

Ozark Native Stone Structures: Jasper and Newton County, Missouri

Introduction

The Joplin Industrial Development Authority (JIDA), Joplin, MO is currently in the process of developing the Crossroads Industrial Park, an undertaking that consists of expanding the existing Crossroads Industrial Park to the east, resulting in the demolition existing buildings at 18901 Argon Lane. JIDA has determined that the undertaking may have an adverse effect on these Ozark Native Stone structures, which have been determined to be eligible for listing in the National Register of Historic Places. As a result of this undertaking, JIDA and the Missouri State Historic Preservation Office, Jefferson City, MO, agree that the undertaking shall be implemented in accordance with stipulations outlined in a Memorandum of Agreement (MOA) in order to take into account the effect of the undertaking on historic properties.

As stipulated in the MOA, JIDA agreed to prepare an architectural survey of Ozark Native Stone structures located in a 49-mile (32,000-acre) area of Jasper and Newton counties, as illustrated on the attached map. The MOA was developed pursuant to Section 106 of the National Historic Preservation Act (P.L. 89-665, as amended).

Architectural & Historical Research, LLC, Kansas City, MO, a certified 36CFR61, was hired by Palmerton & Parish, Inc., Springfield, MO, to prepare an architectural survey of Ozark Native Stone structures within the survey area, the second measure as outlined in the MOA. The survey includes survey forms for each of the structures, photographs, maps, and historic context. Survey findings are also included in this study.

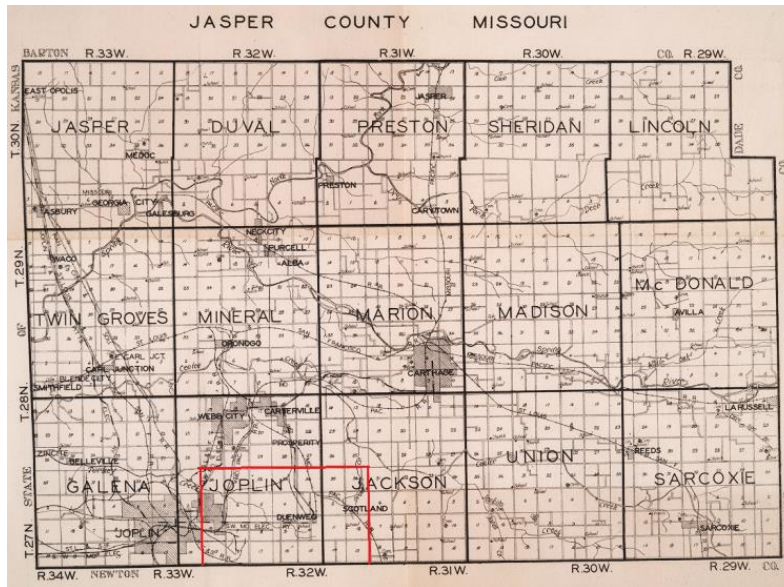
Cydney Millstein, AHR, LLC, in association with cultural historian Maryann Warfield and research assistant Kelsey Lutz carried out fieldwork, photography, research, and narratives for the mitigation documentation of Ozark Native Stone structures for the purpose of this report.

Survey Area

The survey area covers roughly 32,000 acres in a forty-nine square mile area in Jasper and Newton Counties, Missouri. The following map illustrates the boundary surrounding the survey area.

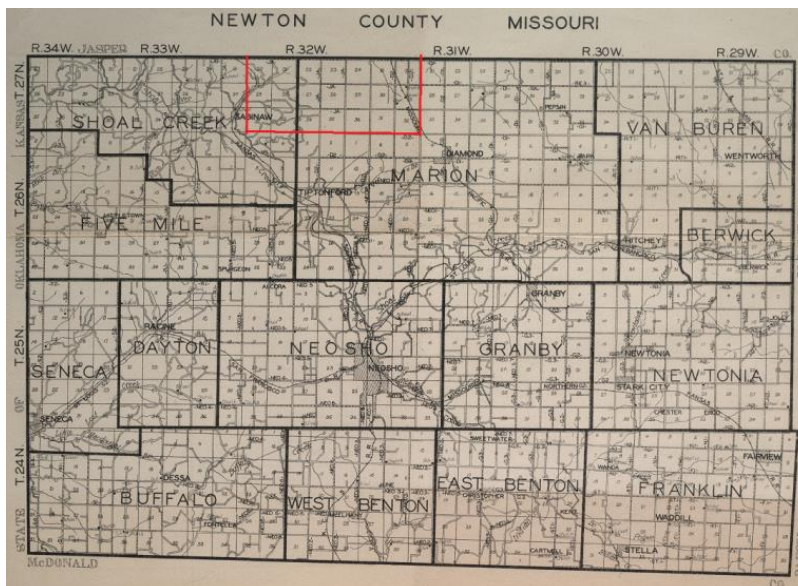


Approximately four-sevenths of the survey area is located in the southern portion of Jasper County, Missouri, ranging across areas of Joplin and Jackson Townships.¹



Jasper County Plat Maps. W. W. Hixson and Co. 1931. Online Accessed May 31, 2016.

The remaining three-sevenths is located in northern Newton County, Missouri, ranging across Shoal Creek and Marion townships, as illustrated within the red boundary lines on the following plat maps.²



¹ W. W. Hixson and Company, *Plats Maps of Missouri Counties.* (Digital Library: University of Missouri), online. Accessed, May 31, 2016: <http://dl.mospace.umsystem.edu/mu/islandora/object/mu%3A5220>

² *Ibid.*

Brief History of the Survey Area: Jasper and Newton Counties, Missouri

Jasper County, Missouri

Prior to 1838, Jasper County had been part of Newton County, Missouri. That same year, a bill was presented before the State of Missouri General Assembly that divided Newton County into four divisions to form the counties of Newton, Barry, Dade and Jasper County. However, the completion of the formation of the new county boundaries was not completed until January 29, 1841. It was then that Jasper County became official and fully organized with the designation of courts and county officials.³

Early immigrants to southwestern Missouri, specifically the Ozark region of both Missouri and Arkansas, were of hardy lineage flowing from Irish and Scottish descent. The geographical area of the Ozark region provided them with the similarities of their native countries, as well as the first wave of immigration to the rocky hills of Tennessee and Kentucky.⁴

The first settlement of Jasper County occurred around 1831 when settlers from Kentucky and Tennessee began spreading throughout the Ozark region of southern Missouri and northern Arkansas. There was no formal city or county government for the small villages of the region and therefore did not appear in the United States Census Records until after 1850, at which time, the population was recorded at 4,223 county wide.⁵ The census records of 1910 show Jasper County peaked at a population of 89,673 but would begin decreasing in 1920 and remained below 89,000 until 1990 when the population surpassed the 1910 figure with over 90,000. Jasper County population has continued to grow and by 2015, its population was estimated to be 118,596.⁶

The survey area in Jasper County is roughly bounded by East Zora/Dogwood Road on the north, South Baker Boulevard/County Road 150 on the east, East 32nd Street/Highway FF on the south, and North Duquesne Road on the west. Additionally, the survey area is intersected east-west by Interstate Highway 44, and north-south by Interstate 49. Some portions of the area were difficult to survey due to inaccessible areas of private property or roads in extremely poor condition.⁷ Twenty square miles are located in Joplin Township (established in 1873) with another eight square miles located in Jackson Township (established in 1847).⁸

³ Joel Thomas Livingston, *A History of Jasper County, Missouri, and Its People: Volume 1* (Chicago: Lewis Publishing Company, 1912), 6. (See also: F. A. North, ed. *The History of Jasper County, Missouri*, (Des Moines: Mills & Co., 1883). Online, accessed 6 June 2016.

<http://cdm16795.contentdm.oclc.org/cdm/compoundobject/collection/mocohist/id/47058/rec/3>

⁴ *Ibid.* 6-10

⁵ *Ibid.*, 42.

⁶ Jasper County, Missouri 1910, U.S. Decennial Census Online Accessed May 31, 2016 at Wikipedia. https://en.wikipedia.org/wiki/Jasper_County,_Missouri#Townships

⁷ There are approximately 30 acres of land in Marion Township adjacent to Lark Road that were set aside for prairie land preservation. This area, called Carver Prairie was not accessible for survey. The George Washington Carver National Monument, located at 5645 Carver Road, Diamond, MO and the Diamond Grove Prairie are outside of the survey area. It is assumed that these lands do not feature Ozark Native Stone Structures.

⁸ F. A. North, ed. *The History of Jasper County, Missouri*, (Des Moines: Mills & Co., 1883). Online, accessed 6 June 2016, Joplin Township, p.605-57; Jackson Township, p. 756-77.

<http://cdm16795.contentdm.oclc.org/cdm/compoundobject/collection/mocohist/id/47058/rec/3>

Metropolitan Statistical Area of Joplin, Missouri: including Duenweg and Duquesne

The City of Joplin and adjacent urban towns of Duenweg and Duquesne make up roughly one-third of the survey area and is the most densely populated region within the entire survey boundary. The first U. S. Census for Joplin was recorded in 1880 with a population of 7,038. The city steadily grew over the next six decades increasing by nearly 190% by 1940 with a population of 37,144.⁹ Following World War II, population growth slowed considerably. In 2015 the estimated population was 51,818 or 43% of the entire population of Jasper County.¹⁰

Two small communities are included in the metropolitan statistical area of the City of Joplin; Duenweg, incorporated in 1954 (population of 1,121 as of 2010);¹¹ and Duquesne, a fourth class city as of 2006 (population of 1,763 as of 2010). During the devastating tornado of May 22, 2011, Duquesne lost 30% of its structures yet contains two excellent examples of structures built using Native Ozark Stone.¹²

The historic data located for the area of Duenweg is related to the lead and zinc mining communities of southwestern Missouri. Much of the land in the survey area is in the process of land reclamation.¹³ The sections of Joplin Township affected in this survey are found in Township 27N; Range 32W; Sections 2-5 and 8-11, which covers a large area surrounding Duenweg. An area north of Duenweg that is part of the City of Joplin is found in Township 28N; Range 32W Sections 32-35.¹⁴

Newton County, Missouri

Prior to 1830, the Newton County did not exist being encompassed by Wayne County, which formed the entire southern area of Missouri from the Illinois state line in the east, to Kansas on the west, with the state of Arkansas forming the southern boundary. Wayne County was later sub-divided, forming Barry County, which included the section of Missouri that became Newton County on December 13, 1838. By 1850, the area of Newton County was again divided and split into four distinct counties to include what is now Newton, Jasper, McDonald, and Barton counties.¹⁵

This survey includes roughly 21 square miles covering portions of two Newton County townships; Shoal Creek and Marion. A section of the southeastern boundary of Joplin is located in the township of Shoal Creek. The survey area is roughly bound on the north along 32nd Street (Hwy. FF) between County Road 150 on the east and S. Duquesne on the west. The southern boundary is formed along a line with Cherry Road on the south, again between County Road 150 to a line extending west to S. Duquesne, to form the southern boundary. While a small

⁹ Joplin, Missouri, "U. S. Census Records," Wikipedia, Online Encyclopedia accessed June 5, 2016. https://en.wikipedia.org/wiki/Joplin,_Missouri

¹⁰ Ibid.

¹¹ Duenweg, Missouri, Wikipedia Online Encyclopedia, accessed, June 5, 2016. https://en.wikipedia.org/wiki/Duenweg,_Missouri

¹² Duquesne, Missouri, Wikipedia Online Encyclopedia, accessed, June 5, 2016. https://en.wikipedia.org/wiki/Duquesne,_Missouri

¹³ Jasper County, Missouri, Environmental Maps, http://www.jaspercounty.org/pdf/health_department/maps/mines.pdf

¹⁴ Jasper County Health Department, "Mine Areas and Smelter Map." Online, accessed 9 June 2016. http://www.jaspercounty.org/pdf/health_department/maps/mines.pdf

¹⁵ Malcolm G. MacGregor, *The Biographical Record Of Jasper County, Missouri*, (Chicago: Lewis Publishing Co., 1901), 12. Accessed on-line June 14, 2016.

portion of Shoal Creek and Marion Township are included within the limits of the City of Joplin Missouri, the majority of the survey area is rural.

Construction of Ozark Native Stone Structures Stone Types

There are several categories used to describe the type of stonework used in building with Ozark Native Stone. While fieldstone is often used synonymously with rubble-stone, the difference is seen in the type, color, and size of the stonework as well in the method of construction.

Rubble-stone (also called rough fieldstone):



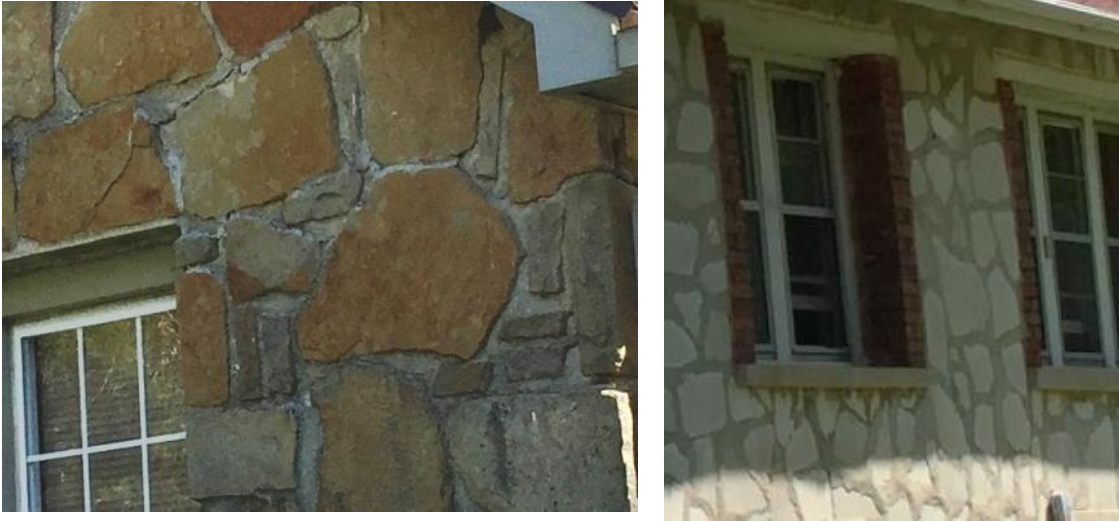
Rubble-stone is rough edged stone usually randomly gathered on site. It can range in size from golf ball to larger than melon-sized. It is typically multi-colored (can also be monochromatic) and made up of a variety of stones differing in geological age and composition. This is the most basic and least refined use of Ozark Native Stone.

Fieldstone:



While fieldstone is often synonymous with rubble-stone, it tends to be more refined in that the stone is more uniform size. As with rubble-stone, fieldstone is typically found and gathered on site. Fieldstone can be multi-colored and made up of a variety of stones differing in geological age and composition or it can be monochromatic and of one stone type as in the illustration.

Split Fieldstone:



Split fieldstone is usually large slabs of limestone or sandstone found on site, which have been chisel split to form large tablets of flat stone. The stone is laid vertically using slip forming as the most typical wall construction method. As previously mentioned, the stone can be multi-colored or monochromatic, as illustrated above.

A second use of fieldstone, unique to the Ozark region, is seen in what is called “Giraffe Stone”. The split fieldstone is placed in a polychromatic pattern, often with the addition of painted mortar joints. The overall effect gives the stone a more three-dimensional appearance.

Split Fieldstone in Decorative Patterning:



The most refined use of split fieldstone from Ozark Native Stone is seen in only three houses within the survey area and located in Marion Township of Newton County. The slip-form wall

construction method featuring distinct patterns in the placement of split fieldstone was used in each case. Multi-colored limestone and sandstone give this stonework a distinct refinement of high style and design with a complexity that only an artistic stonemason could attain.

Stone Construction Methods

Three primary masonry methods were used in the construction of the surveyed structures: Rubble-masonry; slip form masonry and stone veneer:

Rubble Masonry: Roughly dressed stones set in mortar. This technique was utilized prior to the 20th century and before the advent of Portland cement, which became popular after 1872 in the United States.¹⁶

Slip Form Stonemasonry: A method of using formwork to hold Ozark Native Stone and mortar in order to keep the walls straight. Short forms made of wood are placed on both sides of the wall to serve as a guide for the stonework. Stones are placed inside the forms with the quality faces against the formwork. A mortar made using Portland cement is poured behind the rocks while rebar, placed strategically behind the Ozark Native Stone, is added for strength. The wall then becomes approximately half reinforced concrete and half stonework creating some walls as thick as thirteen-inches or more. In this method, the wall can be faced with stone on one side or both sides. This method allows for thick exterior walls with deeply recessed windows and doors. Mark Morgan, owner of 1630 Marten Road, Newton County, stated that the walls of his house were over thirteen-inches thick.¹⁷ Slip form stonemasonry appears to be the most common method of construction in both Jasper and Newton Counties.

Stone Veneer: Veneer serves as both a protective and decorative covering. It can be used on both exterior and interior walls and is typically one-inch thick and light in weight. There is no need for additional structural supports, as metal tabs are set into the structural wall instead. Mortar is applied last, much like in tile placement. There are several structures, post 1960, that use the veneer-faced method.

Survey Results

There are twenty-four properties in Jasper County included in this survey. These surveys include the main building (most often a residence) built of Ozark Native Stone an additional ten outbuildings, built of similar stone construction. Jasper County tax records for the surveyed properties list construction dates that range between 1890 and 1980.¹⁸ The oldest home, one and one-half stories and built of rubble stone, is located in Duenweg, a small community within the Greater Joplin Metropolitan area. Eighteen structures were built between 1920 and 1949, including an excellent example of the Craftsmen style; three structures were built between 1950 and 1969. A triple set of duplexes was constructed in 1980 and feature stone veneer using Ozark Native Stone. One property, containing two native stone structures was found abandoned and in deteriorated condition, is sited on acreage that belongs to a quarry business and located

¹⁶ Debbie Sheals, "Ozark Rock Masonry in Springfield, c. 1910-1955," *The Society of Architectural Historians: Missouri Valley Chapter*, Vol. XII No. 2A, Summer 2006, 2.

¹⁷ *Ibid*, 2-9.

¹⁸ Schneider Corporation, Beacon GIS Mapping Service, "Jasper County Assessors Real Property Portal," Beacon On-line GIS Property Search, accessed June 5, 2016.

<https://beaconbeta.schneidercorp.com/Application.aspx?AppID=151&LayerID=1976&PageTypeID=1&PageID=1007>

at 3701 County Road 190. The date of its construction is unknown but possibly built before 1920.

Twenty-six properties have been recorded within the survey boundary for Newton County. There are twenty-five main buildings (most often a residence) with approximately twenty-seven out buildings. The outbuildings, often but not always, match the stone construction method of the associated residence. The oldest Ozark Native Stone structures in the survey area are located within Marion and Shoal Creek Townships. The earliest structure built c. 1880 has since been modified. Seven structures were built between 1900 and 1919; five in the 1920s; seven in the 1930s; five between 1940 and 1969; and five after 1970.

Of the fifty (50) properties that were surveyed, nine (9) appear to be individually eligible. The properties and their related outbuildings that have retained integrity and are representative examples of Ozark Native Stone construction may be eligible as associated property types in a potential Ozark Native Stone Multiple Property Submission/Documentation Form (MPDF). https://www.nps.gov/nr/publications/bulletins/nrb16b/nrb16b_IIintroduction.htm

The following tables list all properties that were surveyed and their corresponding data including survey number, address and county, number of resources, date, function and use, construction method, district potential and eligibility.

Summary Chart for Ozark Native Stone Structures (Note that Newton County Properties are highlighted in tan)

Survey No.	Address and County	Number of Resources	Date	Function/Use	Construction Method	MPDF Potential	Eligibility
1	152 N Prigmor Rd (Jasper)	4	1930	Residential	Fieldstone (slip form)	Yes	Contributing
2	3701 County Road 190 (Jasper)	2	c.1920	Vacant/not in use	Rubble stone	No	Non-contributing/ Not eligible
3	740 N Travis Acres Rd (Jasper)	2	1950	Residential	Giraffe-stone	Yes	Contributing
4	N Travis Acres Rd (Jasper) (3 duplexes)	3	1980	Multi-family Residential	Stone / veneer	No	Non-contributing/ Not eligible
5	4590 E Cypress Rd (Jasper)	1	1940	Residential	Giraffe-stone	Yes	Contributing
6	4509 E Cypress Rd (Jasper)	1	1960	Residential / outbuilding only	Rubble-stone	Yes	Contributing
7	201 VanHoorebeke Rd (Jasper)	1	1946	Residential	Giraffe-stone	No	Non-contributing/ Not eligible
8	18784 Cedar Rd (Jasper)	2	1930	Residential	Giraffe-esque	No	Non-contributing / Not eligible
9	18105 Cedar Rd (Jasper)	1	1920	Vacant/not in use	Rubble-stone	Yes	Contributing
10	18447 Dogwood Rd (Jasper)	1	1932	Residential	Split-fieldstone	Yes	Contributing
11	4882 E 7th St (Jasper)	1	1940	Vacant/not in use	Split-fieldstone	No	Non-contributing/ Not eligible
12	930 S. Duquesne (Jasper)	1	1927	Residential	Split-fieldstone	Yes	Individually eligible/ Contributing
13	1016 Wood St (Jasper)	1	1940	Residential	Split-fieldstone	Yes	Contributing

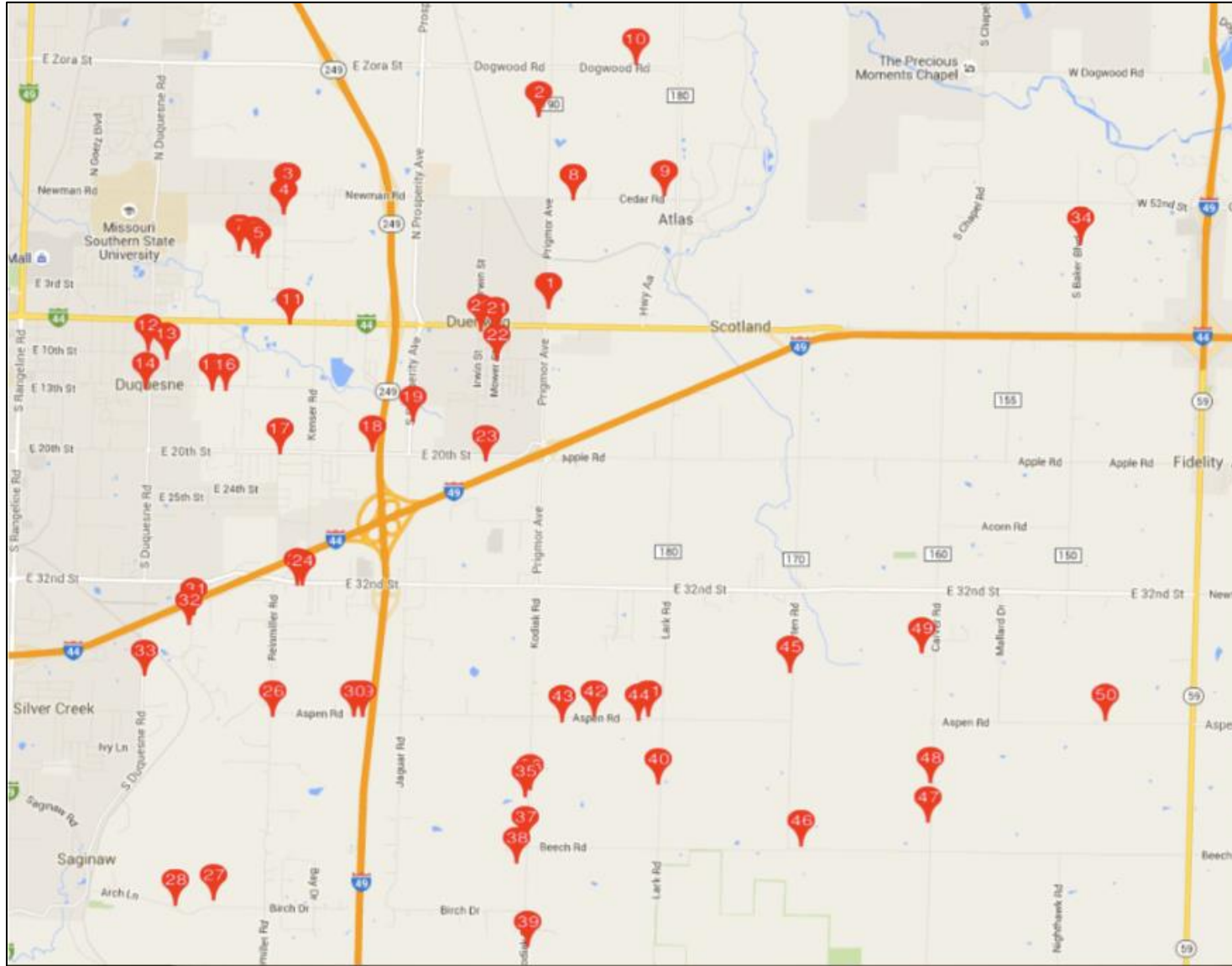
Survey No.	Address and County	Number of Resources	Date	Function/Use	Construction Method	MPDF Potential	Eligibility
14	1302 S. Duquesne (Jasper)	1	1934	Commercial	Rubble-stone	Yes	Contributing
15	1354 Tulip Ln (Jasper)	2	1935	Agriculture	Fieldstone	No	Non-contributing/ Not eligible
16	4646 E 13th St (Jasper)	1	1939	Agriculture	Split-fieldstone (slip form) (Dolomite?)	Yes	Contributing
17	4824 E 20th St (Jasper)	1	1930	Vacant/not in use	Giraffe-stone	No	Non-contributing/ Not eligible
18	5689 E 20th St (Jasper)	1	1960	Residential	Split-fieldstone	Yes	Contributing
19	1555 S Prosperity (Jasper)	2	1930	Outbuildings	Rubble-stone	Yes	Contributing
20	105 Voegel St (Jasper)	1	1890	Residential	Rubble-stone	Yes	Contributing
21	222 Voegel St (Jasper)	1	1920	Residential	Rubble-stone	Yes	Contributing
22	501 Mower (Jasper)	1	1930	Residential	Giraffe-stone (slip form)	Yes	Individually eligible/ Contributing
23	7548 E 20th St (Jasper)	2	1950	Domestic outbuildings	Rubble-stone (slip form)	Yes	Contributing
24	5400-02 E 32 nd St (Newton)	2	1913	Vacant/not in use	Rubble-stone	Yes	Eligible as District/ Contributing
25	5300-16 E 32 nd St (Newton)	1	1940	Vacant/not in use	Rubble-stone w/quoining	Yes	Contributing
26	2075 Reinmiller Rd (Newton)	3	1934	Residential	Rubble-stone	Yes	Non-contributing/ Not eligible
27	9184 Birch Dr (Newton)	4	1932	Agriculture	Storm shelter / Split-fieldstone (slip form) Outbldgs/Rubble-stone	Yes	Individually Eligible/ Contributing

Survey No.	Address and County	Number of Resources	Date	Function/Use	Construction Method	MPDF Potential	Eligibility
28	10246 Birch Dr (Newton)	4	1910	Agriculture	Rubble-stone	Yes	Individually Eligible/ Contributing
29	11641 Aspen Rd (Newton)	1	1986	Vacant	Rubble-stone Veneer Earth-contact	Yes	Non-contributing/ Not eligible
30	11553 Aspen Rd (Newton)	1	1986	Residential	Split-fieldstone used as a veneer	Yes	Non-contributing/ Not eligible
31	1347 Rainbow Dr (Newton)	2	1928	Residential	Split-fieldstone (slip form)	Yes	Contributing
32	1372 Rainbow Dr (Newton)	1	1918	Vacant/not in use	Rubble-stone	Yes	Contributing
33	4097 S Duquesne Rd (Newton)	1	1920	Residential	Rubble-stone (slip form)	Yes	Contributing
34	5416 S Baker Blvd (Jasper)	1	1920	Residential	Rubble-stone (slip form)	Yes	Individually Eligible/ Contributing
35	2670 Kodiak (Newton)	2	1950	Residential	Split-fieldstone	Yes	Contributing
36	2577 Kodiak (Newton)	5	1923	Agriculture	House / Split-fieldstone (slip form) Outbuildings / Rubble-stone	Yes	Contributing
37	2860 Kodiak (Newton)	3	1930	Agriculture	House and Garage / Split-fieldstone (slip form) Well / Cut-stone	Yes	Contributing
38	3114 Kodiak Rd (Newton)	2	1930	Agriculture	Rubble-stone (slip form)	Yes	Individually Eligible/ Contributing
39	3649-3795 S Kodiak Rd (Newton)	2	1900	Agriculture	Rubble-stone	Yes	Non-contributing/ Not eligible
40	2528 Lark (Newton)	1	1926	Residential	Rubble-stone (slip form)	Yes	Non-contributing/ Not eligible

Survey No.	Address and County	Number of Resources	Date	Function/Use	Construction Method	District Potential	Eligibility
41	13750 Aspen Rd (Newton)	1	1880	Agriculture	Rubble-stone (slip form)	Yes	Contributing
42	13502 Aspen Rd (Newton)	3	1939	Agriculture	House & well / Giraffe- stone (slip form) Barn / rubble-stone	Yes	Contributing
43	13187 Aspen Rd (Newton)	3	c.1930	Agriculture	Rubble-stone	Yes	Contributing
44	13750 Aspen Rd (Newton)	4	1908	Agriculture	Split-fieldstone (slip form)	Yes	Contributing
45	1630 Marten Rd (Newton)	1	c.1945	Residential	Split-fieldstone Decorative (slip form)	Yes	Individually Eligible/ Contributing
46	15083 Beech Rd (Newton)	2	1935	Residential	Split-fieldstone Decorative (slip form) Garage / Fieldstone	Yes	Individually Eligible/ Contributing
47	2800 Carver Rd (Newton)	1	1906	Residential	Split-fieldstone (slip form)	Yes	Contributing
48	2512 Carver Rd (Newton)	1	1910	Residential	Rubble-stone (slip form)	Yes	Contributing
49	1472 Carver Rd (Newton)	1	c. 1950	Residential	Split-fieldstone Decorative (slip form)	Yes	Contributing
50	17262 Aspen Rd (Newton)	2	1920	Residential	Rubble-stone (slip form)	Yes	Contributing

Location Map of Surveyed Properties

"HamsterMaps: Generate Custom Maps Using Your Coordinates in Excel!" Accessed June 15, 2016. <http://www.hamstermap.com/custommap.html>



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INTERVIEWS

Millstein, Cydney. Interview with Mark Morgan, 1603 Marten Road. Owner and great grandson of the original owner.

_____. Interview with Mrs. Katherine McMullen, 2075 Reinmiller Road. Current owner and descendant of original owner.

_____. Interview with Pat Jordan, (Larry Knowlton, owner), 9184 Birch Lane, Joplin, Mo.
Owner and descendant of Catherine Knowlton, original owner.

_____. Interview with Denis S. Hirshey, 1470 Carver Road. Owner and son of original owner.