



Interstate Earth Lodge – An Overview of Archaeology and Tribal Consultation from Southwest Iowa

**Brennan Dolan, RPA
Cultural Resources Team Lead / Tribal Liaison**





Between 1968 and 1972 the Iowa Highway Commission (the precursor of the Iowa Department of Transportation – Iowa DOT) excavated 19 Central Plains Tradition earth lodges during construction of US Highway 34 near Glenwood, Iowa. This project substantially changed the State of Iowa in a number of ways, especially with regard to consultation with Tribes and Nations and the critical planning that would be needed under the budding field of cultural resources management. For the ensuing four decades the Glenwood collection continued to be the focus of regular archaeological research conducted by professionals. In the spring of 2020, the Iowa DOT began development on various themed concepts for a rest area reconstruction associated with Interstate 29 (I-29) at Glenwood. After some consideration, the project team moved forward with an earth lodge theme, incorporating education and interpretation materials that focused on the indigenous experiences connected to the Central Plains Tradition (likely Caddoan speaking Tribes/Nations). Additionally, the project team sought to include contemporary indigenous experiences through the inclusion of murals completed by native artists. Opened in the spring of 2023, the I-29 rest area at Glenwood features the frame of a scaled Central Plains Tradition earth lodge, various educational panels (focused on the themes of agriculture, descendent communities, transportation, trade, and others), an inlaid earth lodge footprint in the floor, and four commissioned murals by indigenous artists. This presentation will share some of the lessons learned in developing this project and share ways in which unique and meaningful consultation can focus not just on the past, but also on the present and future.



Iowa's Archaeological Timeline

Early Paleolithic
11,500 - 10,500 BCE

Late Paleolithic
10,500 - 8,300 BCE

Early Archaic
8,300 - 5,500 BCE

Middle Archaic
5,500 - 3,000 BCE

Late Archaic
3,000 - 800 BCE

Early Woodland
800 - 200 BCE

Middle Woodland
200 BCE - CE 300

Late Woodland
CE 300 - 1250

Late Prehistoric
CE 1250 - 1673

Historic
CE 1673 - 1832

CE 1832 - 1842

CE 1842 - 1860

CE 1860 - 1885

Beyond 1885

1000 years

2000 years

3000 years

2500 years

2200 years

600 years

500 years

950 years

423 years

159 years

10 years

18 years

25 years



*BCE = Before Common Era (or BC, Before Christ)
*CE = Common Era (or AD, Anno Domini)

The atlatl, or spear thrower, was introduced during the Paleoindian period, increasing the distance a spear could travel and the force of its impact.



The earliest known people to arrive in Iowa made fluted spear points called Clovis and Folsom.



Late Paleoindian groups were hunting bison in Iowa ten thousand years ago.



Mammoth and Mastodon teeth and bones have been discovered in every county in Iowa. Did Paleoindian people hunt them? Here is what we know!



Deltoid points are a common Paleoindian projectile point found in Iowa sites.



Nuts and seed plants became increasingly important foods during the Archaic period.



The Palace site in Polk County has the earliest Archaic sunfish in Iowa. Minnesota type points have been found here (4800 BCE).



White-tailed deer became an important food animal as prairie and woodlands were established across Iowa in the Holocene, after the end of the ice age.



Evidence of the first domesticated dogs in Iowa (5400 BCE).



Ground, pecked, and polished stone artifacts become common during the Archaic period.



Beads and tools made from bone and amber are often found in Archaic period sites.



Ground stone used to make into widespread use early in Middle Archaic times as activities like woodworking became more important.



Cultivation of goosefoot as a food crop began during Late Archaic times, corn was not important until after CE 800.



Native copper from Lake Superior was used to make tools in Archaic times. This largest point was found in Louisa County.



Pottery became widespread in Iowa after 600 BCE.



Stemmed points like this Woodland are common in Early Woodland sites.



Agriculture became increasingly important during the Woodland period.



Bone Island was perhaps the largest Middle Woodland mound west of the Mississippi River. These sacred sites are protected by Iowa Law.



Artifacts such as marine shells, obsidian, and jetstone are evidence of long-ranging trade networks at some Middle Woodland sites.



Small points found in Late Woodland sites indicate the use of the bow and arrow.



Greenwood Colored Ware is found in southeast Iowa.



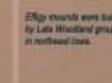
Greenwood earthhog was a distinctive feature of the Missouri Valley.



Shell-tempered Ononda pottery occurs at some Late Prehistoric sites.



People of the Great Plains culture built earthhog and burned in central and northeast Iowa.



Elly's mounds were built by Late Woodland groups in northeast Iowa.



People of the Great Plains culture built earthhog and burned in central and northeast Iowa.



Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.

Fluted water tubs from a Mill Creek culture site.

Greenwood Colored Ware is found in southeast Iowa.

Greenwood Colored Ware is found in southeast Iowa.

Greenwood earthhog was a distinctive feature of the Missouri Valley.

Greenwood earthhog was a distinctive feature of the Missouri Valley.

Greenwood earthhog was a distinctive feature of the Missouri Valley.

Greenwood earthhog was a distinctive feature of the Missouri Valley.

Greenwood earthhog was a distinctive feature of the Missouri Valley.



Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



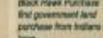
Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



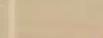
Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



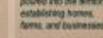
Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



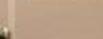
Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



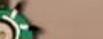
Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



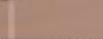
Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



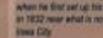
Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



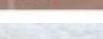
Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



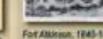
Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



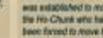
Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



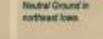
Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



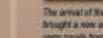
Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



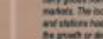
Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



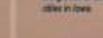
Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



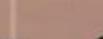
Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



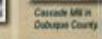
Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



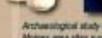
Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



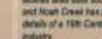
Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



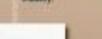
Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.



Mill Creek farmers in northeast Iowa created specialized raised bed gardens. This loam from silt was used as a gardening soil.





Earth Lodge Themed Rest Area



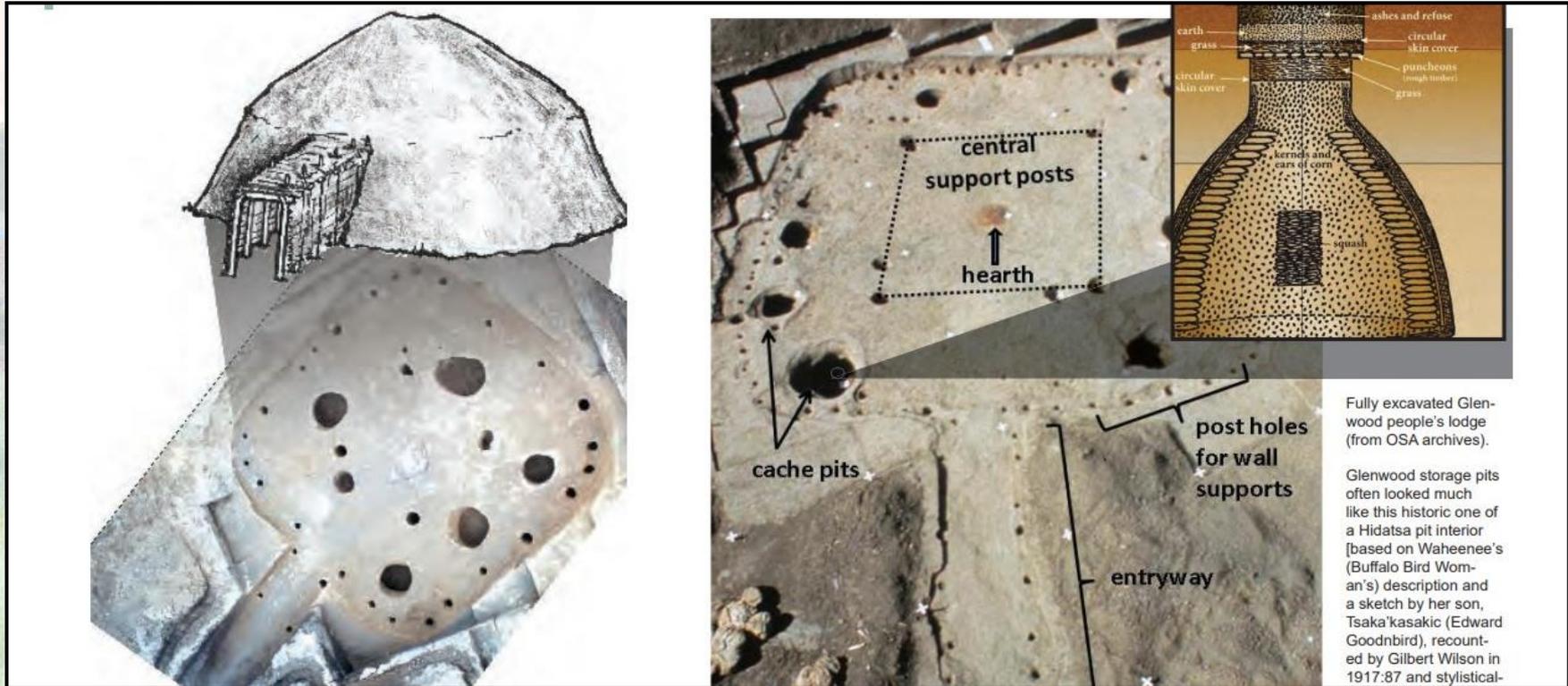


Earth Lodge Themed Rest Area





Earth Lodge Themed Rest Area



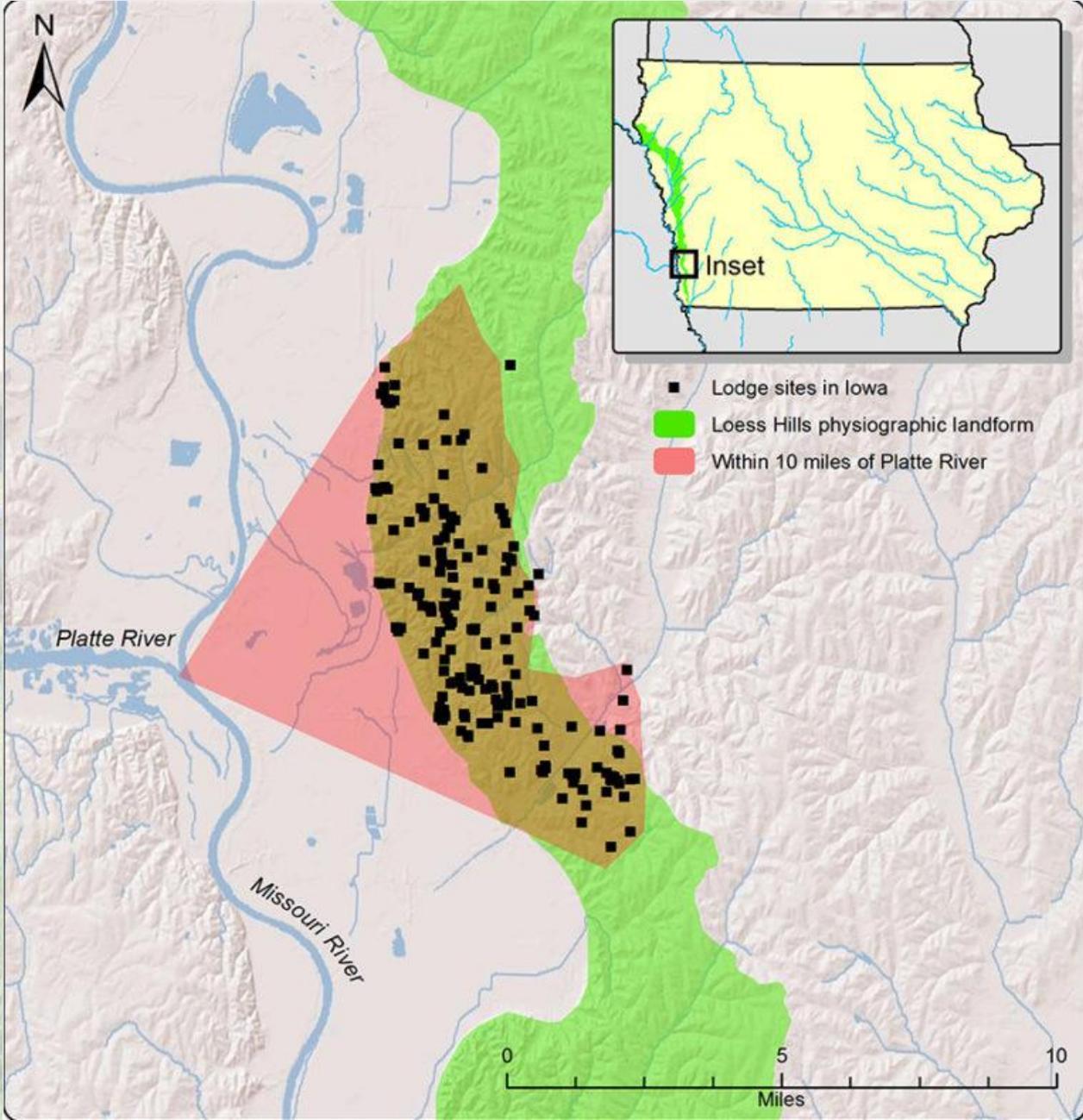
Fully excavated Glenwood people's lodge (from OSA archives).

Glenwood storage pits often looked much like this historic one of a Hidatsa pit interior [based on Waheenee's (Buffalo Bird Woman's) description and a sketch by her son, Tsaka'kasakic (Edward Goodnbird), recounted by Gilbert Wilson in 1917-87 and stylisical-



Earth Lodge Themed Rest Area





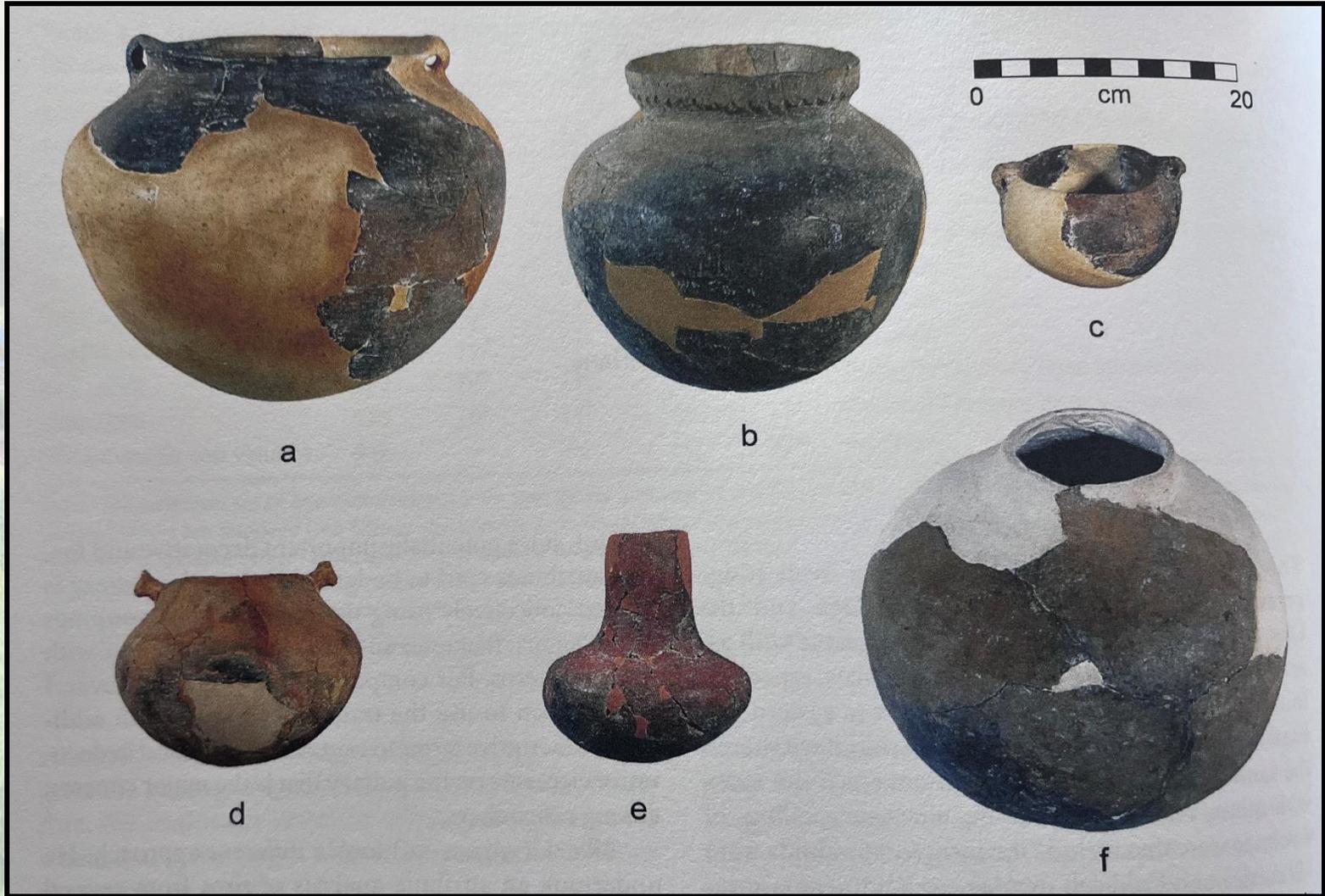


Earth Lodge Themed Rest Area



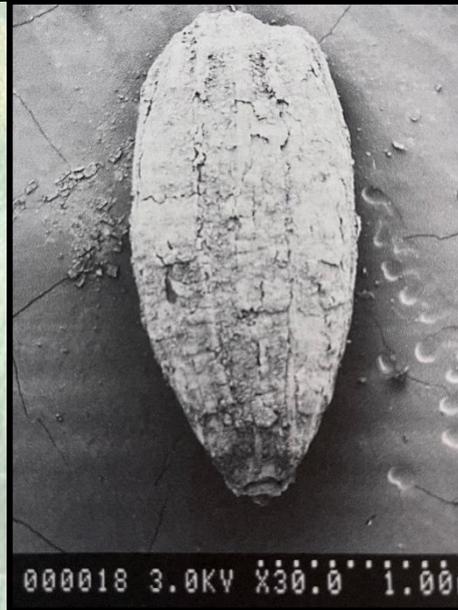


Earth Lodge Themed Rest Area



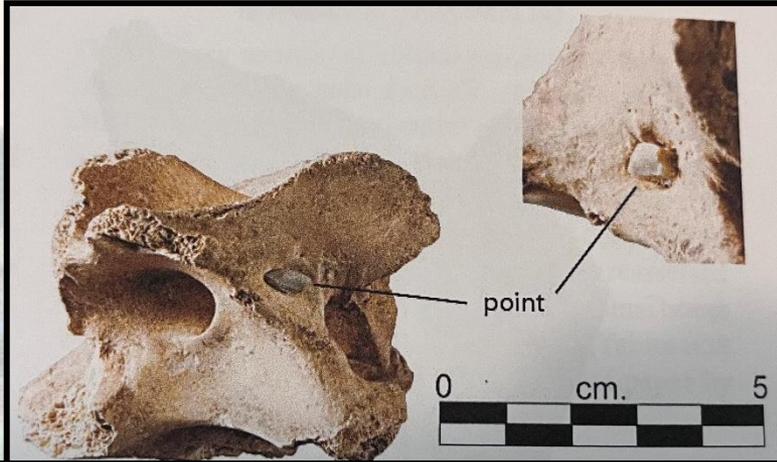


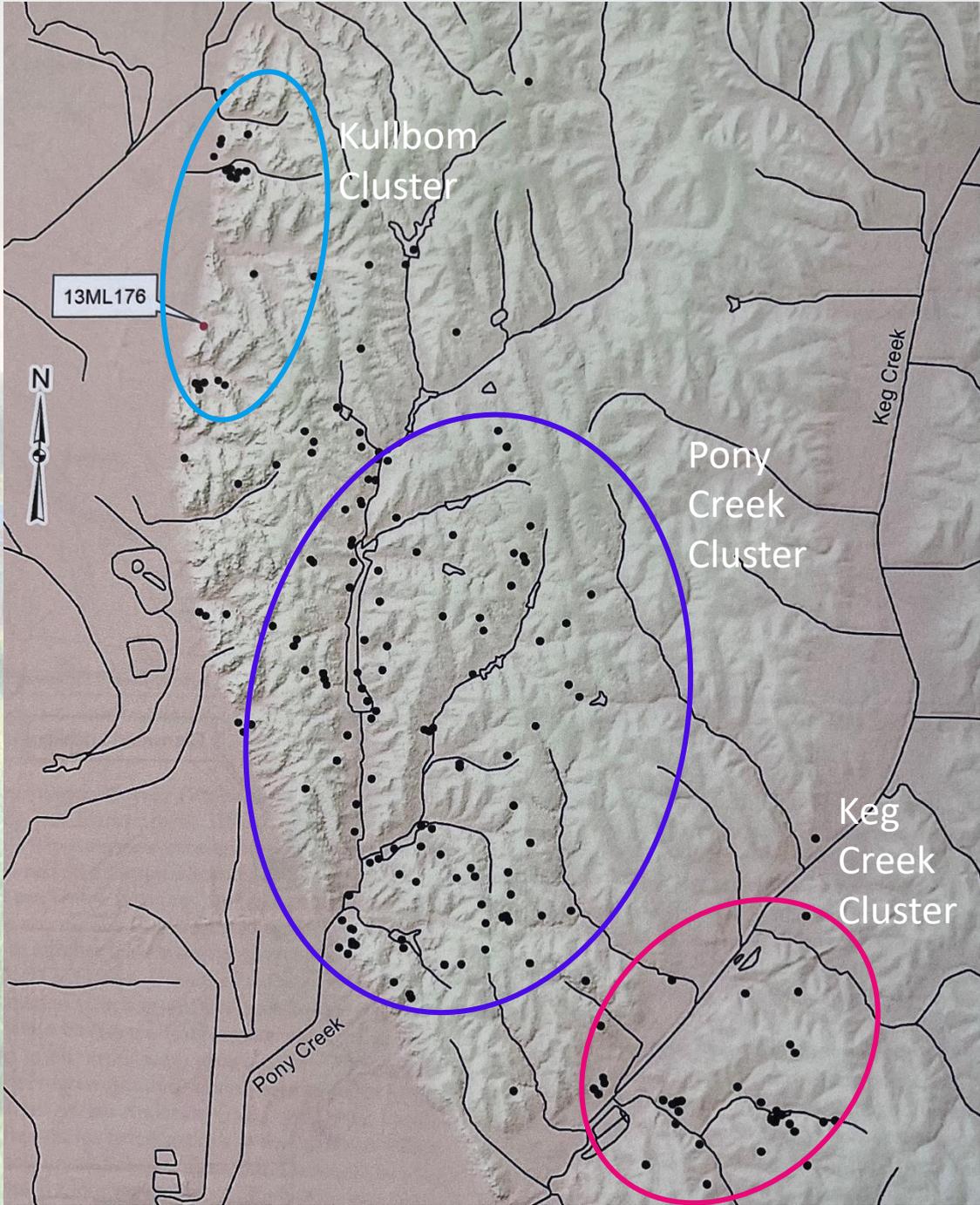
Earth Lodge Themed Rest Area





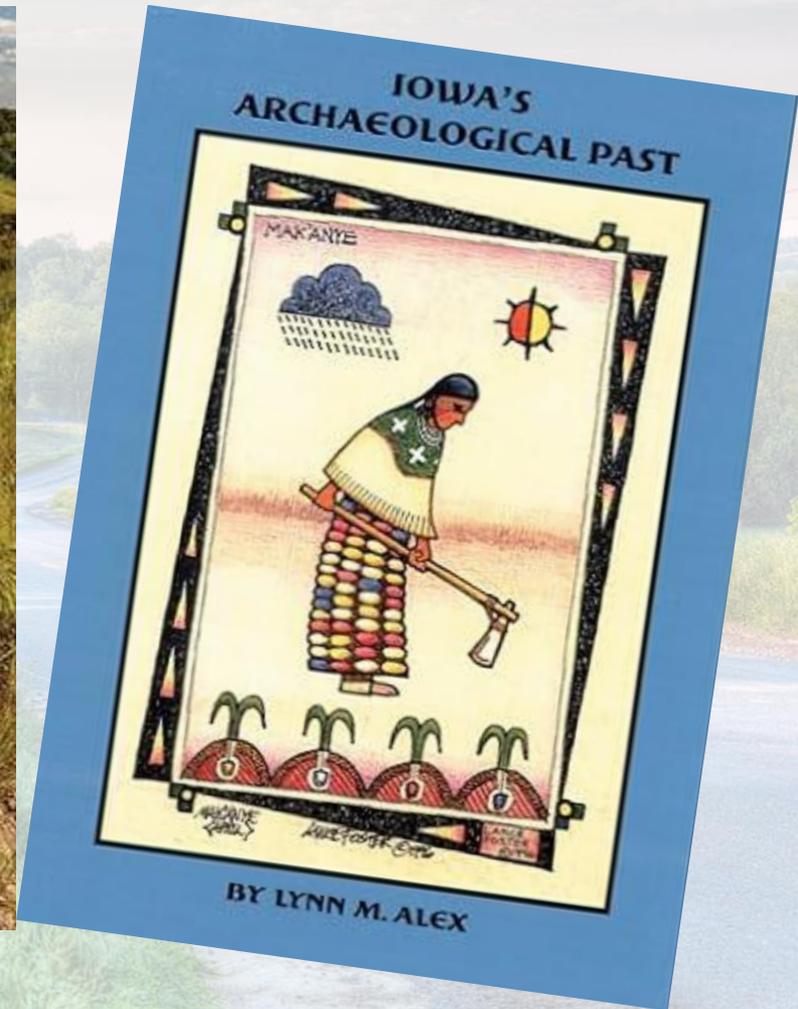
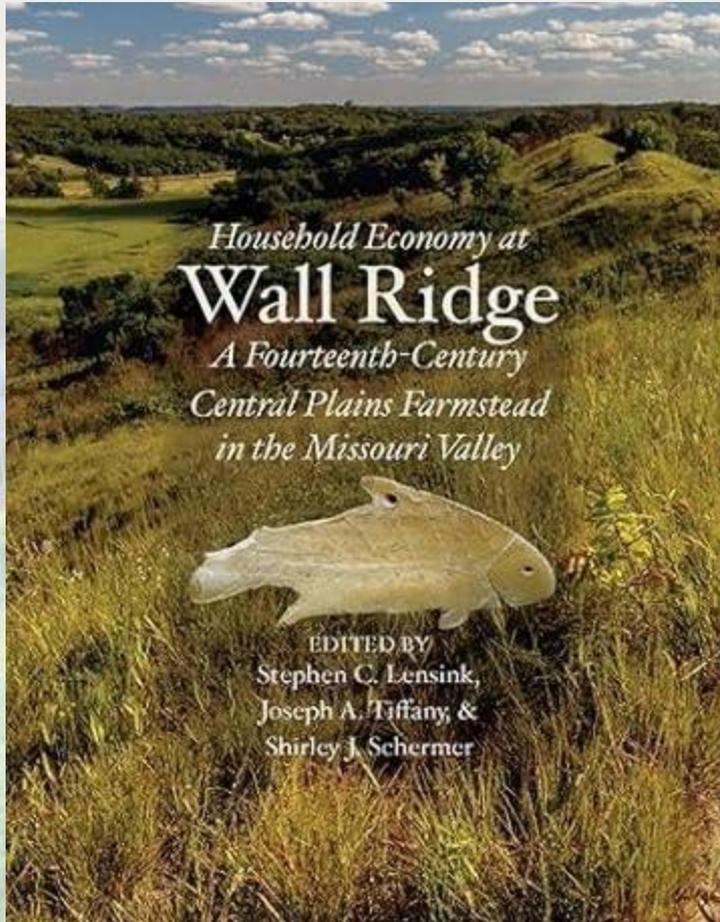
Earth Lodge Themed Rest Area







Earth Lodge Themed Rest Area





Iowa DOT Themed Rest Areas



Iowa's New Generation Rest Areas

Iowa is incorporating art in its new rest areas to educate travelers on the cultural, historical, social, or natural resources of the area.



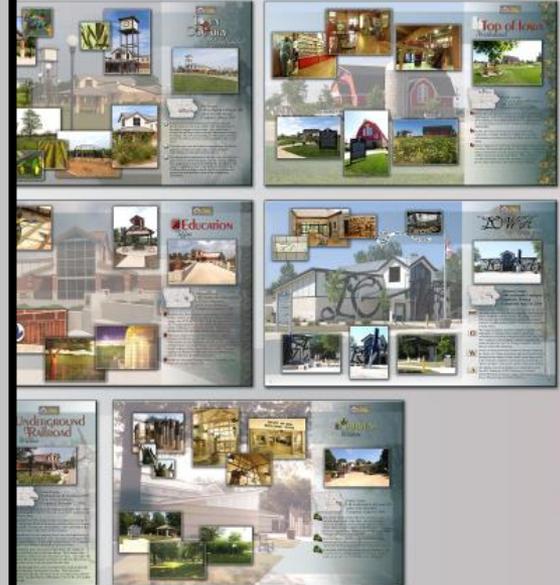
Civil War Dows
November 19, 2003

Franklin County
I-35 north & southbound
at mile post 159
Artist: David Dahlquist
Completed: November 2003

This Iowa rest area explores the prominent role Franklin County residents played in the Civil War. According to Civil War records, Franklin County documented Iowa's highest number of residents involved and most casualties suffered during the war.

Inside the structure, blue and gray are used to show the division of the building into Union and Confederate sides. Depicted here are wall tiles with text showing the vast differences in resources and leadership of the North vs. South. One wall mural shows a Union esp with a gold "I" for Iowa on the face. This side of the building is decorated in blues, reds and golds. On the other side, a canteen and wall colors of grays and yellows represent the confederate struggle. A chain connects the north and south to show how the sides are bound together throughout the site.

Outside, the west courtyard is designed to mimic a Civil War era park or garden. Around it are tombstones inscribed with snippets of actual civil war letters from soldiers back to families. A playground is located on the east side of the building. Lighting, reminiscent of Civil War ammunition, line walkways throughout the site.





Earth Lodge Themed Rest Area



I-29 North Bound, near Glenwood



Earth Lodge Themed Rest Area



SMARTER | SIMPLER | CUSTOMER DRIVEN

www.iowadot.gov

Location and Environment Bureau
800 Lincoln Way | Ames, Iowa 50010

Phone: 515.239.1795 | Email: brennan.dolan@iowadot.us

June 2, 2020

Iowa DOT Ref. IMN-029-2(72)38--0E-65
Missouri River / Mills County

Mr. Matt Reed
Pawnee Nation of Oklahoma
657 Harrison Street
Pawnee, OK 74058

RE: Rest Area Rehabilitation; Glenwood Cultural Theme; Interstate 29; Mills County, Iowa

Dear Matt:

The subject of this letter is somewhat different than our normal consultation efforts, and I think this has the potential to be a remarkable project. As you may know the Iowa DOT operates a number of on system interstate and highway rest areas. They are located across the state and provide travelers a space to get out, take a walk, find rest and in some cases learn about a given theme or topic. Some of our most popular rest areas have themes that include historic topics like Underground Railroad/Network to Freedom, and the United States Civil War and natural themes like Iowa's Native Landscapes.

Recently, I was asked about a rehabilitation of our I-29 rest area near Glenwood. Immediately I thought of the Native American people connected to earth lodge culture that was so prominent near the Glenwood locality nearly a millennium ago. Meanwhile, one of the themes presented by our design consultant also connected to the earth lodge heritage of the area. We agreed we are likely overdue for sharing about this remarkable aspect of the human experience at this location.

Therefore, enclosed for your review is a concept package and a research package to share some of the initial thoughts we've conceived about this potential rest area rehabilitation. The purpose of this outreach is to collect your thought and ideas about the concept and how it might come to fruition. The concept package contains the following:

- Emphasis on People who constructed earth lodges in and around present-day Glenwood, in the context of the Missouri River, the alluvial plain and the Loess Hills
- Representation of an exterior Earth Lodge, to provide visitors a sense of scale and space
- Informational panels
- Native art murals
- Written work art or poetry

It's important to note that this is a rehabilitation of an existing rest area, so we are not looking to change or increase the overall footprint of the location. Also, we know that these locations have to serve a functional purpose, so this effort is really a blending of those aspects along with the potential to educate the traveling public. Uniquely, these kinds of projects are intended to include and intertwine art. We are looking to solicit 2-3 pieces from Native American artists to find a home at this structure. If you know of a Tribal artist who would be



SMARTER | SIMPLER | CUSTOMER DRIVEN

www.iowadot.gov

Location and Environment Bureau
800 Lincoln Way | Ames, Iowa 50010

Phone: 515.239.1795 | Email: brennan.dolan@iowadot.us

June 2, 2020

Mr. Pete Coffey, Compliance Officer
Three Affiliated Tribes - Mandan, Hidatsa & Arikara
Tribal Historic Preservation
New Town, ND 58763

Iowa DOT Ref. IMN-029-2(72)38--0E-65
Missouri River / Mills County

RE: Rest Area Rehabilitation; Glenwood Cultural Theme; Interstate 29; Mills County, Iowa

Dear Pete:

The subject of this letter is somewhat different than our normal consultation efforts, and I think this has the potential to be a remarkable project. As you may know the Iowa DOT operates a number of on system interstate and highway rest areas. They are located across the state and provide travelers a space to get out, take a walk, find rest and in some cases learn about a given theme or topic. Some of our most popular rest areas have themes that include historic topics like Underground Railroad/Network to Freedom, and the United States Civil War and natural themes like Iowa's Native Landscapes.

Recently, I was asked about a rehabilitation of our I-29 rest area near Glenwood. Immediately I thought of the Native American people connected to earth lodge culture that was so prominent near the Glenwood locality nearly a millennium ago. Meanwhile, one of the themes presented by our design consultant also connected to the earth lodge heritage of the area. We agreed we are likely overdue for sharing about this remarkable aspect of the human experience at this location.

Therefore, enclosed for your review is a concept package and a research package to share some of the initial thoughts we've conceived about this potential rest area rehabilitation. The purpose of this outreach is to collect your thought and ideas about the concept and how it might come to fruition. The concept package contains the following:

- Emphasis on People who constructed earth lodges in and around present-day Glenwood, in the context of the Missouri River, the alluvial plain and the Loess Hills
- Representation of an exterior Earth Lodge, to provide visitors a sense of scale and space
- Informational panels
- Native art murals
- Written work art or poetry

It's important to note that this is a rehabilitation of an existing rest area, so we are not looking to change or increase the overall footprint of the location. Also, we know that these locations have to serve a functional purpose, so this effort is really a blending of those aspects along with the potential to educate the traveling public. Uniquely, these kinds of projects are intended to include and intertwine art. We are looking to solicit 2-3 pieces from Native American artists to find a home at this structure. If you know of a Tribal artist who would be





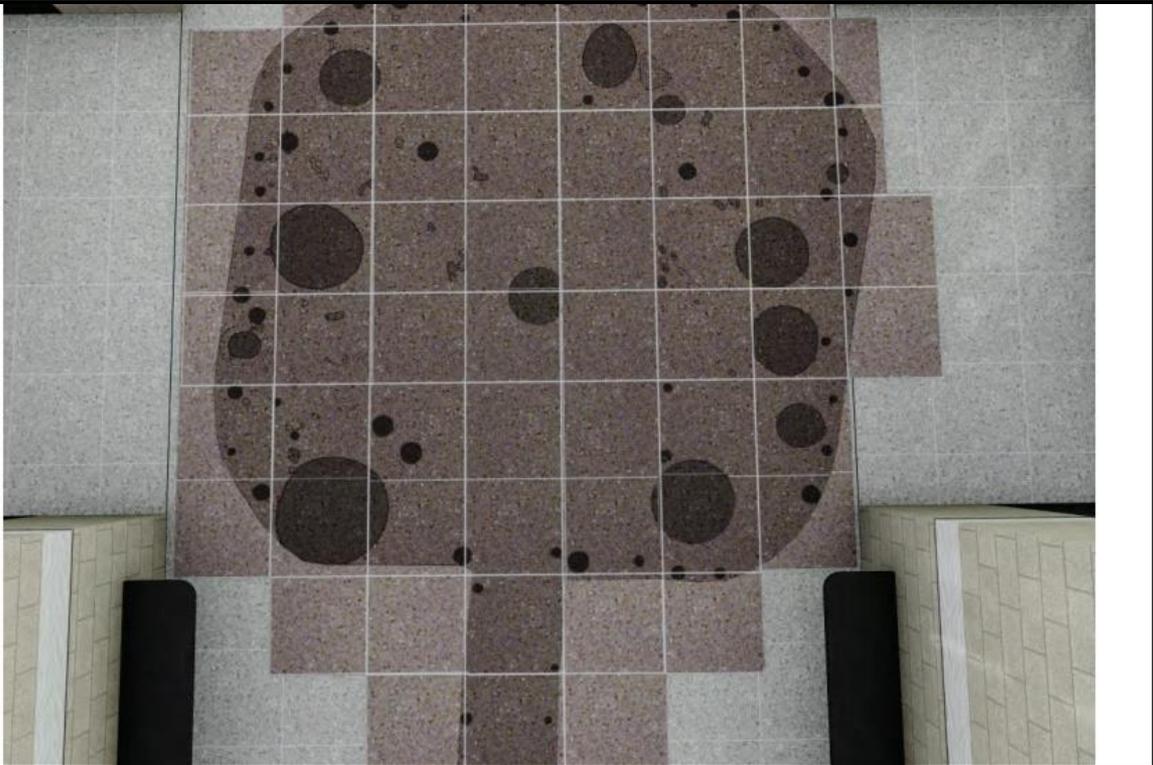
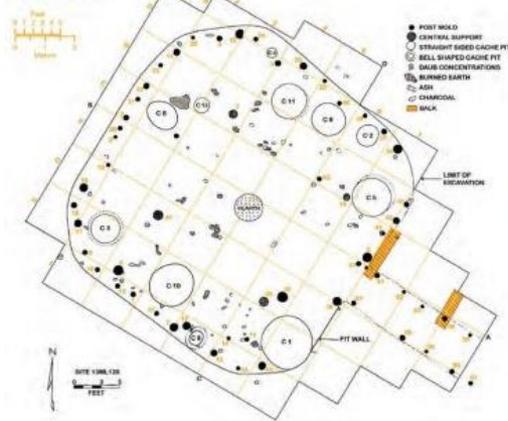


Earth Lodge Themed Rest Area

There have been numerous excavations of Glenwood lodges, with plan view maps drawn for many. Glenwood lodge floor area ranges from 200 to 1,800 ft², meaning just about any size of lodge could be accommodated within the rest area building floor, shown at actual size. The visitor could stand atop the outline and gain a sense of the lodge interior and size. Figure Earthen Lodge Figure 1.

Plan view map of an archaeologically excavated Glenwood lodge site, showing hearths, storage pits, posts, and lodge outline (site 13ML128 from OSA archives). - Office of the State Archaeologist (OSA) of the University of Iowa, Technical Report 1523.

Site 13ML128





Earth Lodge Themed Rest Area





Earth Lodge Themed Rest Area





Earth Lodge Themed Rest Area

INTERACTING WITH THE NEIGHBORS & BEYOND

We understand a little about the Glenwood peoples' relationships with their contemporaneous neighbors. Relative peace is inferred by the absence of fortifications around lodges and the lack of warfare evidence in their burials.



TRADE & TRANSPORTATION

MISSOURI RIVER NEIGHBORS

Native stone culture groups in the West part of the Missouri River valley were known for their expertise in flintknapping. They were also known for their expertise in pottery making. The Missouri River valley was a major trade route for the Glenwood people.

FURTHER AFIELD

Native stone culture groups in the West part of the Missouri River valley were known for their expertise in flintknapping. They were also known for their expertise in pottery making. The Missouri River valley was a major trade route for the Glenwood people.



MATERIAL CULTURE

TOOLS MADE FROM BONE AND STONE

Tools made from bone and stone were used for various purposes, including hunting and agriculture. These tools were often found in archaeological sites and are valuable indicators of the Glenwood people's lifestyle.

POTTERY MAKERS

The Glenwood people were skilled pottery makers. They used a variety of clay to create different types of pottery, including storage vessels and cooking ware. Their pottery is characterized by its simple, functional design.

THINGS TO WEAR

Things to wear included animal skins and plant fibers. The Glenwood people used these materials to create clothing and shelter. Their clothing was designed for protection and durability in their environment.

Things to wear included animal skins and plant fibers. The Glenwood people used these materials to create clothing and shelter. Their clothing was designed for protection and durability in their environment.

Things to wear included animal skins and plant fibers. The Glenwood people used these materials to create clothing and shelter. Their clothing was designed for protection and durability in their environment.

RELIGIOUS GLLENWOOD

Religious practices of the Glenwood people included the use of ceremonial objects and rituals. These practices were often tied to the natural world and the cycles of life and death.

Religious practices of the Glenwood people included the use of ceremonial objects and rituals. These practices were often tied to the natural world and the cycles of life and death.

Religious practices of the Glenwood people included the use of ceremonial objects and rituals. These practices were often tied to the natural world and the cycles of life and death.

NATIVE OCCUPATION CE 1200-1350

About 600 years ago, if you gazed westward from this spot toward the Loess Hills, you would see lodges from here to within the Loess Hills, farmed, and irrigated.

Although people lived here before, it was not until CE 1200-1350 that intensive settlement occurred here. Archaeologists identify about 300 Glenwood Lodges.

It was not until CE 1200-1350 that intensive settlement occurred here. Archaeologists identify about 300 Glenwood Lodges.

AGRICULTURE & SUBSISTENCE

As skilled farmers, the Glenwood people planted higher yielding maize (corn) varieties and had substantial food storage in large pits. One Glenwood lodge contained 10 storage pits, with a total pit storage volume of 180 cubic feet. The average domestic availability of a modern refrigerator is only 20 cubic feet!

DIVERSE ANIMAL HARVESTS

Glenwood people hunted a variety of animals for food and clothing. They used animal skins to make clothing and shelter. Their hunting skills were essential for their survival.

Glenwood people hunted a variety of animals for food and clothing. They used animal skins to make clothing and shelter. Their hunting skills were essential for their survival.

Glenwood people hunted a variety of animals for food and clothing. They used animal skins to make clothing and shelter. Their hunting skills were essential for their survival.

NATIVE AMERICAN OCCUPATION OF GLENWOOD CE 1200-1350

About 600 years ago, if you gazed westward from this spot toward the Loess Hills, you would see lodges dotting the landscape, with smoke rising from hearths within. The families who lived here built distinctive earthen-walled lodges, farmed, and ingeniously utilized a wide variety of natural resources.

Although people lived along this stretch of the Loess Hills for thousands of years before, it was not until CE 1200-1350 that intensive settlement occurred here. Archaeologically, these inhabitants are called the Glenwood people of the Central Plains tradition. Nearly all other sites of this tradition are found west of the Missouri River.

- Archaeologists identify about 300 Glenwood Lodges
- It was not until CE 1200-1350 that intensive settlement occurred here.



AGRICULTURE & SUBSISTENCE

As skilled farmers, the Glenwood people planted higher yielding maize (corn) varieties and had substantial food storage in large pits. One Glenwood lodge contained 10 storage pits, with a total pit storage volume of 180 cubic feet. The average domestic availability of a modern refrigerator is only 20 cubic feet!

DIVERSE ANIMAL HARVESTS

Glenwood people hunted a variety of animals for food and clothing. They used animal skins to make clothing and shelter. Their hunting skills were essential for their survival.

Glenwood people hunted a variety of animals for food and clothing. They used animal skins to make clothing and shelter. Their hunting skills were essential for their survival.

Glenwood people hunted a variety of animals for food and clothing. They used animal skins to make clothing and shelter. Their hunting skills were essential for their survival.

SAMPLE OF PLANTS UTILIZED

PLANT	APPROXIMATE NAME
Maize	Indian Corn
Wheat	Emmer
Barley	Two-row
Beans	Common
Peas	Common
Lentils	Common
Chickpeas	Common
Flax	Common
Mustard	Common
Turnip	Common
Carrot	Common
Onion	Common
Garlic	Common
Asparagus	Common
Broccoli	Common
Cauliflower	Common
Kale	Common
Spinach	Common
Lettuce	Common
Cucumber	Common
Pumpkin	Common
Squash	Common
Tomato	Common
Pepper	Common
Onion	Common
Garlic	Common
Asparagus	Common
Broccoli	Common
Cauliflower	Common
Kale	Common
Spinach	Common
Lettuce	Common
Cucumber	Common
Pumpkin	Common
Squash	Common
Tomato	Common
Pepper	Common

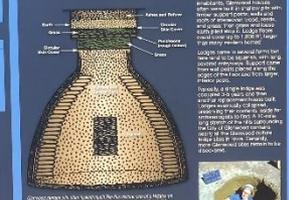
SAMPLE OF ANIMALS RECOVERED FROM GLENWOOD LODGES

ANIMAL	RECOVERED FROM
Deer	Antlers
Beaver	Skull
Porcupine	Quills
Skunk	Skull
Badger	Skull
Coon	Skull
Possum	Skull
Bobcat	Skull
Mountain Lion	Skull
Wolf	Skull
Canine	Skull
Ungulate	Skull
Bird	Skull
Reptile	Skull
Amphibian	Skull
Fish	Skull
Insect	Skull
Plant	Skull
Other	Skull



THE LODGE

Site 13M1-128



LODGE were in several forms but were all built of earth and stone. They were often built on a raised platform and had a thatched roof. The interior was divided into rooms and storage pits. The storage pits were used for storing food and other supplies.

LOCAL ADVANCE

Late archaeological evidence of Glenwood's presence in the region is indicated by the presence of artifacts such as pottery and stone tools.

Late archaeological evidence of Glenwood's presence in the region is indicated by the presence of artifacts such as pottery and stone tools.

IOWA DOT PRESERVE

Many people do not know that the Department of Transportation has a preserve in the area. This preserve is dedicated to the preservation of the Glenwood people's heritage.

Many people do not know that the Department of Transportation has a preserve in the area. This preserve is dedicated to the preservation of the Glenwood people's heritage.

Many people do not know that the Department of Transportation has a preserve in the area. This preserve is dedicated to the preservation of the Glenwood people's heritage.

Many people do not know that the Department of Transportation has a preserve in the area. This preserve is dedicated to the preservation of the Glenwood people's heritage.

Many people do not know that the Department of Transportation has a preserve in the area. This preserve is dedicated to the preservation of the Glenwood people's heritage.





Earth Lodge Themed Rest Area





Earth Lodge Themed Rest Area





I-29 NORTHBOUND MILLS COUNTY REST AREA TRIBAL ARTIST INFORMATION

TAMARA FAW FAW, MIHAXEGE (OTOE-MISSOURIA, IOWA)

Tamara Faw Faw, Mihaxege, is a multidisciplinary artist specializing in illustrations and in cultural clothing. She began her education at Oklahoma State University in 1994, receiving a Bachelor of Fine Arts from Kansas State University in 1999. From her oil paintings in the 1990s to her recent digital "Clan Animal" series, all of her artwork has focused on her Tribal cultures.



ECOLOGY

The piece is based on traditional designs that represent the flora and fauna of the regions the Otoe-Missouria and Iowa people traveled through, including the Glenwood area, as they made their way from what is currently the Green Bay area to their home in Oklahoma. Flowers, vines, berries, leaves, and seed pods can be found here and, in the beadwork and ribbonwork patterns which have been passed down from generation to generation, the hummingbirds represent the importance of pollinators in the vitality of Mother Earth's ecology.

JESSICA MOORE HARJO, PH.D., WEOMEPE (OTOE-MISSOURIA, OSAGE, PAWNEE, SAC & FOX)

Jessica Moore Harjo, Ph.D., Weomepe, is an artist, designer, and educator based in Oklahoma. Jessica's approach to art and design is unique, post-traditional, and grounded in cultural symbolism. Her pieces display intersections of traditional ribbonwork and applique, with elements of nature, harmonious and symmetric forms, and atmospheric color palettes. She received her Bachelor of Landscape Architecture from Oklahoma State University with a minor in Studio Art, Master of Arts in Design and Doctor of Philosophy in Design from the University of Minnesota.



FOUNDATION OF REMEMBRANCE

This design represents the Glenwood culture and includes different representations of the agriculture, vegetation, and general life of the original inhabitants. In the background is an earth lodge with a grid of seeds representing the idea of renewal but also a foundation of remembrance. The floral designs on the sides and the bottom design stem from different plants in the area that provided sustenance and other needs for the people. This includes a design in the middle that gives tribute to corn, beans, and squash.

The color palette and other symbolisms are from environmental or natural elements including the sky, sun, moon, stars, earth, stone, vessels, vegetation, and water; all of which have different significance to Indigenous peoples today.

LANCE FOSTER (IOWA)

Lance M. Foster (Iroge: Finds What Was Sought; Bear Clan; loway); b. 1969, is a member of the Iowa Tribe of Kansas and Nebraska. He has graduate degrees in design and anthropology from Iowa State University and attended the Institute of American Indian Arts in Santa Fe. He has worked in archaeology and historic preservation for decades, and is author of *The Indians of Iowa* (2009). He has appeared in several documentaries about the loway and the prairie. He serves his tribe as a THPO and was elected Vice Chairman in 2019. He works on the tribe's reservation in Kansas and Nebraska. His current work is focused on establishment of loway Tribal National Park. He lives with his wife in White Cloud, Kansas.



ākaraarataa u /mahaci: EARTHLUDGE Iroge: "Finds It"

The earthlodges used in this area, were built by the Caddoan-speaking ancestral Anikara and Sakri Pawnee nations, who call these lodges ākaraarataa u and whose archaeological culture of the eastern Plains has been called the Nebraska Phase of the Central Plains Tradition. These Loess Hills were an area of cultural exchange between the Nebraska culture and the archaeological culture called the Oneota, ancestral culture of the Siouan-speaking loway, Otoe, and Missouria nations, who called these lodges mahaci, and who were woodlands and tallgrass prairie cultures. Inspired by these ancient traditions and by what archaeology has revealed, artist Lance Foster (loway name Iroge: "Finds What Was Sought") portrays a vision of that way of life and cultural exchange between these two ancient groups, set in an earthlodge. Here is one artist's reflection on the deep time and seasons of the earthlodges of the loess hills, and of the spirit world and the land you are standing in now.

KAYLA L. KENT, MAHISKAMI (IOWA)

Kayla L. Kent, MahiskaM', White Knife Woman, Buffalo Clan of the loway Tribe of Kansas and Nebraska. Kayla is an interdisciplinary artist. She specializes in pen & ink, acrylic painting, poetry and studies cultural foods revitalization. Her work is a portrayal of her tribal ancestry, identity and storytelling inspired from a study of maternal empowerment following the role of women amongst the tribal nations, traditional folklore and personal visions and dreams. Kayla is a mother of two, residing in Lincoln, NE. She is currently studying health sciences in sports and nutrition & dietetics.



LAST NIGHT THE THUNDER WAS HEARD

The meaning of the First Thunder is a celebration. When thunder makes its appearance animals come out of hibernation, flowers and plants start to bloom, the land is experiencing a phase of renewal. The power of the thunder is significant in that it is a force that can give life and also take it away. This time of renewal can be correlated to the first equinox of the solar year. The equinox happens when the plane of the Earth's equator passes through at the instant the Sun is directed overhead. The spring season offers us a time of renewal, the seeds begin to sprout, new vegetation is planted & animals then know to come out of hibernation with their young.

The Buffalo Clan in loway Tradition would take over the leadership of the tribe in the spring season. Upon a celebration of their arrival, they offer new crops for the upcoming agricultural cycle and the health of the tribe. The spirit of the buffalo is called upon to ask for abundance in the following crops season, to aid in the health of the people and give thanks to the Earth Maker, Ma'Un. "Last Night the Thunder was heard" depicts an awakening above and below, the Earth Mother, Anuhwa (Buffalo Spirits), and the heart of the people. The earth lodge and/or sweat lodge was a sacred place of prayer where members of the tribe would call on the spirit helpers to aid or guide in the wellbeing of the people. Women held special spots within the tribe, traditionally women are the keepers of the home, but often are overlooked when it comes to maternal empowerment. Women are the threshold of the people, the life-givers, nurturers who have a direct connection to the cosmos. Kayla's work often depicts the feminine form in an effort to depict the strength and divine nature of what it means to be a woman in the traditional lifestyle.



Earth Lodge Themed Rest Area





Earth Lodge Themed Rest Area



TFAWZ 2020



Earth Lodge Themed Rest Area





Earth Lodge Themed Rest Area





Earth Lodge Themed Rest Area





Earth Lodge Themed Rest Area

Lessons Learned:

- **Follow the Vision**
- **Say Yes (if/when you can),
You Never Know Where Opportunities Will Come From**
- **Look for Ways to Innovate; We Looked to
Go Beyond Consultation (Preservation is About People)**



Questions – Comments:

Brennan Dolan

Cultural Resources Team Lead / Tribal Liaison

Location and Environment Bureau

brennan.dolan@iowadot.us

515-239-1795