Living Underground in Kansas
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Renyer Appointed to National Advisory Board

Todd Renyer, project manager and historic preservation architect at Treanor Architects, was appointed to the U.S. Senate Curatorial Advisory Board in February 2014. Renyer was nominated by Senator Pat Roberts of Kansas, one of five members on the U.S. Senate Commission on Art.

The curatorial advisory board is composed of historians, curators, architects, preservationists, and experts from institutions across the nation. The board is responsible for advising and assisting the Senate Commission on Art with acquiring, preserving, restoring, and replacing historical documents, artifacts, and works of art relating to the Senate wing of the Capitol and the Senate office buildings.

Renyer worked on the multi-year restoration of the Kansas State Capitol. He was responsible for the phased design and restoration of the Capitol’s north and south wings. “I am excited to work with some of the nation’s leading experts in curation, history, arts and architecture to assist the U.S. Senate Commission on Art,” Renyer said.

A registered architect in Kansas, Renyer currently serves as the president of the Kansas Preservation Alliance, the only state-wide non-profit historic preservation organization in the state of Kansas. He has served on the American Institute of Architects Kansas Chapter’s Historic Resource Committee, the Topeka Landmarks Commission, and has volunteered his expertise by presenting at Kansas Preservation Conferences in Kansas and has previously been published in Kansas Preservation.
The Dalton site was developed around the former residence of Eva (Dalton) Whipple, a sister of the famed outlaw Dalton brothers known for their robbery of trains and banks. Though stories of the Dalton Gang visiting Meade surfaced in the early 20th century, evidence to support these claims has remained elusive. The Meade Chamber of Commerce, which purchased the former Whipple property in 1940, led the effort to develop the site into a tourist attraction with the financial assistance of the New Deal-era Work Projects Administration (WPA). John Sullivan served as supervisor of the park project. WPA officials reportedly turned down the community’s first proposal, according to the March 5, 1942, edition of the Meade Globe-News, because it romanticized a gang of outlaws. The plans were resubmitted under the name Meade Historical Park and greater emphasis was given to developing a local history museum at the site.

The surviving blueprints include plans for a complete reconstruction of the Whipple barn, the construction of a rock-lined underground tunnel connecting the new barn and 1887 house, and landscape elements such as rock
walls, outdoor stoves, picnic tables, a wishing well, and plantings. WPA and National Youth Administration laborers completed the site work and construction. A museum operated by Ruth and Walter Dingess opened in the Whipple residence in May 1941 and later moved to the upper floor of the barn. The community officially opened the park in June 1941 during the local Cavalcade of the Plains festival, which was part of a statewide commemoration of Francisco Vásquez de Coronado's travels through the region some 400 years earlier. Today, the site is managed by the Meade County Historical Society, which has the original blueprints.

A nomination to the National Register is being prepared and will emphasize the site's significant association with New Deal-era work programs and its history as an auto-age tourist attraction.

The blueprints can be viewed online at kansasmemory.org/item/305702. Recent photographs of the site can be viewed in the Kansas Historic Resources Inventory (KHRI) online database at khri.kansasgis.org/index.cfm?in=119-41

Top, a rock-lined underground tunnel was added to connect the 1942 Whipple barn reconstruction with the 1887 house; above, note the cross section drawing for the secret tunnel in the lower left hand corner.
National and State Register Nominations

At its regular quarterly meeting held at the Kansas Historical Society in Topeka on Saturday, February 8, 2014, the Historic Sites Board of Review voted to forward nine nominations to the Office of the Keeper of the National Register of Historic Places in Washington, D.C., to be evaluated by its professional staff. If staff members concur with the board’s findings, the properties will be included in the National Register. In other action, the board voted to list two properties in the Register of Historic Kansas Places.

Norcatur City Hall – 107 N Decatur Avenue, Norcatur, Decatur County

In 1935 Norcatur residents voted 213 to three in favor of matching a federal grant of $26,000 to erect a new city hall. Despite construction delays and the frequent turnover of project managers, the Norcatur City Hall was completed in August 1937 under the auspices of the Works Progress Administration (WPA), a New Deal-era work relief program. Civic buildings erected as part of this program typically featured expressions of Classical or Moderne style architecture. The Norcatur City Hall reflects a vernacular interpretation of the Streamlined Moderne style with its stucco and concrete exterior, multi-light steel casement windows, pipe railings, flat roof, and modest horizontal tile accents. This style gained favor in the 1930s in part because of its de-emphasis of extravagant architectural ornamentation in favor of clean lines and modern materials. The small-town city hall housed the local government office, jail, fire department, and a basement assembly hall where civic groups and others could gather. It closed in 1985. The building is nominated as part of the New Deal-Era Resources of Kansas multiple property nomination for its local significance in the areas of government, entertainment, recreation, social history, and architecture.

Abram M. Minier House – 307 South Avenue, Highland, Doniphan County

Abram M. Minier, a grandson of Highland founder John Bayless, commissioned the construction of this Craftsman

by Sarah Martin
National Register Coordinator, Kansas Historical Society

Top, Norcatur City Hall, Decatur County; left, Abram M. Minier House, Doniphan County.
Left to right, John W. Birchmore House, Dickinson County; James Truitt House, Neosho County; Sylvan Grove Union Pacific Depot, Lincoln County.

style bungalow in 1916. Though the builder of the house is not known, it was built from a house plan by Gustav Stickley first published in the November 1909 issue of The Craftsman and later published as Cottage No. 78 in Stickley’s 1912 catalogue More Craftsman Homes. The catalogue estimated the construction of the house to be $5,000. There were some minor modifications between the published plans and the blueprints for this house. For example, the fireplace was constructed as brick rather than stone, and the interior plan was modified slightly to incorporate a small, screened porch on the rear elevation. The home otherwise contains all the signature Stickley designs including wood shingle siding, exposed rafter tails, a full-width front porch, heavy structural beams, built-in bookcases and seating, and Mission-style hardware. The Minier House is nominated as part of the Historic Resources of Highland multiple property nomination for its local significance in the area of architecture.

John W. Birchmore House – 1204 N Buckeye Avenue, Abilene, Dickinson County

Episcopal priest John W. Birchmore purchased a four-acre tract in 1878 and contracted to build this Second Empire-style residence. Examples of the Second Empire style can be found in many Kansas communities, often on residences built in the 1870s and early 1880s. A hallmark of the style is the mansard roof, a double-pitched roof with a steep lower slope. This residence features a mansard roof with pedimented windows, another common characteristic of the style. While it also is common to see Second Empire residences with a tower, this element is usually centered prominently on the front elevation. The Birchmore House has a tower, but it is located on a secondary elevation and has a cone-shaped roof rather than the more typical mansard roof. Birchmore served St. John’s Episcopal Church in Abilene for a short period, and the residence was sold several times in subsequent decades. Much of the surrounding acreage was sold off in the early- and mid-20th century for development. It is nominated for its local significance in the area of architecture.

James Truitt House – 305 N Steuben Avenue, Chanute, Neosho County

The James Truitt House in Chanute is an excellent example of late 19th century Queen Anne-style architecture. The two-and-a-half story residence exhibits the hallmarks of the style including an irregular plan, a complex cross-gable roof, variations in exterior wall texture, and multiple porches with Eastlake-inspired spindlework. It was commissioned in 1887 by James Truitt, a nurseryman who had moved his family from Kentucky to Chanute in 1878. Before relocating, Truitt was a successful nurseryman, having won awards as a fruit-grower, gardener, and florist in Kentucky, Ohio, and Indiana. While living in Chanute, he operated Truitt and Sons Greenhouse until his death in 1914, and founded Chanute Nurseries, which continued long after his passing. The house is nominated for its association with Truitt and for its Queen Anne architecture.

Sylvan Grove Union Pacific Depot – 131 S Main Street, Sylvan Grove, Lincoln County

The Sylvan Grove Union Pacific Depot was built in 1887 and is an example of a combination depot, meaning it
served both freight and passenger needs. This rail line was originally known as the Salina, Lincoln & Western Railway Line, which later became a part of the Union Pacific railroad. The depot is located at the south end of Sylvan Grove’s Main Street and is in its original location. The depot closed in 1968 and the rails on either side of the building were removed following the 1993 flood. The wood-frame building is an example of a standardized late-19th century combination depot with minimal ornamentation, though the eave brackets and gable-end embellishments reflect the Victorian-era Stick style. It is nominated as part of the Historic Railroad Resources of Kansas multiple property nomination for its local significance in the areas of transportation and architecture.

**Lowe Center School, District #115 – Indian Road & 27th Road, Washington County**
The Lowe Center School was built in 1884 in response to a growing rural population in Washington County in the early 1880s. School attendance records note between 20 and 35 students enrolled at the school into the early 20th century. The one-acre property is located north of Morrowville in Lowe Township and served rural residents of this area until it closed in 1963. The building is typical of one-room country schoolhouses built in the late 19th century. The wood-frame building rests on a limestone foundation, has clapboard siding, and features a gable roof with a bell tower. There are two outhouses behind the school. It is nominated as part of the Historic Public Schools of Kansas multiple property nomination for its local significance in the areas of education and architecture.

**Sand Creek Tributary Stone Arch Bridge – 2 miles west, 1.4 miles north of La Crosse, Rush County**
The Sand Creek Tributary Stone Arch Bridge was constructed by local men employed by the Works Projects Administration in 1942. This double-arch limestone bridge was one of the last of several New Deal-era construction projects in Rush County. Its limestone construction is typical of structures built in this area and is representative of master stone builders and the craftsmanship of construction workers trained by the WPA. A tributary of Sand Creek flows beneath the bridge during seasonal rains, but remains mostly dry otherwise. The bridge is nominated as part of the New Deal-Era Resources of Kansas and Masonry Arch Bridges of Kansas multiple property nominations for its local significance in the areas of government, social history, and engineering.

**Lone Elm Campground Swale – 21151 W 167th Street, Olathe, Johnson County**
The Lone Elm Campground Swale is located in Lone Elm Park at the southernmost edge of Olathe. This city park’s single trail swale is situated along the combined route of the Santa Fe, Oregon, and California trails as it headed southwest out of Westport, Missouri, to present-day Gardner, Kansas, where the Santa Fe Trail separates from the Oregon and California trails. The earliest known group headed for Santa Fe passed through this site circa 1823, and use of this part of the trail drew to a close in 1861 with the onset of the Civil War, which ended long-distance trail traffic from Independence. This trail remnant is one of the few intact trail remains in the greater Kansas City metropolitan area, as urban and suburban development has greatly encroached upon the
trail in this region. The nominated site also contains a historical marker erected by the Daughters of the American Revolution in 1906. The property is nominated as part of the History Resources of the Santa Fe Trail in the areas of commerce, transportation, exploration/settlement, and social history.

Register of Historic Kansas Places – Nomination Edwards House – 910 Ohio Street, Oswego, Labette County

The Edwards House and surrounding property are the last remaining vestiges of the Oswego College for Young Ladies, which held classes from 1885 to 1920. The house was constructed circa 1874 as a private residence reflective of the Italianate style. In 1885 the property was deeded to the Oswego College for Young Ladies, which was operated by the Neosho Presbytery. Plagued by enrollment problems, the college closed in 1920 and sold its property to the Kansas Military Academy in 1922. The house was a part of the academy's campus just two years before an adjacent classroom and dormitory building suffered a devastating fire. The military academy sold the property to N. R. Bickford, who used the property as a private residence and established a large poultry farm there. Bickford sold it 10 years later to Lewis Edwards. Today the property is owned by a descendant of Edwards.
Kratzer Brothers Store – 24098 Volland Road, Volland, Wabaunsee County

Brothers Bill and Otto Kratzer constructed this building in 1913 at a cost of $8,000 to house their general store, which served as the commercial center of Volland until it closed in 1970. The development of Volland and the Kratzer Brothers store also reflects the railroad history of Wabaunsee County and the summer pasturing industry that developed in the area. Volland prospered in the early 20th century as a shipping point on the Chicago, Rock Island, and Pacific Railroad for Texas cattle fattened on the prairie grass of Wabaunsee County pastures. Generally the economy of Volland and its surrounding trade area was based on small-scale diversified farming and stock-raising. The area began to decline in the 1960s when the cattle-shipping industry bypassed Volland, and today only a few structures remain in the unincorporated village.

The National Register of Historic Places is the country’s official list of historically significant properties. Authorized by the National Historic Preservation Act of 1966, the National Park Service’s National Register of Historic Places is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect America’s historic and archeological resources. Eligible properties must be significant for one or more of the four criteria for evaluation. Properties can be eligible if they are associated with events that have made a significant contribution to the broad patterns of our history. They can be eligible if they are associated with the lives of persons significant in our past. Distinctive construction can qualify properties for the National Register if they embody the characteristic of a type, period, or method of construction, or represent the work of a master, or possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction. Lastly, properties may be eligible for the National Register if they have yielded or may be likely to yield information important in prehistory or history. The National Register recognizes properties of local, statewide, and national significance.

The Register of Historic Kansas Places is the state’s official list of historically significant properties. Properties included in the National Register are automatically listed in the State Register. However, not all properties listed in the State Register are included in the National Register. The same general criteria are used to assess the eligibility of a property for inclusion in the state register, but more flexibility is allowed in the interpretation of the criteria for eligibility.

National Register of Historic Places: nps.gov/nr
Kansas Historical Society (National and state registers): kshs.org/14638
Keeping the History in Historic Rehabilitation Projects

Kansans interested in rehabilitating historic buildings often want to know which items are important to retain. Each building has unique features with differing levels of significance so the answer can be different for each building. Overall, the best option would be to retain as many character-defining features as possible.

Historic buildings are composed of many elements and the combination of these elements is what illustrates their history. When elements of a building are changed or removed, it will no longer read as a historic composition. It’s like changing a few notes in a Mozart symphony or adding a few brush strokes to a Picasso. The composition is just not the same. True, not every historic building is a Picasso, but historic elements must be retained for any historic building to continue to illustrate its history.

**Integrity**

When you visit a historic building, is it as interesting or evocative if the materials are 20th century replacements? Most would agree it is not. There is no history attached to modern reproductions. It would be harder to visualize George Washington walking through the living room of Mount Vernon if the house had not retained authentic materials from his lifetime.

A historic building that retains its historic materials, setting, and location is considered to have “integrity.” Integrity is defined by the National Park Service as the ability of a resource to convey its significance. Seven aspects contribute to the overall integrity of a historic resource—location, design, setting, materials, workmanship, feeling, and association. Retention of integrity is crucial for a historic resource, whether it is a battlefield, a ship, or a historic house, to convey its embodied history.
Character-defining features

Character-defining features are the features of a building that visually convey its history. A building must retain these features in order to retain integrity. These features include materials, finishes, floor plan, setting, volume of spaces, and lighting. They can also be intangibles such as the feeling of a space.

Each building has its own set of character-defining features and they are specific to that building. The character-defining features of a hotel lobby’s main interior may be the large volume of space, grand staircase, and decorative finishes. A barn’s interior features might be the exposed heavy timber framing and unfinished walls and ceilings. The features of these two buildings are vastly different and each must be treated with respect to its own individual characteristics. A treatment that works for one building may not work for another. For example, exposed masonry walls are appropriate in a barn, but not in a historically finished space such as a downtown commercial building.

A building can be considered significant for different reasons. It can be architecturally significant or significant for its association with an important person or event. A building that is significant for its architecture will have character-defining features such as elaborate decoration. The features of a building that is significant for its association with an important person or event may be more difficult to identify. Decorative architectural features may not be present, but the absence of decorative features does not mean the absence of significance. Understanding what the building looked like at the time of the important event or when an important person lived there is key in retaining the integrity from that period. Features that were present at the time of the historic event are the most significant and should be retained during rehabilitation work. This may entail preserving seemingly insignificant trim, plaster, and windows, but the significance lies in the association, not in the architecture. The materials associated with the significant person or event should be retained whether they are highly decorative or not. Integrity is just as important if a building is plain than if it is highly decorated. Significant historic buildings are not always pretty, but are worth saving.

Some features are highly visible and prominent while others may require a little detective work to reveal their existence. Historic buildings that have been in use for many decades have often changed over time and some of the...
character-defining features are hidden under layers of alterations. Features can be hidden above dropped ceilings, beneath layers of paint, or behind wall furring. Research may reveal features that are present and physically removing non-historic layers of material will reveal their condition. The best way to determine if there are hidden historic features is to view historic photographs (if they exist), and then perform selective demolition of non-historic additions to determine if the features are still extant. If they are still there, their condition can be assessed to determine the feasibility of restoration. If historic features are missing, historic photographs can be referenced to restore them.

Generally, buildings have spaces that are of primary significance and spaces with less, or secondary significance. Determining which spaces are primary will help define where it is appropriate to make changes to accommodate modern equipment such as elevators and HVAC. The primary spaces in a building are commonly the public spaces and the secondary spaces are often the private spaces. In a house the most significant features are likely to be located in the main living room or dining room. In a theater the primary spaces are the auditorium and the main lobby. The secondary spaces in both of these buildings are where the general public does not have access, such as the bedrooms in the house and the backstage area in the theater. These are spaces where it may be appropriate to make changes or introduce modern equipment. However, research may reveal a high level of significance with regard to some secondary spaces, so it is important to gather as much information about a building as possible to avoid destroying significant historic materials.

It is always preferable to retain intact historic features, but missing features is a reality in many rehabilitation projects. For example, an ornate Victorian living room is intact except for the mantelpiece. It is necessary to install a mantel in order for the room to appear as it did historically. One of two options is preferred during a rehabilitation project. First, if a photo of the missing mantel is available, it is ideal to replicate what is missing. The room will appear exactly as it did during the historic period. If no photograph exists, it is recommended that a compatible, but differentiated mantel be installed. The goal is to install a piece that is compatible with the rest of the historic features, but will not be misinterpreted as an original feature. Installing historic features that were removed from other historic buildings is usually not appropriate because it creates a false representation of history.

Identifying the significance and character-defining features of a property is the first step to completing a successful historic rehabilitation project. For more information about character-defining features see the National Park Service’s Preservation Briefs #17 and 18. They can be found online at nps.gov/tps/how-to-preserve/briefs.htm.
Last April, the Kansas State Historic Preservation Office (SHPO) began its efforts to document historic Kansas places for the Historic American Buildings Survey (HABS) by measuring and photographing Kaw Mission State Historic Site in Council Grove. HABS is the oldest federal preservation program and was created in 1933 through an agreement between the National Park Service (NPS), the Library of Congress (LOC), and the American Institute of Architects as a way to mitigate any adverse effects upon the nation’s cultural resources. Two sister programs were later established in order to more fully represent the diverse American resources. The Historic American Engineering Record (HAER) was established in 1969 through an agreement between the NPS, the LOC, and American Society of Civil Engineers; in 2000, an agreement between the NPS, LOC, and the American Society of Landscape Architects established the Historic American Landscapes Survey (HALS).

The main purpose of each of these programs is to create a detailed sampling of our nation’s built environment from monumental to vernacular works. The surveys consist of detailed measured drawings, large-format photographs, and written histories. All of the documentation created through a project is catalogued with the Library of Congress. Of the 40,000 resources surveyed through these programs, 207 are in Kansas (193 HABS; 9 HAER; 5 HALS). Though often used as a mitigation resource, documentation through HABS, HAER, and HALS is also a way to better understand man-made resources either through the survey process itself or through future research.
With the goal in mind to better understand the state's resources, the Kansas SHPO decided to finish the documentation of Kansas’ state historic sites. Only two of the 16 sites have been fully documented for HABS (First Territorial Capitol and Grinter Place). Kaw Mission had not been photographed or drawn, so a team including Kim Gant, Matthew Holtkamp, Amanda Loughlin, and Sarah Martin spent a few days in April 2013 field measuring and photographing the main building, the reconstructed Kaw house, and the garage. The photographs have been forwarded to the Library of Congress, and work continues on the final drawings.

As a component of the Section 106 mitigation process, the SHPO recently completed photo-documentation of a World War II-era B-29 Hangar in Barton County that will be demolished. The 4 by 5 inch film negatives have been transmitted to the Library of Congress and will become a part of the Historic American Engineering Record.

Find more information about the programs:
nps.gov/history/hdp

View the HABS collection at the Library of Congress:
loc.gov/pictures/collection/hh

Documentation Before Demolition

Great Bend Army Airfield B-29 Hangar, view of interior taken from east, February 2014.
Living Underground in Kansas

Ask Kansans about underground houses or “dugouts,” and some might tell you that their pioneer ancestors lived in one. On the other hand, they might not divulge this information because inhabiting an underground dwelling sometimes carried a social stigma. When resources were scarce, many settlers could not afford more desirable frame houses.

by Gina Powell
Archeologist, Kansas Historical Society

The L.A. Mead family stands outside their dugout located near Bloom, Ford County. This dwelling has glass windows, wood siding, and a stovepipe, between 1875 and 1889.

Regardless of how people think and feel about dugouts, they are an important part of Kansas history, specifically in relation to the Homestead Act of 1862. This law stipulated that homesteaders could claim 160 acres for a fee. If they lived on and improved the land, they could own it after five years. People who applied for the land could do so only for the “purpose of actual settlement and cultivation” and must reside on the land. Building a dugout was an expedient and practical first step in fulfilling this requirement.

What is a Dugout?
A dugout, as considered here, is a semi-subterranean structure constructed for the purpose of sheltering people. The definition is deliberately vague because they sometimes were built for people and then turned into cellars for surface houses, storage structures, or animal shelters. The form varies widely, depending on the goals of the builder and the availability of raw materials, specifically the roofing material.
Although some Native American groups employed semi-subterranean structures, the dugout tradition as we know it was brought to America by European colonists. Dugouts are especially useful in treeless environments but were not limited to such places; they are known historically in New England and the Great Lakes area. Donald W. Linebaugh provides a summary in his 2005 article, “Excavating the Dugout House of Norwegian Immigrant Anna Byberg Christopherson Goulson, Swift County, Minnesota,” published in Historical Archaeology 39(2):63-88.

One of the most famous dugout dwellers is Laura Ingalls Wilder. In her 1953 book, On the Banks of Plum Creek, she describes the sod walls, whitewashed walls and floor, and the oiled paper window in her family’s dugout in Wisconsin. A number of other reminiscences of dugout living have been published. Most tell that they were relatively quick and easy to build and that they were welcome housing after living in a covered wagon. They also were cheap, out of the wind, relatively fire-proof, and built of locally available materials, such as earth, sod, logs, and brush. It did not take long to find fault in these little homes, however, especially in the form of water leaks and biting insects. Craig Miner provides stories and poems about the problems with leaks, snakes, bedbugs, fleas, flies, and centipedes in his 1986 book, West of Wichita: Settling the High Plains of Kansas, 1865-1890.

There are few published accounts of construction details for dugouts or sodhouses (soddy). The directions probably were passed along as common knowledge among the settlers. Construction of a dugout started with creating a rectangle of a certain size (possibly in regular increments of 2 feet) and digging out a hole to an adequate depth. Digging into the side of a hill or ravine gave access through one side. A diary entry for July 21, 1871, by Abbie Bright (kansasmemory.org/item/223662) provides a personal look at the dugout she had built in 1871.

This is Township 29, Range 2 West, in Section 29 [Sedgwick County]. I think this description is correct. We are about a mile from the river. There is a bank here, which many think was the bank of the Ninnescha—at some time back. From here to the river it is very level, and my garden is on this level meadow not far from the dugout. Back of us is prairie a little rolling. The men first dug a well, and at 6 or 7 ft. found plenty of water. They covered it, and it is reasonably cool. Not far from the well they dug a trench like walk into the bank, when the sides were 4 ft. high a 12 by 14 ft. hole was dug out, logs laid to fit the sides. When high enough—a big log was laid across the middle the long way, then split limbs and brush were fit on top for a roof, and that covered with dirt piled on and pressed down. A fire place, and chimney were dug out and built up, at one end, plastered with mud and it answered well.

This room is a little larger than the cabin. My bed in the corner has one leg. A limb with a crotch at one end, is sharpened at the other end, and driven into the ground, 6 feet from one wall and 2-1/2 from the other. A pole is laid in the crotch-with one end driven into the ground wall. This supports poles the ends of which are driven in the ground wall at the head of my bed. Then comes my hay filled tick, and my bed is a couch of comfort. The double shawl along the side, and the single one at the end—and it looks neat. Next to the bed, is my trunk, then the table— The next side has the fire place. The door is opposite the table, then the buffalo robes on which brother sleeps, and his roll of blankets. While in the corner at foot of my bed are boxes and various things including the tub, which is often pushed under the bed. Boxes are nailed to the wall, in which the table furniture is kept, also some groceries. Our chairs are pieces of logs.

Photographs of dugouts can be viewed on the Kansas Historical Society’s Kansas Memory website (kansasmemory.org); specific images, referenced in the following discussion, can be accessed by searching for “dugout photograph.” Some dugouts were almost completely underground with one wall exposed to the surface or an almost horizontal access door with steps down into the structure (“Potter’s dugout, Logan County, Kansas” or “Dugout Home in Greeley County, Kansas”). Others were cut only a couple of feet into the ground with regular doors on at least one side (“Mead Family Dugout near Bloom in Ford County, Kansas”), and others were somewhere in between (“Mead Family Dugout in Ford County, Kansas”).

Photographs of dugout interiors are very rare, but see one of the Mead home (“Mead Family Dugout near Bloom in Ford County, Kansas”) that shows the crowded conditions inside. Shown in the photo are at least five large pieces of furniture, including a stove, work table, china cabinet, bed, and dining table. Numerous small objects, both necessary and luxury items, are visible. A few construction details are evident also. A window is clearly present in the gable end opposite the door and windows on the front of the house.
Roof rafters can be seen, but the way they are supported along the ridge and how they connect to the walls is not clear. The walls do not seem to be bare earth and might be plastered. In *West of Wichita* Craig Miner states that many people tried to cover the bare earth walls with locally made lime plaster. Others might hang gunny sacks or newspapers on the walls. Wooden floors were sought after but not always affordable. Barring wood, other floor covering, such as rag carpets or tarpaulins, were used. It was also desirable to cover the ceilings with material of some kind to keep dirt and critters from falling out of the roof onto people or furnishings.

### Previous Dugout Excavations in Kansas

As of December 2013, the Kansas Historical Society Archeological Inventory contains 132 recorded sites that various site recorders surmised contained at least one dugout house or depression; many contain more than one depression. All but 14 have been recorded since 1980, so apparently they did not catch the attention of early professional or avocational archeologists. Of these, only a handful of sites have been excavated and reported. In 1974 Douglas D. Scott excavated a dugout as part of his investigations at Fort Larned, Pawnee County, for the National Park Service. Five dugouts were excavated at Fort Ellsworth, Ellsworth County, by the 1996 and 2000 Kansas Archeology Training Program (KATP) field schools under the direction of U.S. Army Corps of Engineers, Kansas City District archeologists. Two dugouts were tested near the town of Nicodemus, Graham County, by Washburn University researchers in 2006 and the 2007 KATP field school in partnership with the National Park Service. Recently, two dugouts in Gray County were tested by KSHS staff for the Kansas Department of Transportation (KDOT), and two Ellis County dugouts were tested during the 2013 KATP.

### Fort Larned

Fort Larned was established in 1860 along the Santa Fe Trail to protect the traders. According to Scott in his 1974 *Excavations at Fort Larned National Historic Site*, the fort’s earliest constructions, dugouts and adobe houses, were not replaced by more permanent structures until after the Civil War.

A series of depressions into the Pawnee River bank was found, and at least one represents an early fort structure. It measured 20 feet long, but the full width could not be determined due to erosion. A hearth and chimney were constructed of adobe and roughly hewn limestone blocks. Artifacts were period-appropriate, consisting of square nails,
bullets, glass, and cast iron stove parts. Above-ground portions of the dugout also might have been constructed of adobe, although a sketch of one Fort Larned dugout (kansasmemory.org/item/730) shows that only milled lumber or logs were used.

**Fort Ellsworth**

A temporary military post was established at Fort Ellsworth from 1864-1867 along the Smoky Hill River. Visitors described the fort as having a log blockhouse for defense, a sod commissary, log shanties covered with dirt, and a row of dugouts (that they called “caves”) along the bank. A total of 14 depressions were recorded by archeologists along the escarpment of the river; two of which (Dugouts 10 and 13) were completely excavated during the 1996 KATP field school. Three additional dugouts were excavated during the 2000 KATP.

Dugout 10 was the fort’s bakery. A large brick-and-clay-covered sandstone slab structure was expertly constructed in the rear of the dugout that served as a bake oven. The dugout measured around 29 feet (including the oven) by 15 feet 7 inches. Most of the exterior posts were set in footing trenches dug on the front and two sides of the excavated pit, while three posts were set directly into the floor. A square pattern of upright square nails in the floor probably marked the former location of floor joists with attached floor boards. Five fragments of rubberized cloth (with one attached brass grommet) represented another possible floor covering—a tarpaulin.

Dugout 13 measured 20 feet 7 inches by 15 feet 6 inches and had a footing trench only along the entrance side with a gap for the door. A pattern of upright nails indicated some kind of attached floor structure or covering. Artifacts were consistent with an early 1860s military and domestic use. Bottle glass was especially prevalent. Butchered animal bones were concentrated in front of the dugout.

Known construction methods of the dugouts seemed to entail the excavation of a pit, the installation of vertical logs in footing or wall trenches, the covering of the floor with wood or tarpaulin, and a hearth for heat and cooking. Historic accounts retold by the archeologist indicate brush and earthen roofs. Walls were not plastered. Without periodic maintenance, the dugout structures became almost uninhabitable hovels by 1867, and they clearly were meant
to be ad hoc and temporary quarters. Logs set vertically into a trench (*poteaux en terre*) was a European style that was brought to timber-rich America, especially French settlements. The style was used in Western military posts, such as Fort Zarah, but rarely in civilian applications.

**Nicodemus**

Surface survey, geophysical survey, and excavations in Nicodemus were completed to shed light on the everyday lives of the African Americans who moved from Kentucky after the Civil War to create a new town on the Kansas prairie. Nicodemus, founded in the late 1870s, has rightfully received a degree of attention because of its unique origins. It was designated a National Historic Landmark in 1976, and a 161-acre parcel was added as a National Historic site in 1996. A Historic American Building Survey (HABS) in 1983 drew attention to the possibility of several dugout structures in the area, and interviews with older residents fleshed out their possible functions.

In 2006 and 2007 two structures at 14GH102 were investigated: a subsurface root cellar and a semi-subterranean domestic structure. The domestic structure, called a sod-up/dugout structure, was the primary home of Henry Williams and his family for up to 15 years until their frame house was constructed in 1921. The dugout was approximately 40 by 33 feet (10 by 12 meters) and was partially constructed of limestone blocks, which might partially account for its longevity. The above-ground walls contained windows and might have been constructed of sod blocks. Tarpaper seemed to be part of the roof construction and at least one of the interior walls was plastered. Artifacts included nails, window glass, tableware, clothing, toys, medicine bottles, and pipes.


**Gray County**

Two dugouts in Gray County were tested by Historical Society archeologist Gina Powell as part of a 2013 KDOT project for Highway 50. The highway through that county follows an important transportation route that includes the Santa Fe Trail (active between the 1820s and the 1870s) and the Atchison, Topeka & Santa Fe Railway (the Santa Fe), which was completed in 1872 in Gray County. The boom-and-bust cycle of the 1880s in western Kansas led to much speculation in land, cattle, railroad, towns, and irrigation. The irrigation canal boom came to Garden City...
and then Dodge City in 1882-1886. The Soule Canal is a 70-mile-long canal that snakes up and down the topography between Ingalls and Spearville. The capital and labor needed for this enormous feat created a flurry of jobs for laborers, who had camps along the course of the canal, as reported by the *Dodge City Times* in 1884 and 1885. Many of the men who homesteaded in Gray County were ranch men trying to share in the cattle boom of the early 1880s. They sometimes lived with the hired hands required to tend and herd the cattle, according to Mrs. D. B. Hungate in her 1938 Gray County reminiscences from the Jacksonian newspaper. Christopher M. Schoen uses the term “road
“ranch” in his 1990 article in *Central Plains Archaeology*, “Window Glass on the Plains,” to describe ranches that catered to moving people and goods and producing crops and livestock. Being next to the railroad and the Santa Fe Trail, the ranches in the project area might have needed to house people who conducted business in the area or who were seasonally employed.

One dugout, called the “Plaster House” for the amounts of plaster found during test excavations, probably represents a more permanent dwelling because of the presence of plaster and the high density of artifacts associated with a family, such as clothing, shoes, and toys. It measured 12 by 23 feet (3.7 by 7 meters). The other dugout, called the “Trail House” because it is close to preserved Santa Fe Trail ruts, probably represents short-term housing for laborers on the Soule Canal, the Santa Fe Railroad, or a ranch. It measured 10 by 20 feet (3 by 3.1 meters). The artifact density was low, and the artifacts were mainly nails and tin cans.

**Ellis County**

Two or possibly three dugouts, thought to represent Whisky Ranch, the trading house of Billy Dixon, famous buffalo hunter and civilian Army scout, were tested during the 2013 session of the KATP with Steven R. Roberts as principal investigator. The larger dugout might represent Dixon’s picket house (with walls constructed of upright poles similar to Fort Ellsworth) that served as domicile and trading house, and measured about 33 by 19 feet (10 by 6 meters). The smaller dugout measured about 9 by 20 feet (2.7 by 6.1 meters) and might have served as storage and housing. A third dugout might have been discovered north of the picket

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Marbles from the floor of Plaster House, made of unglazed clay, blue and brown glazed clay, and glass.

Family members poses in front of their dugout in Norton County. The dugout appears to have some sod walls, between 1880 and 1890.
Historic photograph of buffalo hunters camp in Sheridan, 1870.

Artifacts were found by a systematic metal detector survey on the surrounding flat areas. Artifacts included tin cans, ammunition casings, and horse tack.

Conclusion
One can see from the few archeological studies of Kansas dugouts that they were purpose-built from locally available materials. Dugouts required maintenance if they were to be used for more than a few years as water and pest infiltration were constant threats. In most cases, they were meant to be temporary shelters that were to be replaced with frame structures or abandoned after their builders moved on. Because they are subterranean, however, they have the potential to be preserved as archeological sites and time capsules of pioneer times.

Archeologists prepare for work at the Trail House depression that represents a dugout, much like the buffalo hunters small dugout.
Historic Sites Board of Review

The Kansas Historic Sites Board of Review is a group of 11 professionals from various fields that meets quarterly to review and recommend nominations to the National Register of Historic Places and the Register of Historic Kansas Places, and award preservation planning and rehabilitation grants. As prescribed by the Kansas Historic Preservation Act of 1977 (K.S.A. 75-2719), the board is comprised of the following members: the governor or the governor’s designee, the state historic preservation officer or such officer’s designee, and nine members appointed by the governor for three-year terms. At least one member must be professionally qualified in each of the following disciplines: architecture, history, prehistoric archeology, historical archeology, and architectural history.

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Toni Stewart, Topeka
Sharron Hamilton, Salina
John W. Hoopes, Lawrence
Joseph Johnson, Wichita
Samuel Passer, Overland Park
Beka Romm, Lawrence
David H. Sachs, Manhattan
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Happenings in Kansas

January 17 – August 31, 2014
Speaking of Quilts exhibit • Kansas Museum of History, Topeka

May 10
Preserve Topeka Workshop Series: Neighborhood Fair • Topeka & Shawnee County Public Library

May 30 – June 14
Kansas Archeology Training Program (KATP) field school • Osawatomie

June 7
Mountain Man Rendezvous • Pawnee Indian Museum State Historic Site, Republic

June 8, 11 – 14
Art Exhibit: Arthur Short Bull • Kaw Mission State Historic Site, Council Grove

June 10
Preserve Topeka Workshop Series – Repair Not Replace: How to Care for Your House and Neighborhood • Kansas Historical Society, Topeka

June 20
30 years in west Topeka, Kansas Museum of History

June 20 – 21
Washunga Days • Kaw Mission State Historic Site, Council Grove

July 23 – 27
Archaeology in the Classroom • Greenbush Resource Center, Eudora

July 26
West Fest: National Day of the Cowboy • Kansas Historical Society, Topeka

July 26
Museum After Hours: A Night of Country • Kansas Historical Society, Topeka

August 9
Historic Sites Board of Review • Kansas Historical Society, Topeka

Join the Preserving Kansas listserv under Historic Preservation at kshs.org.