed over the original house roof. Additionally, there is an original east facing gable. The construction method of these roofs is 2x4 rafters at 24-inches on-center and 2x4 ceiling joists at 16-inches on-center spacing. The ceiling joists run north-south and are spliced on a main level bearing wall. The ceiling joists extend beyond the main level walls to form the roof overhangs. The ceiling rafters are tapered and bear on a 1x4 plate that sits on top of the ceiling joists. The hip beams are 2x4 with vertical 1x4 supports on the north hip beams of the original roof. The top of the original roof does not have a ridge beam but is boxed out with 2x8's that are flush with the bottom of the joists and extends up with a flat roof. The flat roof is covered with wood sheathing and a metal finish.

The northwest and southwest additions and the front porch roofs all likely have similar framing materials and techniques as what is described above but these areas were not visible. The rafters of the front porch roof extend into the main roof attic space and are 2x4's that are sistered to the main roof rafters.

The roof sheathing observed in the attic is constructed of a layer of 1x skip sheathing with widths varying from six to twelve inches and roughly a two-inch gap between boards. The skip sheathing is the original sheathing and there is also an additional layer of OSB sheathing on top of the skip sheathing. The OSB sheathing was likely added at some point when the roofing was replaced. It is likely that the non-visible roof areas have similar sheathing construction and materials.

Where observed, the insulation in the attic is blown-in cellulose roughly the depth of the 2x4 ceiling joists but in several areas, there is less than this. It could not be determined if there is roof insulation in the northwest or southwest additions.

Condition Evaluation:

The roof is in fair condition and is constructed of typical materials and methods for houses built around the same time in the Louisville area. Several roof areas were minimally assessed due to limited access to observe the structural members. These roofs appear to be constructed using similar materials and techniques as those areas observed and appear to be performing adequately. The uppermost flat roof of the original house is in poor condition. This area is not properly supported and does not appear to have a minimum slope for drainage.

The attic insulation is in poor condition as it appears to be providing a minimal insulation R-value that does not meet current code standards.



Hipped roof framing with a central brick chimney.

Recommendations:

The roof and ceiling structure is not to current code standards. Since Louisville did not likely have a building code at the time of construction, we are unable to determine if it was built to a code or engineered. The original roof is built to a similar standard of other buildings typical of this type and age.

All new repairs should be specified by a licensed structural engineer. Repair details should be provided and submitted to the City of Louisville for review and be observed by the engineer and city inspectors during construction.



1. Hurricane clips (or toe-nails) may need to be added where roof framing members bear on exterior walls to meet the minimum IRC code requirements of today.
2. Collar ties are needed to be in compliance with current IRC code for prescriptive roof framing.
3. Diagonal braces and purlins are needed to strengthen the existing rafters to be in compliance with the current IRC code for prescriptive roof framing.
4. Additional beams are needed in the attic area to support the above-mentioned diagonal braces and purlins. This is mainly needed approximately at the mid-span of the roofs. These beams will require support in the wall system and likely would require new foundation support in the crawlspace and basement. This must be coordinated with a licensed structural engineer.
5. Attic insulation should be added to achieve an R-value as close as possible to current code standards. The maximum insulation possible should be added at the perimeter of the roof as the roof depth in this location does not allow for the minimum required by code. Any energy upgrades, such as increased insulation in the attic, could result in prolonged snow retention on the roof and could ultimately affect roof performance without first completing structural reinforcement.
6. It is not recommended to add additional roofing materials such as an additional layer of shingles, or solar panels without the additional structural support mentioned above.
7. The above-mentioned recommendations are for the visible portions of the roof. However, we assume that the roof framing in the non-visible areas may be built in a similar way and would need the repairs as mentioned above.



1x skip sheathing with a layer of osb sheathing. Rafters bear on a 1x plate on top of the ceiling joists.

3.3 ENVELOPE – EXTERIOR WALLS

EXTERIOR WALL CONSTRUCTION

Description:

The main level wall framing was not exposed for review. The wall framing is likely a 2x4 stud wall with studs on regular spacing (site measurements support this assumed wall thickness). The original wood siding appears to be attached directly to the wall framing, as seen in the attic and it is noted on the 1948 Boulder County Assessor's card that there is no wall sheathing. The wall insulation type could not be determined, if any exists. It is likely that there is minimal to no insulation in the original house walls.

It appears that several of the interior framed walls are load bearing for the roof above and that they are supported by beams and walls in the basement as described above. Further analysis of these walls should be completed prior to their removal or modification.



Gable end wall seen in the attic.

Condition Evaluation:

Since the wall structure was not exposed for observation, we are unable to evaluate the condition or determine if there is any structural damage. The wall heights are approximately 9 ½ feet tall which is at the upper height limit for 2x4 wood stud construction. Furthermore, the insulation type and R-value within the walls cannot be determined without deconstructive investigation. It is likely that there is minimal to no wall insulation.

Recommendations:

1. Without the opportunity to observe the exterior wall structure, we do not have any recommendations currently. If the opportunity presents itself, the exterior walls should be assessed by a licensed structural engineer. The owner is to note that the walls will need to be evaluated if any remodels or additional load is to be added, including the interior walls as several of these walls appear to be load bearing. Also, if any remodel or addition plan is in place, new braced wall lines may be added by adding OSB or gypsum board on the interior side of exterior walls to resist wind loading.
2. Wall cavity insulation should be added to achieve an R-value as close as possible to current code standards. Any energy upgrades, such as increased insulation in the attic, could result in prolonged snow retention on the roof and could ultimately affect roof performance without first completing structural reinforcement.

EXTERIOR FINISHES

Description:

The entire house is clad in painted steel siding. It is unclear when this siding was applied but it was commonly added to houses in the Louisville area in the late 1970's to early 1980's. Building records indicate a 'general repair' to the house in 1980, but no further information could be found. It is possible that the steel siding was part of the work done to the house in 1980. The steel siding covers the original house and all additions but is not found on the shed in the southwest property corner. The steel siding is in contact with grade at some locations and runs up to the bottom of the roof eaves.



Steel siding was commonly applied on top of existing siding, oftentimes with a layer of half-inch foam beneath. Layers of siding beneath the current steel siding could not be determined without deconstructive investigation. It is likely that the original wood siding still exists throughout the house. There also might be different types of wood siding used on the additions than that used on the original house. The 1948 Boulder County Assessor's card indicates that the siding at that time was 'woodboard'. The original siding was likely painted wood shiplap siding with a Dutch-cove profile. There is one area on the covered front deck where there is an attached column and there is a gap between the attached column and the steel siding. Small sections of Dutch-cove wood shiplap siding can be seen at this location. Additionally, it is possible that sometime around the middle of the 20th century, a layer of stucco siding was added on top of the original wood siding. This has been found to be the case for several houses throughout Louisville but there is no evidence of this at 1013 LaFarge at this time.



Original wood shiplap siding behind metal siding and an attached column.

Condition Evaluation:

The steel siding is in fair condition as no missing or damaged panels were observed. The paint is chipped in several areas which is typical of metal siding from this time period. The condition of the original siding, or any additional siding beneath the steel siding cannot be determined without deconstructive investigation.

Recommendations:

Further investigation is required to determine all siding types beneath the steel siding. Investigative deconstruction is recommended in an inconspicuous area to determine if wood siding exists beneath the steel siding. If so, it is recommended that the current siding be removed from the entire house. There may also be additional layers of siding on top of the original wood siding that should be removed. If layers of stucco or composite siding exist, they should be tested for asbestos prior to removal. With the removal of siding layers, it is likely that original wood siding will be exposed throughout the entire house and various types of original wood siding may exist depending on the date of construction. Repair, refinish, or replace the original wood siding.



Chipped paint finish common for metal siding.

EXTERIOR MASONRY

Description:

There is a brick planter box attached to the east side of the house that is two feet deep and extends to the eastern edge of the covered front deck. The brick appears to be supported by a concrete foundation of unknown depth. There also appears to be a layer of sheet metal between the house and the dirt within the planter but it could not be determined how far down this extends or the condition and termination of the sheet metal. The brick planter box is not original, and the date of construction could not be determined, though it appears to be at least 40 years old. There is no other exterior masonry on the house in 2025.



A brick chimney is visible in the 1948 Boulder County Assessor's card image. The brick chimney is centered on the main hipped roof. Part of this chimney can be seen in the attic and there is evidence of the chimney extending down into the main floor walls. The chimney does not extend into the basement and the part of the chimney that was above the roof was removed at an unknown date. There is also a second brick chimney seen in the attic that extends down to the wall separating the kitchen and original house. This chimney was also removed above the roof.

Condition Evaluation:

The brick planter box is in poor condition. There are cracks throughout the brick, and it could not be determined how the brick is supported or attached to the house. Additionally, it could not be determined if there is proper waterproofing where the planter box meets the house to prevent damage to the house walls and foundation. Nor could it be determined how the planter box is drained to remove water away from the house.



Remnants of a brick chimney above the kitchen seen in the attic.

Recommendations:

1. The brick planter box should be removed. The house siding, structural wood elements, and foundation at this location should be assessed by a licensed structural engineer after removal. It is possible that wood rot or foundation damage is present due to poor drainage.
2. Consider adding a faux brick chimney above the roofline that matches the chimney seen in the 1948 Boulder County Assessor's card image. The chimney location can be determined from the historic image as well as evidence of the original chimney in the attic and main floor walls. Additionally, there are several examples of similar chimneys found throughout Louisville.



Dirt in the planter box is adjacent to the house wall. A layer of sheet metal is seen possibly protecting the house from moisture.



A large crack running the full height of the brick planter box.

EXTERIOR APPENDAGES

Description:

A covered deck is attached to the front of the house facing east that is roughly five feet deep and twelve feet wide. The covered front deck is seen on the 1948 Boulder County Assessor's card and is likely original.

There is no access beneath the front deck to observe the structure, and the deck floor is covered with outdoor carpet. There are holes in the carpet that reveal some of the structure of the deck, but not all areas are visible. The deck appears to be constructed of 2x4 framing on top of a concrete foundation. The foundation thickness, depth, and presence of any footing could not be determined. The deck has a top layer of ½-inch plywood on top of wood planks. The wood planks might be original, but the plywood is not. The wood planks appear to be attached to 2x4 joists based on site measurements, but the joists and any support beams are not exposed for analysis. There are concrete steps on the east side of the deck that access a sandstone walkway to LaFarge Avenue. The original deck likely had wood steps in the same or similar location as the current concrete steps.

The deck is entirely covered with a hipped roof supported by painted turned wood columns. The foundation support of the columns could not be determined due to the finish materials of the deck. The columns and roof structure appear to be original. There is no access to the front deck roof structure, but it is likely framed with 2x4 joists and rafters with similar construction techniques observed in the attic of the main house roof. The porch roof soffit is vinyl panels that are not original but the original soffit, likely beadboard, may be present beneath the vinyl.

Finally, there is a painted wood privacy screen attached to north side of the front deck that is not original and was likely added within the last 50 years.

Condition Evaluation:

Overall, the covered front deck is in fair condition, but our assessment is limited. Access to observe the roof and deck structure is necessary for a full analysis and this will involve deconstructive investigation.

The carpet floor is well worn with several tears and is beyond the expected lifespan for such material. There is some water damage at the base of the wood columns, likely caused by prolonged water retention within the carpet and poor drainage of the deck surface.



Concrete deck foundation, wood framing, and carpet over plywood with concrete steps.

Recommendations:

1. Remove the carpet floor from the deck and remove the layer of plywood sheathing. The layer of wood deck boards is likely in poor condition and should also be removed. Once all of the floor layers have been removed, the deck structure should be observed by a licensed structural engineer with further recommendations given for proper support of the deck and front deck roof. Repairs to the deck framing and foundation are likely.
2. The deck floor should be replaced with wood or composite wood-look boards after all other structural items have been addressed.
3. The concrete stairs on the east side of the deck should be replaced with wood or composite wood-look stairs in the same location.
4. The painted wood privacy screen on the north side of the deck should be removed.
5. The painted wood columns should be further analyzed by a licensed structural engineer once finish materials of the deck floor and roof have been removed. The columns should be inspected for rot at their base and special attention should be given to the support of the columns and how they are attached at the base and capitol. If it is determined that the columns need to be replaced, identical painted, turned wood columns should be used.
6. The vinyl soffit of the front porch roof should be removed. The original soffit may exist beneath the vinyl and should be repaired or replaced. If the original soffit does not exist, painted beadboard should be used and several examples throughout Louisville can be found. The roof structure should also be observed by a licensed structural engineer at this time. It is likely that repairs similar to those recommended for the main house roof will be required.

3.4 ENVELOPE – ROOFING & WATERPROOFING

ROOFING SYSTEMS

Description:

The house roof is covered with an asphalt composite shingle roof. Building records show that in 2003 roofing layers were removed and a new asphalt composite shingle roof was installed. The current asphalt shingle roof was installed in 2018, likely replaced due to hail damage as was common throughout Louisville at that time. The 1948 Boulder County Assessor's card indicates that the roof at that time was asphalt, and the original roof was likely wood shingles.

There is painted metal drip edge throughout the roof that appears to have been added in 2003 with some areas appearing to have been added in 2018.

There are four mushroom style roof vents at the upper part of the hipped roof of the original house. There are also two mushroom style vents on the hipped roof of the west addition. The mushroom style vents appear to have been installed in 2003. The roofs over the northwest addition, southwest addition, and covered front deck do not appear to be vented. There is a gable end vent at the east facing gable. This vent is constructed of horizontal slats in the metal siding. A larger gable end vent that was likely original can be seen in the attic at this location. Low roof and soffit venting were not observed.

Condition Evaluation:

The asphalt composition shingle roof is in good condition and still within the expected lifespan of such a roof. The roof venting does not appear to be adequate for the amount of attic space and lacks low roof venting.

Recommendations:

Roof venting should be increased with the addition of low and high venting as required by code.

SHEET METAL FLASHING

Description:

Metal flashing is not visible anywhere on the house but it is possible that there is flashing beneath the steel siding. Flashing is likely in areas where the lower roofs meet the upper roofs or where roofs meet the exterior wall face.

Condition Evaluation:

The condition of metal flashing, if any is present, is indeterminable at this time.



Asphalt roofing on the entire house with mushroom style vents.



Recommendations

Metal flashing should be assessed after the metal siding, and any subsequent siding has been removed and the original wood siding is exposed. Metal flashing may need to be added or replaced upon further inspection.

PERIMETER FOUNDATION DRAINAGE

Description:

A perimeter foundation drain was not observed during the inspection. Due to the construction period and construction methods used, it is unlikely that a perimeter foundation drain exists.

Recommendations

A perimeter foundation drain should be installed with the installation of a new foundation (see above foundation recommendations). A new perimeter foundation drain shall adhere to all current City of Louisville building codes.

DRAINAGE SYSTEM, GUTTERS & DOWNSPOUTS

Description:

Painted white, k-style gutters are found throughout the house. Gutters are located at the end of all roof eaves in appropriate locations and of appropriate lengths for adequate water collection. Some of the gutters have metal standoffs while other locations do not.

Painted 2x3 downspouts are located throughout and appear to be an adequate amount for proper drainage where located. There is a round downspout that drains the covered front deck roof. This downspout is buried in the brick planter box and daylights at the base of the brick wall. It appears that the 2x3 downspouts were added sometime after 2012 and replaced round downspouts in the same locations. Downspouts have downspout extensions at most locations.



Painted k-style gutters and 2x3 downspouts are located throughout.

Condition Evaluation:

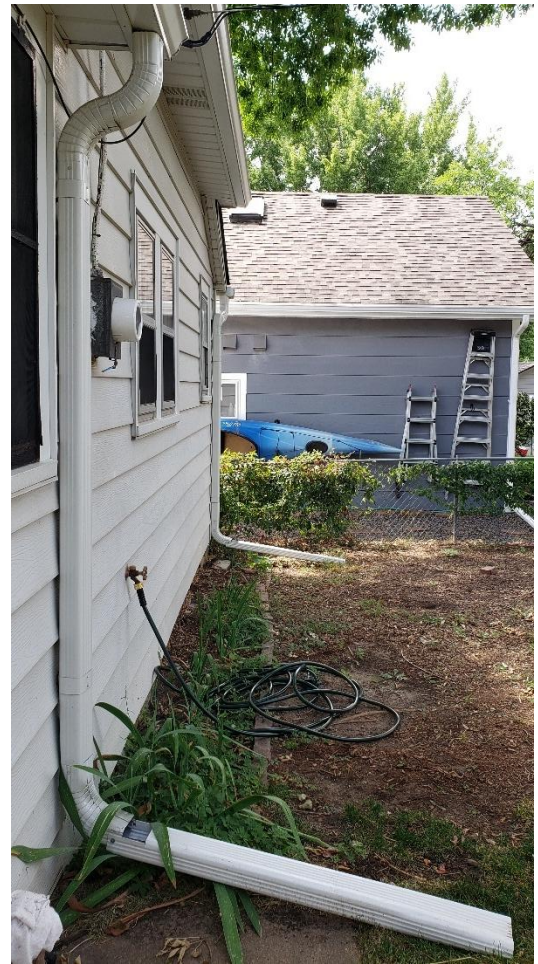
The gutters are in good condition and most of the downspouts are in good condition. The round downspout on the east side is in poor condition as it is rusted where it is buried in the brick planter box. Additionally, there are two locations where there are no downspout extensions to direct water away from the house foundation. Gutters can be difficult to assess outside of significant rain or snow events, but they appear to be properly attached, and no visible signs of leaking were present.

Recommendations:

1. Ensure that all gutters, downspouts, and downspout extensions are maintained to discharge water away from the building foundation and are kept clear of debris.
2. The buried round downspout should be replaced as it is rusting and drains water near the front deck foundation.
3. The gutters and downspouts are not historic. Consider replacing the gutters with half-round gutters and the downspouts with round downspouts. Though not historic, these styles will more appropriately match the historic nature of the house.



Round downspout buried in brick planter.



Downspouts with extensions.

3.5 WINDOWS & DOORS

DOORS

Description:

The front door is a stained wood door with a full-lite aluminum storm door. The front door has a single lower panel and three divided single-pane glass windows in the upper 1/3 of the door. The front door is not original but is in the same location as the front door seen in the 1948 Boulder County Assessor's card image which is likely the original front door location. The front door style from 1948 cannot be determined but was likely a painted or stained wood door, typical to similar houses from the same timeframe in the Louisville area.

There is a side entrance door on the north side of the house that accesses a small mudroom and laundry area. This door is a six-panel painted wood door with an aluminum 3/4 storm door. This door location was likely added when this area that was originally a deck was enclosed. The door location is likely original to when this area was enclosed but the door slab is a replacement that appears to have been added in the last 20 years.

There is an interior door that separates the mudroom from the kitchen. This door is a painted wood door with a 1/3 glass panel and three panels below and one panel above the glass. This was likely an exterior door at this location or possibly moved from another exterior door location at some point.

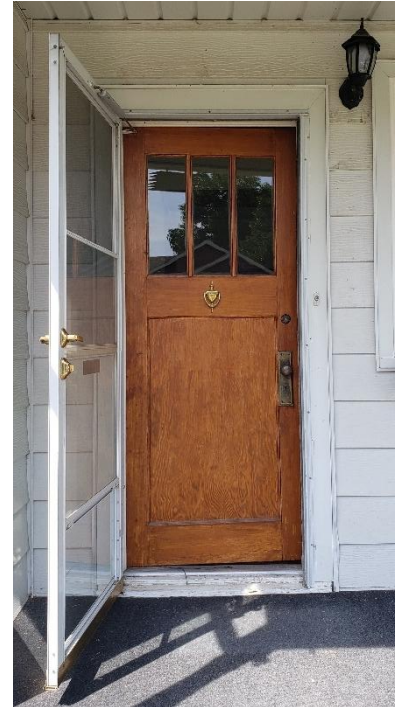
Condition Evaluation

The front door is in fair condition. The door works properly and appears to create an acceptable seal. However, the stained wood door has signs of weathering in the wood finish. The front aluminum storm door is in good condition and has likely prolonged the lifespan of the wood door.

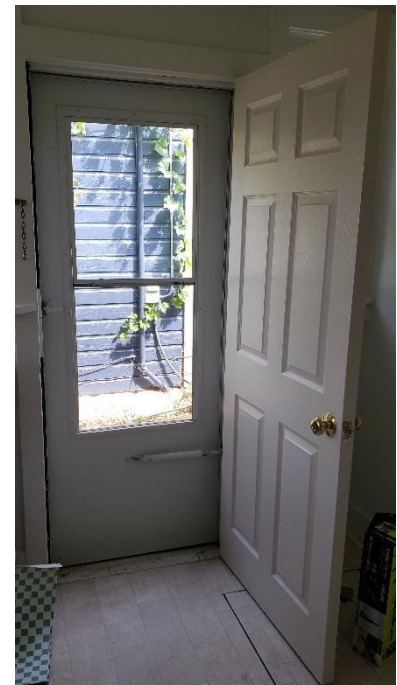
The north entrance door and aluminum storm door are in good condition. These doors work properly and create acceptable seals.

Recommendations:

Both doors should be replaced with painted or stained wood doors. The door style from 1948 cannot be determined. However, there are numerous examples of historic wood doors from the same timeframe throughout the Louisville area including the front door on the house located at 1021 LaFarge. The interior door between the kitchen and mudroom is also an example of a door that was previously an exterior door on this house. Work with a licensed architect and the historic preservation committee to select an appropriate front door style that matches the period of significance. The north door should also be replaced with an appropriate style for the period of significance but does not need to match the style chosen for the front door.



Wood front door and storm door.



North side door and storm door.

WINDOWS

Description:

There are various window sizes and styles throughout the house that indicate the different phases of construction and various remodels. Where the original windows have been removed or modified, evidence of the original locations and sizes still exists in the 1948 Boulder County Assessor's card image, ghosting in the walls, and in the house located at 1021 LaFarge.

The original windows are tall and narrow single-hung wood windows with counterweights. These windows are found on the original house. The original windows would have all been the same size with paired windows in the east facing gable. The east facing window under the covered front deck was replaced with an aluminum window with double-pane glass. The replacement window modified the original window opening at this location and is wider and not as tall as the original window. The original windows on the north side of the house were also removed. One of these windows was not replaced and the opening was framed in. Two windows were replaced with a larger opening consisting of two wood single-hung windows with a center picture window.

There are two single-hung wood windows with counterweights on the west wall of the kitchen. These windows are likely original to this addition but are smaller than the windows found on the original house. The kitchen windows have a 3-panel divided lite in the top pane.



Original wood windows with counterweights.

There are five double-hung wood windows in the mudroom that are of similar size to the kitchen windows and have a 3-panel divided lite in the top pane. However, these windows have pin-stops as opposed to counterweights. These windows are likely original to when this area was enclosed.

There is a single-hung vinyl window in the bathroom that is also similar in size to the kitchen windows and has a 3-panel divided lite top pane. This is a replacement window that appears to have been added in the last thirty years. The original window in this location likely matched either the windows in the kitchen or the mudroom but likely experienced increased deterioration due to moisture within the bathroom.

Nearly all the operable windows have aluminum storm and screen windows that are not original. The windows in the mudroom have wood framed screen windows with exterior hangers that may be original to when this addition was enclosed.



Condition Evaluation:

Overall, the windows are in poor condition except for the vinyl window in the bathroom which is in fair condition as it is the newest window. Operation was not tested but most of the windows appear to be minimally operable if at all. The ropes were cut for several of the weighted windows and the stop-pins were painted over in the mudroom limiting their ease of operation. The wood windows have reached the end of their expected lifespan and do not perform well thermally.

The wood and aluminum storm and screen windows are also in poor condition. These windows are also beyond their expected lifespan as the wood, aluminum, and screens all have damage from exposure to sun and moisture.

Recommendations:

1. Remove the aluminum and wood storm and screen windows from all windows. Consider replacing these with new wood storm windows with minimal visual impact. These windows should be removable, with an option for bug screens installed in their place during the warmer months.
2. The large windows on the north and east sides should be removed and replaced. Replacement windows should match the original window size and style as found elsewhere in the original house. Original window locations can be determined when the original wood siding is exposed as well as from the interior ghosting and using 1021 LaFarge as a reference. This recommendation is for a total of four replacement windows.
3. The original wood windows should be fully restored. New components will likely need to be used, and current energy code should be followed. Ensure that all restored windows are fully operable and match the original window style and operation. Alternatively, the original windows could be replaced with new aluminum clad wood or fiberglass windows. New windows should match the existing size, operation, and locations of all original windows. This recommendation is for a total of eleven windows.
4. The window in the bathroom should be replaced with a new unit that matches the size and style of the existing unit, unless further evidence is revealed indicating a different size or style original unit at this location. For durability in a wet area, this window should be constructed of fiberglass, with an exterior appearance that matches the historic windows.



Replacement windows and aluminum storm windows.



Wood framed screens on mudroom windows.



3.6 EXTERIOR DETAILS

SOFFIT & FASCIA

Description:

The soffits throughout the entire house are painted vinyl panels with a v-groove profile. The vinyl soffits are not original and were likely added at the same time as the steel siding, probably around 1980. The original soffits cannot be determined at this time but most likely would have been painted wood boards. There might have been some locations that had exposed rafter tails, possibly at the northwest and southwest additions. The current vinyl soffits were likely added on top of the original soffits or exposed rafter tails.

The fascia throughout the entire house is painted sheet metal that was probably added in 1980 and applied directly to the original fascia. The original fascia was probably painted wood with the possibility that some locations did not have fascia where there were exposed rafter tails. The roof eaves are a combination of both plumb-cut and square-cut rafter ends and some of the eaves are boxed-out while others are not. It is possible that these variations in roof eave treatment are original and pertain to the different phases of construction. However, the roof eaves may have been altered when the house was wrapped in steel and vinyl around 1980.

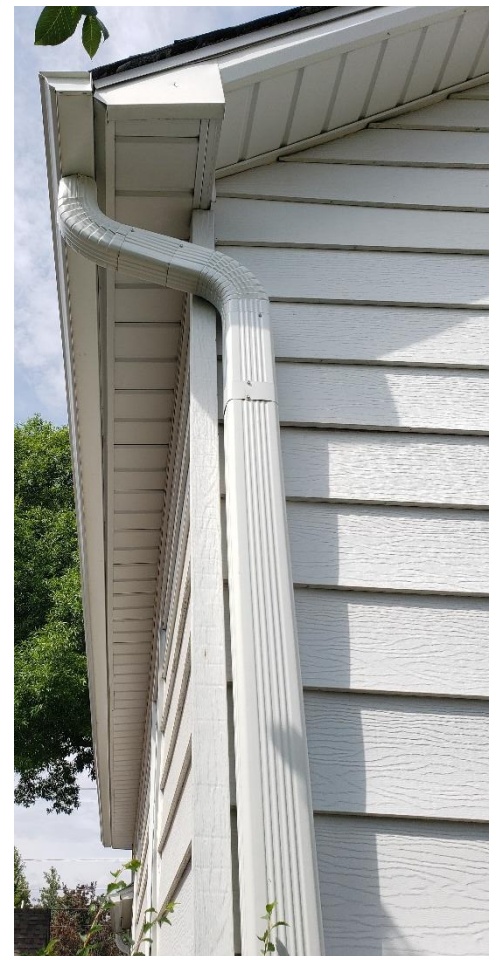
Condition Evaluation:

The soffits and fascia throughout the original house and the additions are in good condition. The painted metal and vinyl were probably applied around 1980 and are still within the expected lifespan, especially as gutters are in place to protect from water damage. The fascia behind the gutters is difficult to analyze as it is minimally exposed but is likely in a similar condition. Painted metal drip edge is present throughout that was likely added at the same time as the asphalt shingle roof which also adds to the protection of the soffit and fascia from water damage.

The metal and vinyl soffit and fascia are not original. The original soffit and fascia, probably painted wood, likely still remains but requires deconstructive investigation to analyze the condition.

Recommendations:

The vinyl soffit and metal fascia should be removed throughout. Any original wood soffit and fascia beneath should be analyzed and the original sizes and locations should be determined. Scrape, repair, refinish, or replace all original wood roof elements.



V-groove soffit panels and metal wrapped fascia.

TRIM

Description:

All the corner trim is standard painted steel siding trim that is 2 ½-inches wide. There is also standard painted steel j-trim that captures the steel siding at the base, top, and sides of the siding. J-trim captures the steel siding where it meets the edges of the window and door trim.

The window and door trim are painted metal panel that appears to be wrapped around the original wood trim. The window and door trim are various sizes and styles that indicate the different phases of construction and the alterations to windows that were made.

The original trim cannot be determined at this time. The original trim would have been painted wood. It is probable that the original window and door trim remains except in the locations where the original windows were replaced. It is also likely that the original corner trim and possibly frieze boards remain beneath the steel siding. However, some of the original trim might have been removed around 1980 in order to apply the current steel siding. The house located at 1021 LaFarge has many similar features to 1013 LaFarge and the trim found at 1021 LaFarge may indicate what the original trim looked like.

Condition Evaluation:

Overall, the painted metal trim is in fair condition throughout the house as some of the trim is bent and there are areas of exposed metal. The presence and condition of any original wood trim pieces cannot be determined without deconstructive investigation. It is likely that some of the original trim still remains and is probably in fair to poor condition due to the age of the house and the expected lifespan of exterior wood elements.

Recommendations:

The painted metal trim should be removed along with the steel siding. The original wood trim likely remains beneath the siding though some pieces may be missing. Determine the extent and condition of any remaining original wood trim. Missing pieces of original trim should also be determined, and the sizes and locations should be apparent in 'ghosting' on the original wood siding. Repair, replace, or restore all original painted wood trim elements.



Typical metal corner trim.



Metal wrapped window trim & typical j-trim.

ORNAMENTATION

Description:

There are painted wood decorative brackets on the front porch columns. These brackets appear in the 1948 Boulder County Assessor's card image and may be original. In 2025, no other ornamentation exists on the house.

The 1948 Boulder County Assessor's card image also appears to show Victorian shingles in the east facing gable, but the image is not clear enough to determine the style. There are similar shingles in the gable end at 1021 LaFarge. 1021 LaFarge also has decorative brackets at the east facing gable that may have existed at some time on 1013 LaFarge, but this cannot be determined.

Condition Evaluation:

The decorative brackets on the front deck are in poor condition. One of the brackets is nearly entirely missing and several of the other brackets are broken.

Deconstructive investigation is required to determine if any other decorative elements remain beneath the steel siding. It is likely that there is shingle siding in the east facing gable end and possible that other decorative elements exist or 'ghosting' exists of elements that were removed.

Recommendations:

1. The decorative brackets should be replaced with new brackets that match the current profile.
2. Further investigation into other decorative elements such as shingle siding should be done after the removal of the steel siding. Such decorative elements may still be present and will require further analysis, or there may be 'ghosting' of elements that were removed and further research into these items will be required.



Decorative painted wood brackets.

3.7 MECHANICAL SYSTEMS

HEATING & AIR-CONDITIONING

Description:

Heating is provided to the entire house through a gas-fired furnace located in the basement. The gas line enters the basement from the north with the meter located approximately at the midway point of the north side of the house. The furnace is direct-vented through PVC pipe to the south side of the house. The furnace was not dated but appears to have been installed within the past 20 years. The furnace sits on the concrete slab floor in the basement with adequate space for servicing and a condensate pump on the floor. Galvanized metal ductwork runs throughout the basement and crawlspace to floor and wall registers on the main floor.

The 1948 Boulder County Assessor's card indicates that heating at that time was 'coal', which is typical of the Louisville area for that time. A coal furnace was likely located in the basement but a coal storage room was not found.

Cooling was not observed and likely has not existed in the past.

Condition Evaluation:

The heating system appears to be in good condition but was not tested during the site visit. There is no record of when the furnace was installed, but it looks like it is no more than 20 years old.

Recommendations:

1. Continue to perform routine maintenance on the furnace to prolong the lifespan.
2. If heating or cooling does not perform to the homeowner's satisfaction, consult with a licensed mechanical designer for upgrade options.

WATER SERVICE, PLUMBING, & SEWER UTILITIES

Description:

A standard 40-gallon gas-fired water heater sits on the concrete slab floor in the basement. The water heater is atmospherically vented into the chimney and through the roof. The water heater is dated as installed in 2006. Water enters the house from the north side, and the meter is in the basement. The water delivery system is copper that runs throughout the basement to the main floor fixtures. The waste lines are abs plastic to a main line that is cast iron where it exits the house. The sewer line exits the house on the west side to the main line in the alley. Building records indicate that in 2019 sewer repair was done from the house to the alley. The records state: '75 foot pipe burst in 2-way cleanouts.' Records also state that the sewer depth is three feet at the house and 9'-5" at the city main. Additionally, there is no fire sprinkler system in the house.



Gas furnace that sits on the concrete basement floor.



Condition Evaluation:

The water heater, supply and waste lines, and sewer appear to be in good condition, but were not tested.

Recommendations:

Consider replacing the water heater with a high-efficiency unit with a sealed combustion intake/exhaust system.



Copper supply lines and abs plastic waste lines to the main cast iron waste line in the basement.



40-gallon gas-fired water heater in the basement.



The water heater vent enters the chimney in the attic.

3.8 ELECTRICAL SYSTEMS

ELECTRICAL SERVICE & PANELS

Description:

Electrical service to the house is brought in overhead from electrical lines running in the alley to the west. The electrical meter is located on the west exterior of the house. The electrical panel is located inside the mudroom on a wall that was an exterior wall prior to this area being enclosed. The electrical panel is a 100-amp panel that looks to be at least 50 years old. The 1948 Boulder County Assessor's card states that lighting is electric, indicating that power was brought to the house prior to this time.

Condition Evaluation:

The electrical service was not tested during the site visit but appears to be in working condition. The panel appears to be sized appropriately for the existing house requirements but will likely need to be upgraded for any future improvements. The electrical panel is also an older model that likely does not meet current code standards and is beyond the expected lifespan.

Recommendations:

1. The electrical service panel should be replaced by a licensed electrical engineer with a new 200-amp panel compliant with current codes.
2. Consider replacing the overhead electrical service with a new underground electrical line compliant with current codes and replaced by a licensed electrical engineer.

ELECTRICAL DISTRIBUTION SYSTEM

Description

The electrical distribution throughout the house is cloth-sheathed wiring that runs throughout the attic and basement. There is likely cloth sheathed wiring in the walls as well, but deconstructive investigation is required to determine the extent. The wiring is also visible at the electrical panel.

Condition Evaluation:

The electrical distribution was not fully tested during the site visit but appears to be in working condition. The presence of cloth-sheathed wiring could present a fire hazard and is therefore in poor condition. The full extent of wiring throughout the house could not be determined due to finish materials and therefore our analysis is limited.



Electrical meter on the west side of the house.



Electrical panel in the mudroom.



Recommendations:

Determine the extent of the cloth-sheathed wiring throughout the house and remove and replace with new wiring to current codes.

LIGHTING

Description

There is an exterior sconce light next to the front door that is on an interior switched circuit. The light fixture is not original but may be in an original location. There is also a flood light fixture at the northwest corner of the house, near the north side entrance. This light fixture also appears to be on an interior switched circuit but was not tested. This light fixture is not historic nor in a historic location.



Cloth-sheathed wiring in the attic.

Condition Evaluation:

The light fixtures were not tested but appear to be in working condition. Neither of the exterior light fixtures are historic but the light near the front door may be in a historic location.

Recommendations:

1. Consider installing new exterior lighting that complies with Dark Sky regulations.
2. Removal of siding may reveal original light fixture locations apparent in the original wood siding. If the siding is removed and historic light fixture locations are determined, replace the exterior light fixtures with full cutoff, high-efficiency units.



Sconce light at the front door.



Flood light in the northwest house corner.

4.0 ANALYSIS AND COMPLIANCE

4.1 HAZARDOUS MATERIALS

Due to the age of the building, the finish coatings may contain lead-based paint. Asbestos testing results show that asbestos is present in the bottom layer of sheet vinyl flooring in the kitchen and mudroom. A professional evaluation should be conducted to determine the presence of any hazardous materials.

4.2 MATERIALS ANALYSIS

Does not apply.

4.3 ZONING CODE COMPLIANCE

Notes:

- It is recommended that the owner have a survey of the property conducted to verify the *Lot Size*. All *Lot Coverage* and *Floor Area Ratio* percentages are based on the actual property size and are subject to change from what is specified in this report.
- Building area square footages are taken from:
 - Boulder County Property Records (R)
 - As-built measurements as measured from the interior face of wall, by DAJ Design (M)
- Some areas are taken from the Boulder County Property Records. These records are found to be inaccurate at times. All areas are subject to change based on actual measurements.
- Only the main floor of the house was measured by DAJ Design as this is the main historic structure located on the specified property.

Legal Description:

Lot 5 & South 8 feet of Lot 6 Block 4, Barclay Place
City of Louisville, County of Boulder, State of Colorado

Year Built (Main House):

ca. 1906

Lot Dimensions:

Approx. 33' x 125'

Lot Size:

4,135 sf (Boulder County Records)

Zoning:

[RM](#) (one residential unit per 3,500 sf)

Property is subject to the [Old Town Overlay Zoning District Regs](#)

Areas of levels in square feet (sf):

First (above ground) finished area:	828 sf (M)
Front Porch (covered):	60 sf (M)
Shed	96 sf (R)

Allowable Building Height (from existing grade):

Primary Structure:	27'
Accessory Structure:	20'



Lot Coverage:

Existing:	1,026 sf	24%	House, Porch and Shed
Allowable:	1,600 sf	N/A	574 sf remain
Preservation:	1,757 sf	42.5%	731 sf remain
Landmark:	1,964 sf	47.5%	938 sf remain

Floor Area Ratio:

Existing:	911 sf	22%	First Floor and Shed
Allowable:	1,999 sf	N/A	1,088 sf remain
Preservation:	2,067 sf	50%	1,156 sf remain
Landmark:	2,274 sf	55%	1,363 sf remain

Setbacks:

Front:	20'	(could be different depending on the front of neighboring house locations)
Front Porch:	14'	(6' encroachment into front yard & street side yard setback)
Rear:	25'	
Side (interior lot line):	5'	
Accessory Rear:	3'	
Accessory Side:	3'	



5.0 PRESERVATION PLAN

5.1 PRIORITIZED WORK

CRITICAL DEFICIENCY

One or more of the following indicate a critical deficiency:

1. *Advanced deterioration has resulted in failure of the building element, feature, or space, or will result in its failure if not corrected within two years.*
2. *Accelerated deterioration of adjacent or related building materials has occurred as a result of the feature or element's deficiency.*
3. *The feature or element poses a threat to the health and/or safety of the user.*
4. *The feature or element fails to meet a code/compliance requirement.*



- The top of the foundation relative to the top of grade should be determined around the entire perimeter of the house. If the top of the foundation is determined to be at or below the existing grade, new grading should occur to bring the grade down below the top of the foundation, as prescribed by a licensed structural engineer.
- Finished grade around the house perimeter should be re-graded to create positive drainage away from the house. The top of finished grade should be a minimum of six inches below the top of the foundation and slope away from the foundation for at least the first five feet. Coordinate slope with a licensed geotechnical engineer.
- The house foundation should be replaced to bring the top of foundation at least six inches above finished grade. Coordinate with a licensed structural engineer and a licensed geotechnical engineer.
- The wood floor framing members including the sill plate, rim board, floor joists, and floor sheathing should be inspected for rot caused by poor drainage. If rot is found in any of these members, the affected flooring should be replaced as prescribed by a licensed structural engineer.
- The basement and crawlspace foundation walls showed various signs of damage that require further evaluation. No additional load should be added to the existing foundation system without a full analysis of the current foundation walls/footings.
- A licensed structural engineer and contractor should be contracted to evaluate and repair the existing stone foundation walls. This work could include tuck-pointing of the existing stone and/or the systematic removal and replacement with a modern concrete wall.
- Retaining walls and foundation repair is necessary to address the areas where the foundation has been undermined by sheer cut soil to create the basement area. Work with a licensed structural engineer for further evaluation and a design strategy that will likely include the construction of new retaining walls. The soil cut portion should be temporarily braced until a retaining wall can be designed and built.
- Alternatively, the foundation walls (including the perimeter and interior walls) should be replaced with a new concrete foundation at either a basement or crawlspace depth below frost, or a combination of basement and crawlspace depths. New foundation walls should be designed by a licensed structural engineer and supported with proper footings.
- A new foundation should be set high enough to allow for proper drainage away from the foundation as prescribed by a geotechnical engineer. To pour a new concrete foundation, the house will need to be temporarily lifted or moved to a temporary location by a licensed house mover. Once returned, the location of the house on the site should not vary from the current, historic location.
- New footings are likely needed to support the point and distributed loads from the roof and floor framing as specified in the recommendations below. New foundation support below any new beam and posts supporting the floor and roof framing should be coordinated with a licensed structural engineer.



- The beams and beam supports should be replaced or reinforced as prescribed by a licensed structural engineer. The best method is to construct new beams and beam supports that support the existing floor joists and remove the existing beams and beam supports as prescribed by a licensed structural engineer. These new supports should bear on footings, or any other type of foundation as prescribed by a licensed structural engineer and located at a depth and soil bearing capacity as specified by a licensed geotechnical engineer.
- The brick planter box should be removed. The house siding, structural wood elements, and foundation at this location should be assessed by a licensed structural engineer after removal. It is possible that wood rot or foundation damage is present due to poor drainage.
- The electrical service panel should be replaced by a licensed electrical engineer with a new 200-amp panel compliant with current codes.
- Determine the extent of the cloth-sheathed wiring throughout the house and remove and replace with new wiring to current codes.

SERIOUS DEFICIENCY

One or more of the following indicate a serious deficiency:

1. *Deterioration, if not corrected within two to five years, will result in failure of the feature or element.*
 2. *Deterioration of a feature or element, if not corrected within two to five years, may pose a threat to the health and/or safety of the user.*
 3. *Deterioration of adjacent or related building materials and/or systems will occur as a result of the deficiency of the feature or element.*
- Continue to monitor the drainage around the perimeter of the house. The perimeter should be observed after snow and significant rain events to assess all areas of pooling water.
 - Continually monitor the main floor walls for signs of foundation distress such as cracking or improper door operation. If signs of cracking are detected, these areas should be evaluated by a licensed engineer and repaired as needed.
 - Foundation wall and crawlspace insulation should be added to achieve an R-value as close as possible to current code standards.
 - The floor framing should be observed by a licensed engineer and repaired as needed. The existing floor joists are over spanned per current IRC code. New floor joists could be sistered to the existing floor joist or new beam lines should be added to the main floor system to support the existing floor joists as mentioned above. Special attention should be given to the connections between the foundation walls, floor joists, beams, and beam supports. The floors are not suitable for additional load resulting from a remodel or addition.
 - It is likely that the non-visible portions of the floor structure are constructed in a similar manner to those areas that are exposed. However, the entire floor structure should be verified and evaluated by a licensed structural engineer prior to any remodel or addition.
 - New beams may need to be added to support the point and distributed loads from the roof framing as specified in the recommendations of the 'Roof Framing Systems' section of this report.
 - Rim joist insulation should be added to achieve an R-value as close as possible to current code standards. Verify that the crawlspace is a conditioned area otherwise insulation should be added to achieve an R-value as close as possible to current code standards.
 - Hurricane clips (or toe-nails) may need to be added where roof framing members bear on exterior walls to meet the minimum IRC code requirements of today.
 - Collar ties are needed to be in compliance with current IRC code for prescriptive roof framing.
 - Diagonal braces and purlins are needed to strengthen the existing rafters to be in compliance with the current IRC code for prescriptive roof framing.
 - Additional beams are needed in the attic area to support the above-mentioned diagonal braces and purlins. This is mainly needed approximately at the mid-span of the roofs. These beams will require support in the wall system and likely would require new foundation support in the crawlspace and basement. This must be coordinated with a licensed structural engineer.



- Attic insulation should be added to achieve an R-value as close as possible to current code standards. The maximum insulation possible should be added at the perimeter of the roof as the roof depth in this location does not allow for the minimum required by code. Any energy upgrades, such as increased insulation in the attic, could result in prolonged snow retention on the roof and could ultimately affect roof performance without first completing structural reinforcement.
- The above-mentioned recommendations are for the visible portions of the roof. However, we assume that the roof framing in the non-visible areas may be built in a similar way and would need the repairs as mentioned above.
- Without the opportunity to observe the exterior wall structure, we do not have any recommendations currently. If the opportunity presents itself, the exterior walls should be assessed by a licensed structural engineer. The owner is to note that the walls will need to be evaluated if any remodels or additional load is to be added, including the interior walls as several of these walls appear to be load bearing. Also, if any remodel or addition plan is in place, new braced wall lines may be added by adding OSB or gypsum board on the interior side of exterior walls to resist wind loading.
- Wall cavity insulation should be added to achieve an R-value as close as possible to current code standards. Any energy upgrades, such as increased insulation in the attic, could result in prolonged snow retention on the roof and could ultimately affect roof performance without first completing structural reinforcement.
- Further investigation is required to determine all siding types beneath the steel siding. Investigative deconstruction is recommended in an inconspicuous area to determine if wood siding exists beneath the steel siding. If so, it is recommended that the current siding be removed from the entire house. There may also be additional layers of siding on top of the original wood siding that should be removed. If layers of stucco or composite siding exist, they should be tested for asbestos prior to removal. With the removal of siding layers, it is likely that original wood siding will be exposed throughout the entire house and various types of original wood siding may exist depending on the date of construction. Repair, refinish, or replace the original wood siding.
- Remove the carpet floor from the deck and remove the layer of plywood sheathing. The layer of wood deck boards is likely in poor condition and should also be removed. Once all of the floor layers have been removed, the deck structure should be observed by a licensed structural engineer with further recommendations given for proper support of the deck and front deck roof. Repairs to the deck framing and foundation are likely.
- The deck floor should be replaced with wood or composite wood-look boards after all other structural items have been addressed.
- The concrete stairs on the east side of the deck should be replaced with wood or composite wood-look stairs in the same location.
- The painted wood privacy screen on the north side of the deck should be removed.
- The painted wood columns should be further analyzed by a licensed structural engineer once finish materials of the deck floor and roof have been removed. The columns should be inspected for rot at their base and special attention should be given to the support of the columns and how they are attached at the base and capitol. If it is determined that the columns need to be replaced, identical painted, turned wood columns should be used.
- Ensure that all gutters, downspouts, and downspout extensions are maintained to discharge water away from the building foundation and are kept clear of debris.
- The buried round downspout should be replaced as it is rusting and drains water near the front deck foundation.
- The gutters and downspouts are not historic. Consider replacing the gutters with half-round gutters and the downspouts with round downspouts. Though not historic, these styles will more appropriately match the historic nature of the house.
- Both doors should be replaced with painted or stained wood doors. The door style from 1948 cannot be determined. However, there are numerous examples of historic wood doors from the same timeframe throughout the Louisville area including the front door on the house located at 1021 LaFarge. The interior door between the kitchen and mudroom is also an example of a door that was previously an exterior door on this house. Work with a licensed architect and the historic preservation committee to select an



appropriate front door style that matches the period of significance. The north door should also be replaced with an appropriate style for the period of significance but does not need to match the style chosen for the front door.

- Remove the aluminum and wood storm and screen windows from all windows. Consider replacing these with new wood storm windows with minimal visual impact. These windows should be removable, with an option for bug screens installed in their place during the warmer months.
- The large windows on the north and east sides should be removed and replaced. Replacement windows should match the original window size and style as found elsewhere in the original house. Original window locations can be determined when the original wood siding is exposed as well as from the interior ghosting and using 1021 LaFarge as a reference. This recommendation is for a total of four replacement windows.
- The original wood windows should be fully restored. New components will likely need to be used, and current energy code should be followed. Ensure that all restored windows are fully operable and match the original window style and operation. Alternatively, the original windows could be replaced with new aluminum clad wood or fiberglass windows. New windows should match the existing size, operation, and locations of all original windows. This recommendation is for a total of eleven windows.
- The window in the bathroom should be replaced with a new unit that matches the size and style of the existing unit, unless further evidence is revealed indicating a different size or style original unit at this location. For durability in a wet area, this window should be constructed of fiberglass, with an exterior appearance that matches the historic windows.
- The vinyl soffit and metal fascia should be removed throughout. Any original wood soffit and fascia beneath should be analyzed and the original sizes and locations should be determined. Scrape, repair, refinish, or replace all original wood roof elements.
- The painted metal trim should be removed along with the steel siding. The original wood trim likely remains beneath the siding though some pieces may be missing. Determine the extent and condition of any remaining original wood trim. Missing pieces of original trim should also be determined, and the sizes and locations should be apparent in 'ghosting' on the original wood siding. Repair, replace, or restore all original painted wood trim elements.
- The decorative brackets should be replaced with new brackets that match the current profile.
- Further investigation into other decorative elements such as shingle siding should be done after the removal of the steel siding. Such decorative elements may still be present and will require further analysis, or there may be 'ghosting' of elements that were removed and further research into these items will be required.

MINOR DEFICIENCY

One or more of the following indicate a minor deficiency:

1. *Standard preventive maintenance practices and building conservation methods have not been followed.*
 2. *A reduced life expectancy of affected or related building materials and/or systems will result.*
 3. *A condition exists with long-term impact beyond five years.*
- Work with a licensed arborist to maintain the mature trees and shrubs. Ensure that growth does not interfere with the house roof, siding, or foundation.
 - Keep overgrowth trimmed away from the house and overhead electrical lines and remove any overhead branches to eliminate the risk of damage to the structure.
 - If the main floor deflection is inadequate, consult a licensed structural engineer for additional support design options.
 - It is not recommended to add additional roofing materials such as an additional layer of shingles, or solar panels without the additional structural support mentioned above.
 - Consider adding a faux brick chimney above the roofline that matches the chimney seen in the 1948 Boulder County Assessor's card image. The chimney location can be determined from the historic image as well as evidence of the original chimney in the attic and main floor walls. Additionally, there are several examples of similar chimneys found throughout Louisville.



- The vinyl soffit of the front porch roof should be removed. The original soffit may exist beneath the vinyl and should be repaired or replaced. If the original soffit does not exist, painted beadboard should be used and several examples throughout Louisville can be found. The roof structure should also be observed by a licensed structural engineer at this time. It is likely that repairs similar to those recommended for the main house roof will be required.
- Roof venting should be increased with the addition of low and high venting as required by code.
- Metal flashing should be assessed after the metal siding, and any subsequent siding has been removed and the original wood siding is exposed. Metal flashing may need to be added or replaced upon further inspection.
- A perimeter foundation drain should be installed with the installation of a new foundation (see above foundation recommendations). A new perimeter foundation drain shall adhere to all current City of Louisville building codes.
- Continue to perform routine maintenance on the furnace to prolong the lifespan.
- If heating or cooling does not perform to the homeowner's satisfaction, consult with a licensed mechanical designer for upgrade options.
- Consider replacing the water heater with a high-efficiency unit with a sealed combustion intake/exhaust system.
- Consider replacing the overhead electrical service with a new underground electrical line compliant with current codes and replaced by a licensed electrical engineer.
- Consider installing new exterior lighting that complies with Dark Sky regulations.
- Removal of siding may reveal original light fixture locations apparent in the original wood siding. If the siding is removed and historic light fixture locations are determined, replace the exterior light fixtures with full cutoff, high-efficiency units.

5.2 PHASING PLAN

A phasing plan is not available at this time.

5.3 ESTIMATE OF PROBABLE COST OF CONSTRUCTION

Since the author of this report has no control over the cost of labor, materials, equipment, the contractor's method of determining prices, or market conditions, opinions of probable costs, as provided herein, are made on the basis of our experience with similar project types and represent our best judgement as design professionals familiar with the rehabilitation and construction industry. The author of this report cannot and does not guarantee that proposals, bids, or the construction costs will not vary from our opinions of probable costs.

The allowance for general conditions provides for the General Contractor's mobilization, temporary facilities, builders risk insurance, and contingencies. General Contractor overhead includes indirect costs such as permits, Worker's Compensation, insurances, and supervision. Contingency (for construction) provides for uncovered existing conditions, weather delays, and other unforeseen conditions.



• Site	
○ Associated Landscape Features	N/A
○ Grading	\$5,000
○ Parking	N/A
• Structural System	
○ Foundation Systems	\$60,000
▪ Temporarily lift house	\$30,000
○ Floor & Ceiling Systems	\$20,000
○ Roof Framing Systems	\$10,000
• Envelope – Exterior Walls	
○ Exterior Wall Construction	\$10,000
○ Exterior Finishes	\$35,000
○ Exterior Masonry	\$3,500
○ Exterior Appendages	\$1,500
• Envelope – Roofing & Waterproofing	
○ Roofing Systems	\$3,000
○ Sheet Metal Flashing	N/A
○ Perimeter Foundation Drainage	\$3,500
○ Drainage System, Gutters & Downspouts	\$12,500
○ Skylights / Cupolas	N/A
• Windows & Doors	
○ Doors	\$3,000
○ Windows	\$25,000
• Exterior Details	
○ Soffit & Fascia	\$7,500
○ Trim	\$8,500
○ Ornamentation	\$2,500
• Mechanical Systems	
○ Heating & Air-Conditioning	\$40,000
○ Water Service, Plumbing, & Sewer Utilities	\$10,000
• Electrical Systems	
○ Electrical Service & Panels	\$5,000
○ Electrical Distribution System	\$20,000
○ Lighting	\$500
• Hazardous Materials	
○ Asbestos Removal	\$20,000

6.0 PHOTOGRAPHS AND ILLUSTRATIONS



West Façade, 2025



1948 Boulder County Assessor's Card Image



Southwest Corner, 2025



Northwest Corner, 2025



Durable.
Sustainable.
Reliable.

Structural Engineering Consultants
P.O. Box 20708
Boulder, Colorado 80308
303.554.9591

September 18, 2025

Attn: Josh Johnston
DAJ Design
Louisville, CO

Dear Josh,

We visited the residence at 1013 LaFarge Avenue, Louisville, CO on August 28, 2025 to review the existing building for the purpose of documenting and evaluating the existing structure. It was at this time that we reviewed the building with DAJ Design and coordinated our findings with the report created by DAJ Design.

On September 18, 2025 we reviewed the final report and made any necessary modifications to the structural sections. All findings, evaluations and recommendations are in the report. Below, in this letter, are our structural conclusions and a summary of our scope of work. Please feel free to contact us for any further information.

Structural Conclusions:

A. In our professional opinion, the building's structure is adequate for its continued safe use if unsupported foundation excavations can be stabilized until proper repair or replacement can be completed. Please note that in general much of the construction does not meet all modern code standards; however, it has performed adequately up to this point. We recommend that a licensed Structural Engineer be retained to further evaluate the structure, provide the repairs recommended in each of the sections of this report and assist in any modifications to the structure proposed by the owner and an architect.

Please see the recommendations sections of the report for any required or recommended structural recommendations, to be completed by a licensed structural engineer and contractor.

It is also important to note that a significant portion of the building's structure was not exposed for our review. There may be damaged structure that we were not able to observe due to finish materials. Also, additional cosmetic imperfections could arise, which is normal for an old structure.

B. An extreme event occurring at the site, such as a tornado, a serious (rare) earthquake or other unforeseen event could significantly damage the structure. But this is also true for most old structures in Louisville and is only mentioned for completeness of this report.

C. The drainage around the home should be addressed to allow for water to flow away from the building. Poor drainage could result in water infiltration or excessive movement and damage to the foundation and wood framing.



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Summary and Limitations:

A. Summary:

1. The goal of our site observation and the structural portion of the report is to provide an overview of the building's structure and foundation and identify areas where remedial work in the near future is prudent.
2. The recommended remedial measures are intended to promote the building's continued safe use and are not intended to eliminate all existing and potential future cosmetic defects.

B. Limitations:

1. The information contained in the report is the author's professional opinion based on visual evidence readily available at the site, without the removal of existing finish materials. Of course, this means there could be hidden defects which are not discoverable at this time, without demolition of finish materials. That is true for most buildings, and an inherent limitation for this kind of report. Should additional information become available or additional movement is perceived, we recommend that our firm be contacted for further review.
2. The issuance of the report does not provide the building's current or future owners with a guarantee, certification, or warranty of future performance. Acceptance and use of this report do not transfer financial liability for the building or the property to the author or this engineering firm.
3. The report is also only preliminary to make note of areas that need to be addressed. A licensed Structural Engineer should be retained to provide a more thorough investigation and provide appropriate repair details for all necessary repairs.

Sincerely,

Jesse Sholinsky, P.E.

