

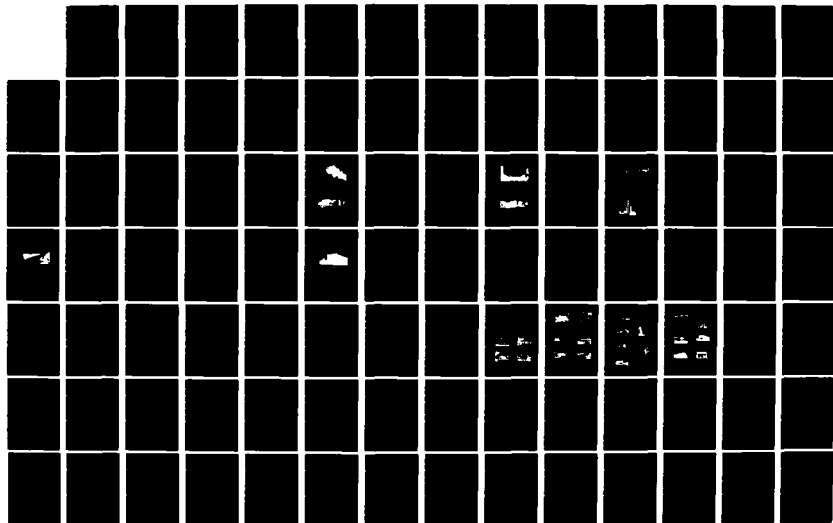
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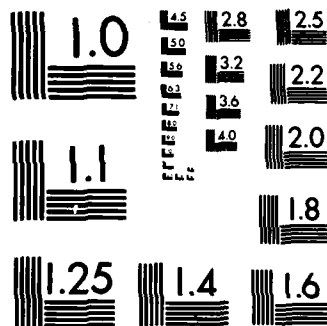
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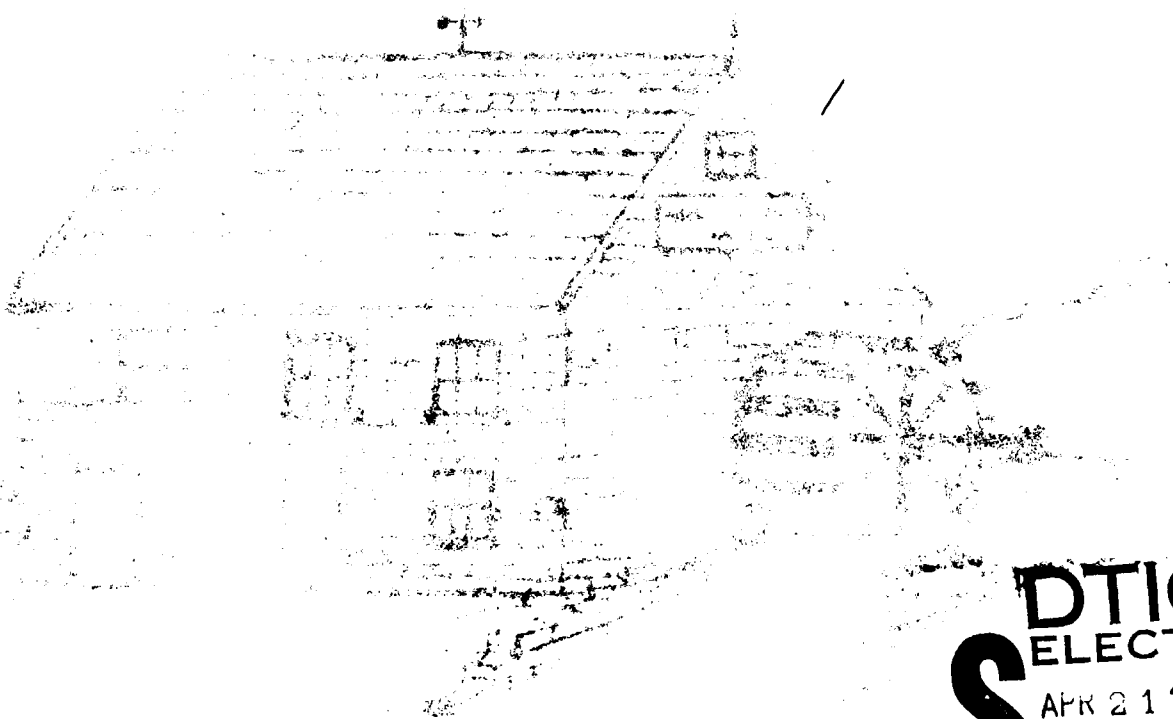




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**Cultural Resources Literature
Review and Reconnaissance
STRANGER and
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KANSAS**



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**U.S. Army Corps of Engineers
Kansas City District
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DACW41-79-M-1935**

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CULTURAL RESOURCES LITERATURE REVIEW
AND
RECONNAISSANCE SURVEY
STRANGER AND TONGANOXIE CREEKS, KANSAS

Co-Principal Investigators and Authors

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R. Gail White, A.I.A.

Prepared for
Kansas City District
Corps of Engineers
Under Purchase Order No.
DACW41-79-M-1935

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Cultural Resources
Management Study #50

January 1981

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ABSTRACT

A literature and records search and reconnaissance level investigation for cultural resources in four selected areas along portions of Stranger and Tonganoxie Creeks is presented. The study area is within Atchison and Leavenworth Counties, Kansas, and is limited to an area a half mile in width on each side of the creeks. The four reconnaissance areas include 403 acres.

Eighteen archaeological sites were identified; none are within the reconnaissance areas. A total of twenty-five architectural/structural sites is reported, including three urban zones of potential significance, eight individual buildings, two farmsteads, eleven bridges, and one highway. A literature and records review did not reveal National Register properties within the study area.

An intensive survey of areas having higher elevations along Stranger and Tonganoxie Creeks and which may be impacted is recommended. A survey and assessment of the Linwood, Tonganoxie and Easton zones of potential significance which would be impacted is recommended. Documentation of the farmsteads in the Highway 92 reconnaissance area for inclusion in the Kansas Statewide Historic Inventory is recommended. Other structures outside the reconnaissance area which may be impacted should be surveyed and assessed.

ACKNOWLEDGEMENTS

The cover design is taken from a drawing by Robert J. Seute. The drawing is Mr. Seute's conjectural interpretation of the early appearance of the former mill at Millwood, Kansas.

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GLOSSARY

Historical Terms

Homestead Act of 1862 - Legislation which provided for grants of 160 acres of land to any person who was the head of a family or 21 years old and who was a citizen or declared his intent to become one. A homesteader was required to pay a \$10 filing fee, live on the land for five years, cultivate it and improve it. The Timber Culture Act of 1873 supplemented the Homestead Act, offering 160 acres to anyone who would plant 40 acres in trees and maintain them for 10 years (Richmond 1977:127).

Kansas-Nebraska Act of 1854 - Legislation which repealed the Missouri Compromise of 1820, created the two territories of Kansas and Nebraska divided by the 40th parallel, and introduced the idea of "popular sovereignty" allowing resident voters to decide for themselves whether or not slavery would be allowed in the territories (Richmond 1977:61-2).

Missouri Compromise of 1820 - Legislation which provided for the admission of Missouri as a slave holding state, but prohibited slavery north of 36° 30' in the rest of the Louisiana Purchase (Richmond 1977:61).

Pre-emption Act of 1841 - Legislation which allowed settlers on the land to purchase up to 160 acres at \$1.25 per acre prior to the time of a public auction for the region (Richmond 1977:76).

Architectural Terms*

Batten door - A door made of boards held together with battens nailed cross-wise.

Broken joints - Joints made so that they are not aligned with adjacent joints above and below.

Bungalow - A single-story house characterized by a rectangular plan form and gently pitched broad gables with the lower gable covering an open or screened porch and the larger covering the main portion of the house. Porch piers are often battered and wood shingles, stucco, brick or wood siding are used for exterior finish materials. The bungalow tradition has its roots in India where the Indian government built low houses surrounded by verandas as rest houses along the road. The bungalow tradition was popular in the United States between approximately 1890 and 1940, peaking before the First World War (Blumenson 1978:71; Lancaster 1958:29; Whiffen 1969:217-21).

Classical Revival - A revival of or return to the principles of Greek or Roman art and architecture. Buildings constructed in the United States during the period 1895-1920 using the Classical Greek or Roman styles tended to be notable for their symmetrical arrangements, solid and weighty character and use of pretentious figural and ornamental motifs. Walls tend to be of pale, smooth surfaced marble, limestone, or sandstone.

Dugout - A temporary shelter made by digging out a small room into the side of a hill or ravine, and building a front wall across and facing into the ravine of square-cut turf, log or frame construction. A roof structure was built of poles or logs covered with brush, a layer of prairie grass and final layer of dirt.

Italianate - A style of architecture popular in the United States from approximately 1840 to 1880. The Italianate style, popular for residential architecture, is generally rectangular or squarish in form, two or three stories in height, has wide eaves supported by large brackets, tall thin first floor windows, and a low-pitch hip roof topped with a cupola. Central one-bay or long porches, bold detailing and rusticated quoins are also common features of the style.

Italian Villa - A style of architecture popular in the United States from approximately 1830 to 1880. Buildings in this style are characterized by an asymmetrical composition, a two-story "L" or "T" shaped floor plan, with a tall tower, a gently pitched roof with projecting eaves, groupings of windows into threes or small arcades, and porches placed between the tower and house or at corners. Ornamentation is generally exuberant and the building has a picturesque quality.

Log house construction - a means of construction using logs as structural elements. Horizontal log construction traditions which were found on the Kansas frontier reflected the influence of German and Swedish log building techniques. The Swedish type is generally characterized by unhewn logs with V-shaped corner notches and projecting ends. The German type is generally characterized by hewn logs and notched, smooth-cut corners. The walls were sealed by inserting chinking between the logs and daubing the inside and outside with mud or lime plaster.

Log house types:

Single-pen - A single room structure having a generally square plan form, one story or one story plus attic height, few windows or doors, and a gable roof.

Double-pen - A two room structure, generally rectangular in plan form and one story or one story plus attic in height. The double-pen house frequently began as a single pen cabin which was later expanded by adding an adjacent second room.

Dog trot - Often referred to as the "southern double log house," consists of two rooms approximately equal in size, sharing a common gable roof but separated by a central open aisle or "dog trot." The dog trot was frequently left unfloored and the stairway to the loft was located there.

Puncheon - A slab frame of log or split timbers, roughly dressed used with the face side up for flooring.

Queen Anne Style - A style of architecture popular in the United States between approximately 1880 and 1900. The style is characterized by asymmetrical compositions and a great variety of forms, textures, materials and colors resulting in an exuberant effect. Towers, turrets, tall

chimneys, bays, encircling verandas, and textured wall surfaces are trademarks of the style.

Quoin - A corner of stone or other material toothed into the walls making the angle.

Renaissance Revival - Revival of the Renaissance architectural style. In the United States, the Renaissance Revival manifested itself during the mid-19th through early 20th centuries. Characteristics of the style are arched openings, rusticated masonry laid with deep joints emphasizing strong horizontal lines and a massive quality. Cornices tend to be finely detailed with crisp elements.

Rubble construction - A wall of stone masonry construction using rough, courseless and undressed stone.

Second Empire - A style of architecture popular in the United States from approximately 1860 to 1890. Buildings in this style are generally two- or three-story symmetrical square blocks with a projecting central pavilion. The mansard roof is the distinguishing feature of the style; roofing is generally multi-colored slates or tin plates. Classical details such as moldings, cornices, quoins and belt courses are frequently dramatized by different textures and colored materials.

Shake construction - A type of wood frame construction; "shake" cabins erected as temporary shelters in Kansas were built by setting corner posts into the ground and nailing rough hewn boards or, "shakes", split from trunks of trees to them.

Sod construction - A construction type using structural units of sod in a manner similar to standard stone masonry. Sod units were made by turning furrows of turf of an even width and depth, and cutting them into sections approximately three feet in length. The sod units thus formed could be laid up much like brick or stone masonry to form a self supporting wall. Roofs were generally of frame construction covered with prairie grass and finally with a layer of sod. Sod houses, or "sod-dies," as well as corrals, henhouses, cribs, pig pens and windbreaks were commonly found in Kansas in the mid-through late 19th century. Sod construction became very common in western Kansas and was utilized as late as 1938.

Wattle-and-daub - A method of construction consisting of branches or thin laths (wattles) roughly plastered over with mud or clay (daub).

*Definitions derived from Blumenson 1977; Fleming et. al. 1972; Lancaster 1958; Richmond 1977; Rifkind 1980; Siegele 1946; Ware et. al. 1945; and Whiffen 1969.

INTRODUCTION

This assessment was prepared for the Department of the Army, Corps of Engineers, Kansas City District. The government is currently engaged in a study to gather information for the formulation and evaluation of flood control and other water-related problems and solutions for Stranger and Tonganoxie Creeks in Atchison and Leavenworth Counties, Kansas.

The work included in this assessment is called for in the National Environmental Policy Act of 1969 (PL91-190) and the National Historic Preservation Act of 1966 (PL89-665).

The project area is approximately 60 miles in length and is limited to an area one-half mile in width on each side of Stranger and Tonganoxie Creeks (Map 1). Four areas within the project area have been selected for field reconnaissance. These areas are located in the towns of Linwood, Tonganoxie, and Easton and in the rural area of Kansas Highway 92 across Stranger Creek (Map 1). The project areas are located entirely within Atchison and Leavenworth Counties.

The scope of work for this project consists of a literature search and records review to identify, locate, and assess known archaeological, historical, and architectural resources of the entire project area. A field reconnaissance of four selected areas most affected by flooding was completed. The reconnaissance was for the purpose of locating potentially significant archaeological, historical, and architectural resources within these areas and to assess the general nature of resources present.

Field work was carried out by co-principal investigators, R. Gail White and Michael J. McNerney, May 12-16, 1980.

SETTING

Physiography

The Great Plains and the Central Lowland provinces are the two major physiographic divisions in Kansas. The Great Plains, occupying the western two-thirds of the state, and the Central Lowlands, occupying the eastern one-third, are divided by the Flint Hills subprovince. A small portion of the Ozark Plateau province extends into extreme southeastern Kansas.

The Central Lowlands are subdivided into the Osage Plains in the south and the Dissected Till Plains (Glaciated Region) in the north. The Kansas River is the dividing line between these two subdivisions. Stranger and Tonganoxie Creeks are located within the Dissected Till Plains division of the Central Lowlands province. The Dissected Till Plains were once overlain by a glacier which extended south of the Kansas River in places and overlapped the Flint Hills on the west. Sediment from the outwash plains south of the Illinoian and Wisconsinian glaciers were carried by winds and deposited as loess ranging in depth from 10 to 100 feet. The dissected terrain which is characteristic of the area is the result of the down cutting action of streams. Erosion of the loess deposits has exposed chert-bearing Pennsylvanian limestone which provided raw materials for making stone tools during the prehistoric period.

The topography of this region is gently undulating. Where large streams occur, valleys tend to be broad and open and well suited to cultivation. Along the Missouri River, local relief ranges from 50 to 300 feet and is too rugged for cultivation. Elevation within the Stranger Creek drainage system ranges from 780 feet on the floodplain to 1,180 feet on upland divides.

The Stranger Creek system drains an area in northeastern Kansas of approximately 550 square miles, including portions of Atchison, Jefferson, and Leavenworth Counties. Major streams in the Stranger Creek system and their orders as established by Strahler (Brockington and Logan n.d.:3) include Stranger Creek (sixth order), Nine Mile Creek (fifth order), Walnut Creek (fourth order), and Tonganoxie Creek (third order).

Climate

Three climatic types occur within Kansas -- humid subtropical, temperate continental, and middle latitude steppe (Self 1978:61). The climate of the Stranger Creek area is of the temperate continental type.

Temperature extremes range from below zero during winters to over 100°F. in summers. Average temperatures of the coldest month are below 32°F. The frost-free period is approximately 190 days (Self 1978:63).

Precipitation is greatest during the warm season and annually averages about 21 inches in western Kansas and a little more than 40 inches in the southeast. Most precipitation is caused by moist air being lifted and cooled in cyclonic storms.

Vegetation

Kansas lies within the prairie grassland province. Prior to the settlement of Kansas, vast expanses of prairie grass were found here. Broadleaf deciduous trees were found along streams and shaded sides of ridges in eastern Kansas. The Stranger Creek area lies within this transitional zone between prairie on the west and deciduous forests on the east. The margin between the prairie and forest environment will fluctuate with climatic shifts. It has been shown that climatic shifts have occurred globally which may correlate with cultural readaptations in North America (Brockington and Logan n.d.:6).

The Flint Hills are generally the western limit of these wooded environments, although broadleaf trees are found along streams as far west as the 100th meridian. West of this point, trees have been planted as windbreaks. Timber resources in eastern Kansas are generally limited to 25 percent of the total land area.

Hardwood trees of eastern Kansas provided a source of fuel and building materials for early settlers to the area. Common tree types of the area include cottonwood, elm, selected white oak, hackberry, sycamore, black walnut, ash, selected red oak, other oak, and pecan (Self 1978:66-70).

Soils

Kansas soils, with the exception of the extreme southeastern portion of the state, are classed under the order known as Mollisols. These are generally considered the most productive agricultural soils and are known for their production of corn, wheat, sorghum, and other cereal grains. Kansas soils fall into the Ustoll and Udoll suborders.

The Udolls cover approximately the eastern one-fourth of the state, including the Stranger Creek project area. The Typic Udoll suborder soils of this area were formed from glacial till deposits along with some thick deposits of loess. Soils range from shallow to deep and include black and very dark brown silt loams, clay loams, and silty clay loams. The natural fertility of these soils and the favorable climate of the area normally result in the highest crop production of all soils in Kansas (Self 1978:78-79).

Fauna

The rich natural environment of Kansas provided the setting for diverse and abundant wildlife. The prairie grass environment supported large game, such as bison and elk, while the forested stream setting was suitable for white tailed deer. Other mammals, such as bear, wolf, coyote, beaver, raccoon, and bobcat, were common to the area (Brockington and Logan n.d.:6). The Kansas River and its tributaries provided a number of species of fish and mollusks.

RESEARCH METHODS

A literature and records search was conducted for known cultural resources within the total project area. Historic, archaeological, and architectural files of the Kansas State Historical Society's Historic Site Survey, Kansas University Museum of Anthropology, and the Kansas State Historical Society were reviewed. State, county, and local histories were reviewed for historical background information. Collections of the Kansas State Historical Society Library were reviewed. Sources consulted included unpublished county and local histories, newspaper clippings, and historical atlases. Topical searches were conducted for information regarding historic resources (bridges, buildings, etc.). Previously completed surveys and inventories were reviewed for documented sites. All sites located in this manner were recorded on standard data forms (Supplement 1).

Archaeological survey methods used in this study conformed to the proposed regulations of the National Park Service directive (36CFR Part 66) and the Department of the Army Regulation No. 1105-2-460 (33CFR305) as recommended in the scope of work (Appendix A, 2b.). The National Park Service directive states that the reconnaissance should

... make it possible to identify obvious or well-known properties, to check the existence and condition of properties, tentatively identified or predicted from background research, to identify areas where historic properties are obviously lacking and to indicate where certain kinds of properties are likely to occur.

The Army's definition (33CFR305) states that a reconnaissance survey includes

... a literature search and records review plus an on-the-ground surface examination of selected portions of the area to be affected, adequate to assess the general nature of the resources probably present and the probable impact of alternative plans under construction.

Using these recommended guidelines, Michael J. McNerney conducted a pedestrian survey of selected portions of the following tracts: 70 acres near Easton, 18 acres in Linwood, 15 acres in Tonganoxie, and 300 acres upstream from the Highway 92 bridge (Map 1 and Maps 6, 7, 8 and 9). Approximately 153 acres (38 percent) were examined with emphasis on those areas most suitable for human use and occupation. Spring plowing had just been completed at the Highway 92 and Easton tracts, affording 100 percent ground visibility. In these areas, the zones of high cultural resource potential (terraces and slightly higher elevations in the floodplain) were systematically walked at 20-meter intervals. At Linwood and Easton, the ground surface was obscured by grass (residential lawns), weeds, and winter wheat. Creek banks and other areas exposed by erosion were examined at these locations, and the zones were assessed for cultural resources potential. In addition to the pedestrian survey, local residents were interviewed for information regarding known historic or prehistoric sites.

Site numbers assigned by various agencies to previously recorded resources have been maintained for the purpose of this study. For example,

sites coded with a ten digit reference number (000-0000-000) were obtained from the files of the Kansas Statewide Historic Inventory. Those which are referenced 14LV00 and 14AT00 refer to archaeological sites located by University of Kansas; reference numbers LV-00 refer to sites and urban zones of potential significance identified during the reconnaissance. Site numbers are used consistently throughout the report, data forms, and maps.

ARCHAEOLOGICAL CONTEXT

The extent of our knowledge about the prehistory of a given region depends upon archaeological research. Extreme northeastern Kansas has had some selected investigation in the past. Probably the first archaeological excavations in Kansas were made by Reverend Isaac McCoy in 1830 near Fort Leavenworth. He apparently dug into an earth and stone filled burial mound (Wedel 1959:83-84). Later, George J. Remsburg, an Atchison County newspaper man investigated sites in northeastern Kansas (Wedel 1959:94). In addition, Remsburg wrote frequently of Stranger Creek and the Indian sites in the vicinity (Rensburg n.d. ca. 1910). The accidental discovery of portions of two human skeletons in 1902 (Lansing Man) near Leavenworth, which were suspected of being those of "glacial man," brought wide attention to Leavenworth County. Geologists and anthropologists debated the age of the deposits and skeletons for some time. More recently a radiocarbon date of 3835 B.C. $\pm$ 105 was obtained from the site which indicates an Archaic Period occupation (Brockington, Personal Communication) rather than the earlier Paleo Indian period. For the next forty years, there was little more than sporadic archaeological observations in northeastern Kansas. Wedel's investigations under the auspices of the U.S. National Museum from the late 1930s to the mid-1940s mark the beginning of systematic professional research in northeastern Kansas and northwestern Missouri.

Recent archaeological research, much of it carried out in conjunction with Corps of Engineers projects, has occurred to the east, south, and west of the Stranger Creek area. Some of these projects include archaeological and historical investigations in Missouri for the Little Blue River channel project (Brown and Baumler 1976) in Jackson County, Smithville Lake project (O'Brien 1977) in Clay County, and the Kansas City International Airport project (Logan 1979) in Clay County. In Jefferson County, Kansas, west of Stranger Creek, research has been conducted at Perry Lake on the Delaware River (LeeDecker and Fahey 1977; Reynolds 1979). Archaeological investigations at the Clinton Lake project near Lawrence recorded sites varying from Paleo-Indian through Central Plains (Chambers and Tompkins 1977). To the south, work is currently underway at the proposed Hillsdale Reservoir in Miami County, Kansas (Rohn and Woodman 1976). In Leavenworth County the Kansas State Historical Society (Witty and Marshall 1968) and the University of Kansas (Heffner 1973) recorded prehistoric sites in conjunction with the Salt and Mud Creek surveys respectively.

There are several other studies and projects which could be mentioned, but this brief review provides an adequate summary of recent work in the area surrounding Stranger Creek. One other study for which the field work is presently underway and upon which this study relies is an archaeological survey of the Stranger Creek watershed being conducted by the University of Kansas Museum of Anthropology (Brockington and Logan n.d.). This research encompasses the 550 square mile watershed of Stranger Creek and, when completed, will be a valuable cultural resources management tool.

Using the studies mentioned and what information is presently available from the University of Kansas study, a summary of the cultural history

of the region will provide a useful framework for predictive statements and future study. The discussion will be brief, since similar summaries have been offered repeatedly in the reports previously mentioned.

Paleo Indian: ca. 12000-8000 B.C.

At the close of the Pleistocene era, inhabitants of the Central Plains hunted now extinct fauna, including mammoth, horse, and bison (B. occidentalis). Just before the turn of the 20th century, a projectile point was found in direct association with bones of the large extinct bison on Twelve Mile Creek in Logan County (Wedel 1959:88-89). The tool was of an early variety, but it did not exhibit the characteristic fluting of Clovis and Folsom points so diagnostic of the early Paleo Indian period. Most of these early man sites are bison or mammoth kill and butchering sites. There is no archaeological evidence of other subsistence activities for these nomadic hunters, but it would seem unlikely that they were not exploiting some vegetal resources. Whatever the full range of subsistence activities included, it is inferred that the people operated in small nomadic bands.

In northeastern Kansas and the Stranger Creek area, this period is represented by surface finds of Folsom and Plainview points (Wedel 1959:176; Witty 1979:8). A Plainview point is reported from a bluff crest site (Figure 1, 14LV314) overlooking the Missouri River near Leavenworth (Kansas State Site Inventory Supplement 1975).

Archaic: ca. 8000 B.C.-A.D. 1

As the glaciers retreated and the climate changed, the large herbivores which had been hunted during the Paleo Indian period became extinct. White tail deer and bison (Bison bison) became the major meat source on the Central Plains, supplemented by extensive foraging and gathering of wild vegetal products. Early and middle cultural complexes of the Archaic period include the Sedalia Complex, first identified near the Missouri town of the same name, and the Nebo Hill complex near Kansas City (Shippee 1964). The early Middle Archaic period is represented by bison hunting and wild plant food exploitation at the Sutter site in northeastern Kansas where radiocarbon dates indicate an occupation dating to 6000 B.C. (Katz 1973). Excavations at the Snyder site in south central Kansas indicated Archaic occupations ranging from 3000 to 20 B.C. (Grosser 1973). Recent excavations at the Coffey site on the Big Blue River west of Stranger revealed important archeo-environmental data. Buried occupation strata at the site indicate exploitation of bottomland and prairie flora and fauna, including bison, deer, waterfowl, fish, and wild seeds (Schmits 1978:164).

Throughout the long Archaic period, there appears to be a trend toward increasing population densities, social complexity, and sedentary lifeways. As research progresses on Stranger Creek, information on the Archaic use of the area will undoubtedly be forthcoming.

Early Ceramic: ca. A.D. 1-1000

Localized cultural developments of this early pottery period are referred

Figure 1

Cultural Chronology
Stranger Creek Area
(Adapted from Brown 1976)

Kansas Antiquities Commission	Archaeological Phases or Units	Selected Sites	Aboriginal Subsistence Patterns
1800 Historic		Pensineau Site KANSA Village	Small Scale farming-hunting
1600 Late Ceramic			
1400			
1200 Middle Ceramic	Steed Kisker Nebraska	Steed Kisker Doniphan 14DP2	Agriculture hunting and gathering
1000	Pomona		
500 Early Ceramic	Grasshopper Falls Kansas City Hopewell	Gene Hill LV-R-04 14LV92 Quarry Creek Desiter	Hunting, gathering, incipient agriculture
AD BC			
1000	Late Archaic		
2000		14LV10	Hunting and gathering
4000 Archaic	Middle Archaic		
6000	Early Archaic	Nebo Hill	
8000			
Paleo-Indian			
10000			Big game hunting
12000		Surface finds of Clovis, Folsom and Plainview (14LV314) points	

to as Plains Woodland (Witty 1979:9). Although still exploiting the wooded stream valleys of the plains, subsistence activities began to change. White tail deer became an important resource, and the earliest domestic corn and beans date to this period. Sites are usually located along major streams, often at the junction of tributary streams. In eastern Kansas, the Early Ceramic period is best known from sites which exhibit elaborately decorated ceramic vessels, stone chambered burial mounds, exotic trade goods, and other socio-religious traits related to the well-known Hopewellian complexes of Illinois and Ohio. In northeastern Kansas and northwestern Missouri, Early Ceramic sites which show Hopewellian affiliations are the Quarry Creek site (Figure 1) located at Fort Leavenworth (Muir and Associates 1976), the Kelley site in Doniphan County (Brockington and Logan n.d.), and the Renner (Wedel 1943) and Deister (Katz 1974) sites just north of Kansas City in Platte County, Missouri. Brockington and Logan report a site on Stranger Creek (14LV92) with apparent Hopewell traits, and there are others that have not been recorded at the time of this writing (Logan, Personal Communication).

To the west, along the Delaware River, is another recently defined Early Ceramic complex known as the Grasshopper Falls phase (Reynolds 1979). A settlement pattern of small isolated clusters of light pole and grass covered houses, located on alluvial terraces, is indicated. Small corner notched projectile points observed in the collection of Gene Hill (site LV-R-04) during this reconnaissance survey are similar to points recovered at site 14JF333 (Reynolds 1979:132D-E) and suggest that Grasshopper phase sites are present along Stranger Creek.

Middle Ceramic: ca. A.D. 1000-1500

Three fairly well defined archaeological complexes of this cultural period are present in northeastern Kansas and northwestern Missouri. Pomona Focus sites are characterized by two to four house structures located on low terraces in floodplains, cord marked ceramics, and small arrow points (Rohn and Woodman 1976). Sites of the Nebraska phase occur in the extreme northeastern tip of Kansas, marking the southern limit of this eastern Nebraska and western Iowa complex. This complex is characterized by semi-subterranean post type house structures, which occur singly or clustered in groups (Blakeslee and Caldwell 1979). Cord marked, cord marked/smoothed, and smoothed pottery vessels exhibit plain and collared rims. Wedel (1959:98) excavated a Nebraska phase component at the Doniphan site (14DP2, Figure 1).

The third complex is known as Steed-Kisker. This cultural manifestation was first identified from burial and habitation sites along the Missouri and Platte Rivers in western Missouri (Wedel 1943). Shell tempered pottery exhibiting distinctive decorative motifs and vessel forms indicate close affiliation with Mississippian period sites in the Cahokia area.

All three of these cultural units were partially contemporaneous, and the people were probably in contact. Hunting, gathering, and horticulture constituted the subsistence base of each complex. At the present time, sites of these phases have not been identified on Stranger Creek, but it is likely that components of these phases will be identified in the future.

Late Ceramic: ca. A.D. 1500-1700

This period is often referred to as Protohistoric. Sites of this period are not well defined in northeastern Kansas. However, just across the Kansas border in extreme southeastern Nebraska, Euro-American trade goods and historic documents suggest that the Fanning site represents a protohistoric occupation possibly affiliated with Dhegiha Siouan groups (Wedel 1959:171). Nearby, in central and northcentral Kansas, this period is recognized by sites representing protohistoric Wichita and Pawnee. At the present time, there is a hiatus in the cultural history of this region from the close of the Nebraska and Pomona Foci until Euro-American contact.

Historic: ca. 1700-Present

French traders encountered a Kansa village near Doniphan, Kansas, in 1718. Wedel (1959:130), excavating at the Doniphan site (14DP2, Figure 1), corroborated this early historic contact location. This event conveniently marks the beginning of the historic period in northeast Kansas. Later, probably after 1757, the Kansa left this area and settled near the mouth of the Blue River (Wedel 1959:51-52).

The arrival of Euro-Americans and displaced eastern Indian tribes is presented in the history section of this report. Two historic archaeological sites on Stranger Creek are representative of this period, the Paschal Pensineau Trading Post site just north of Potter and the old town of Millwood. These sites will be discussed further in a following section of this report.

HISTORY

Historical Sketch of Kansas

The earliest recorded European contact with present-day Kansas was in 1541 when the Spanish expedition under Francisco Vasquez de Coronado explored and laid claim to the region. Coronado's initial exploration was followed by several authorized as well as unauthorized expeditions by other Spaniards. For example, Don Juan de Onate entered present day Kansas in 1601 and confirmed Coronado's earlier opinion that the region was potentially valuable to New Spain and encouraged the founding of Santa Fe. However, when the Spanish failed to locate the large cities of gold and riches they expected, they ceased expeditions into the region and later lost interest in it.

The French later developed an interest in the region for its potential wealth in not only precious metals, but also fur bearing animals and trade with the indigenous population. During the 18th century, several Frenchmen, including du Tisné, the Mallets and Bourgmund traveled into present day Kansas. In 1724, Bourgmund led an expedition as far west as Saline and Ellsworth Counties, Kansas, where he established contact with the Plains Apache and effectively opened the way for the French to trade with the southwestern Indian settlements.

Bourgmund, in his Description de la Louisiane, carefully noted the location of the Indian groups he discovered on his expedition up the Missouri River (Villiers 1925:60-64). At the time of his contact, the Kansa, or Kaw, occupied land near the mouth of the river named for them. Directly south of them were the more populous Osage. Both groups probably migrated from the East in prehistoric times and were both of the Siouian linguistic family. The historic Pawnee ranged in area south from the Platte River into the valleys of the Republican, the Solomon, and the Smoky Hill Rivers, and numbered approximately 25,000 at the time of historic contact. The Wichita were located south and east of the Great Bend in the Arkansas River. Like the Pawnee, the Wichita were Caddoan-speaking horticulturalists (D. Davis 1976:13-14). The Commanche, principally a southwestern group which relied heavily upon the horse, roamed incessantly on the plains (often with the Apache) claiming portions of western Kansas, Oklahoma, northern Texas, and eastern Colorado as their hunting territories (Wedel 1959:24-25).

In 1744, the French built Fort Cavagnial near present day Fort Leavenworth. Fort Cavagnial was a combined military and trading post. The fort became the commercial and military center of the area including Kansas, Missouri and Nebraska, supplying trade goods to the Indians who brought their furs to the fort. Fort Cavagnial remained important to the French until 1763 when France ceded the Louisiana country to Spain. Fort Cavagnial, though small in size, represented the first white outpost of any permanency in present day Kansas, and was a significant factor in the American fur trading industry of Louis XV (Richmond 1974:15-16).

Kansas became American territory with the United States Louisiana Purchase of 1803. When the Santa Fe Trail from Independence, Missouri, to

Mexico became established after 1821, the U.S. War Department built Cantonment Leavenworth in 1827 to protect the trade route, which ran the length of the state, from attacks by the Pawnee and Comanche. The Kansa and Osage tribes had ceded their lands to the United States in 1825, and their former territory of eastern Kansas soon became a reservation for displaced tribes relocated from the east by the U.S. Government (Zornow 1957:34, 55-59; Davis 1976:28-29).

From 1821 to 1850, traders passed through Kansas on the Santa Fe Trail; thousands of immigrants, heading for Oregon and California, cut across northeastern Kansas along the Oregon Trail; and soldiers were organized and outfitted at Fort Leavenworth during the Mexican War (1846-1848). Yet, in 1853, there were still no more than one thousand white settlers between Missouri and the Rocky Mountains (Davis 1976:33). In 1854, the passage of the Kansas-Nebraska Act made Kansas a territory and opened it up to settlement. The Act was embroiled within the nationwide slavery issue; and, under the notion of popular sovereignty, it allowed the settlers to decide for themselves whether Kansas would become a free or slave state. Both pro- and anti-slavery extremists poured into Kansas to give weight to their respective sides. In 1855, pro-slavery advocates elected a territorial legislature, while an anti-slavery party denied its legality and adopted its own constitution. The two factions soon became embroiled in a small war that gave rise to the term "Bleeding Kansas." In 1856, eight hundred Southerners laid waste to the town of Lawrence, and the notorious John Brown and his men massacred five pro-slavers at Pottawatomie Creek. Armies of the two opposing groups met throughout eastern Kansas in battles and skirmishes that killed more than two hundred people (Zornow 1957:67-75).

Further bloodshed was averted by the interference of the troops at Fort Leavenworth. In 1857, a new pro-slavery constitution was drawn up at Leecompton. Free-soilers, or anti-slavery forces, refused to participate in the election of delegates; and the Leecompton Constitution became involved in national politics, further dividing the North and the South. Finally, with the beginning of the Civil War in 1861, Kansas was admitted into the Union as a free state (Zornow 1957:75-79).

During the Civil War, Kansas fought for the Union cause. Troops saw action in Missouri, Arkansas, Tennessee, Mississippi, and the Indian Territory. Three black regiments distinguished themselves at the Battle of Honey Springs, Indian Territory. Indian regiments were also formed to help protect the Kansas border from raids by guerrilla forces from Missouri. In 1863, Lawrence was nearly destroyed in a surprise attack by William C. Quantrill and his Confederate guerillas (Zornow 1957:108-117; Richmond 1974:82-89).

The development of Kansas was stimulated after the war with the construction of railroads throughout the state. The Kansas Pacific Railroad, completed in 1870, ran the length of the state from Kansas City to Denver. The Atchison and Pike's Peak Railroad, later renamed the Union Pacific, Central Branch, ran across several northeastern counties; and the Atchison, Topeka, and Santa Fe line, constructed between 1868 and 1880, followed a portion of the old Santa Fe Trail. Many other railroad lines crisscrossed eastern Kansas by 1880. This construction fostered the sale of land and the growth of many communities throughout Kansas, but the control by the railroad companies over land and shipping rates and their involvement in politics eventually led to strong public reaction against the companies (Richmond 1974:97-112).

Partly because of the railroad construction, which opened much of Kansas to settlement, the population grew with the arrival of many different immigrant groups. Colonies were established by Scandinavians, Germans, German-Russian Mennonites, Pennsylvania-Dutch, and other ethnic groups. Between 1878 and 1880, over 30,000 blacks settled in Kansas to escape the poverty of the South. The number and variety of immigrants have given Kansas a rich ethnic heritage (Davis 1976:113-117).

In the last three decades of the 19th century, the United States became increasingly involved in controversial social issues, many of which sprang from the plains of Kansas. The prohibition movement had always had strong support in Kansas, the first state to constitutionally prohibit the manufacture and sale of alcohol (Richmond 1974:167-169). Disgruntled Kansas farmers organized the Grange movement and the Farmers' Alliance to help control the railroads and to bring about needed social and political reforms. They became the backbone of several third parties as the Greenback, Union Labor, and Populist parties. In 1890, the Kansas legislature was controlled by the Populists who, in 1896, supported William Jennings Bryan in the national presidential campaign (Richmond 1974:174-181).

The spirit of reform continued in Kansas, as in the rest of America, in the early 20th century alongside progress in agriculture and industry. Kansas has since become important for its wheat production and its exploitation of mineral resources, including oil, zinc, coal, salt, and building stone. Next to agriculture, the manufacturing of chemicals, transportation equipment, and food products are today the main elements in the Kansas economy (Socolofsky and Self 1972:map 53).

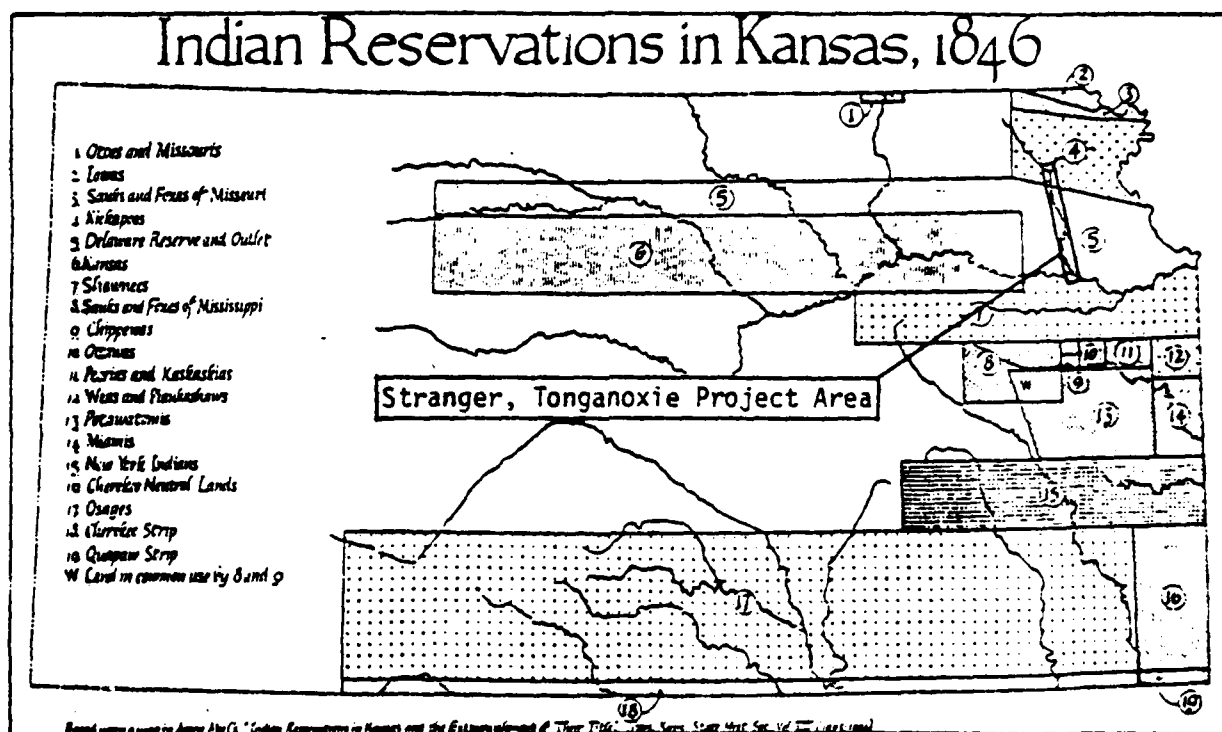
Indian Removal and Missionary Work

In 1825, the Kansa and Osage tribes ceded their lands in eastern Kansas to the United States government. Their former territory was soon assigned as reservations to many tribes whose original homes were east of the Mississippi River. The proposal to relocate these eastern tribes to west of the Missouri River was advocated in the 1820s by a Baptist missionary, Isaac McCoy, who considered the plan of removal one of colonization and civilization for the Indians. In 1830, Congress passed the Indian Removal Act. Executed during the administration of President Andrew Jackson (1829-37), the Removal Act allowed for the relocation of more than thirty tribes to eastern Kansas (Lyons 1945:9-39; Richmond 1974:25-28).

The Delaware was the first to arrive. The 1829 Treaty of Council Camp provided them with a reservation of over 924,000 acres in eastern Kansas. Beginning at the confluence of the Kansas and Missouri Rivers, the reservation boundary went north along the Missouri River to Fort Leavenworth, northwest to a point near present-day Netawaka in northern Jackson County, south to the Kansas River, and east along the Kansas River to the Missouri. Included with the Delaware reservation was a long narrow strip of land called the Outlet which extended west over two hundred miles. The Delaware, like many of the other displaced tribes, was proselytized by Christian missionaries, was offered education and practiced agriculture. A school was established on the reservation in 1835 (Weslager 1978:215-220).

The Kickapoo ceded their lands to the United States in 1832 and was assigned a large tract north of the Delaware. In 1834, the Shawnee tribe was given a rectangular tract 25 by 125 miles which lay south of the Delaware reservation. Other tribes, which were removed to eastern Kansas by 1837, included the Illinois, Iowa, Sauk, Fox, Cnippewa, Ottawa, Miami, Pottawatomie, and Quapaw (Map 2). The Kansa and Osage were given large areas in central and and southern Kansas (Zornow 1957:45-51).

The last tribe to arrive was the Wyandot which came from Ohio in 1843. The Wyandot had been acculturated before removal to Kansas. Because many members of the tribe were full-blooded whites, their treaty with the United States Government allowed them to choose their own locations on their arrival.



Some negotiated with the Delaware and purchased thirty-six sections at the mouth of the Kansas River, where Kansas City is now located. Other Wyandot chose sections on prime farmland and other strategic locations throughout Kansas. Members of this tribe lobbied in Washington to secure territorial status for Kansas. An 1855 treaty moved them closer to full citizenship and property rights (Socolofsky 1970:241-246).

The Indian reservations became the focal point of many Christian missionaries who hoped to educate and civilize the tribes. The Baptist missionary, Isaac McCoy, who had explored much of the region and assisted in the migrations, established several schools and missions. In 1830, the Methodists established the Shawnee Mission in present-day Wyandotte County. Later relocated in Johnson County, the Shawnee Mission taught English and vocational

skills to hundreds of Indian children, opened the Western Academy for young whites in Missouri, and became a frontier center of civilization (Richmond 1974:32-34). Presbyterians, Catholics, Quakers, and other denominations founded more than thirty schools and missions in eastern Kansas, many near Kansas City and along the Marais des Cygnes River (Socolofsky and Self 1972: map 15).

Eventually, encroachments into Kansas by white settlers with the passage of the Kansas-Nebraska Act in 1854 forced the Indians to move again, this time to the Indian Territory. In 1854-55, many of the tribes sold much of their lands to the government, while other lands were laid in trust, allotted to individual Indians, or held as diminished reserves (Zornow 1957:92-94). The lands held by the Wyandots, known as Wyandot floats, were actively sought by speculators and town builders. Acquiring the floats enabled town companies to claim more land and better control the sale of town lots than would have been otherwise possible. The original town lots of Kansas City, Topeka, Lawrence, Manhattan, Burlington, and Emporia were lands once granted to Wyandot Indians (Socolofsky 1970:302-303).

By 1880, most of the Indians had sold their remaining lands and relocated in Oklahoma. The Kickapoo, Sauk-Fox, and Pottawatomie tribes still own small reservations in Kansas. In 1856, the Wyandot tribe successfully won claim to a small part of their former holdings in Kansas City (Zornow 1957:104-105).

History of Leavenworth County, Kansas, and the Stranger Creek Area

Leavenworth County, Kansas, established by the First Territorial Legislature of Kansas in 1855, embraces a portion of northeastern Kansas, partially bordered by the Missouri and Kansas Rivers. Much of the county is rolling land originally covered by prairies and timber and watered by Stranger Creek and its many tributaries (Andreas 1883:417).

The county's inhabitants in the early historic period were members of the Siouan-speaking Kansa tribe who had migrated west to the area. They were found along the Missouri and Kansas Rivers in the early 18th century by French traders and explorers. In 1744, the French erected Fort Cavagnial on the west bank of the Missouri, northwest of present-day Fort Leavenworth, and operated it as a trading post for Indian and French-Canadian trappers in the Missouri Valley until 1763 when France ceded the Louisiana Territory to Spain (Richmond 1974:14-16; Davis 1976:12-13).

In 1803, when the United States purchased the Louisiana Territory, the Leavenworth County area still remained largely unchanged by the French contact. Between the years 1804 and 1819, American exploration parties under Lewis and Clark, Zebulon Pike, and Stephen H. Long passed near the area (Richmond 1974:17-24). With the establishment of the Santa Fe Trail through Kansas after 1821, the United States built Cantonment Leavenworth in 1827 to protect the trail from attacks by Plains Indians. William Clark had secured a treaty with the Kansa and Osage tribes in 1825 which secured for the United States a large part of eastern Kansas, including the area of Leavenworth County. Cantonment Leavenworth (renamed Fort Leavenworth in 1832) became important as a military post, protecting the frontier and

preserving peace between the Indians of western Kansas and American traders traveling along the Santa Fe Trail (Andreas 1883:418).

In September, 1829, much of Leavenworth County became a part of the reserve given by the United States by treaty to the Delaware tribe which was then in Missouri. The Kickapoo tribe was relocated north of the Delaware in an area now including a small part of Leavenworth and all of Atchison Counties (Zornow (1957:44-45). The arrival of these Indian groups and more than thirty other tribes to other parts of eastern Kansas was coupled with the arrival of missionaries. Isaac McCoy, a Baptist missionary, surveyed the reservation boundaries and camped along Stranger Creek in 1830. He later established schools and missions for the relocated Indians (Remsburg n.d.:99; Richmond 1974:32). Catholics, Baptists, Methodists, and Moravians all established missions for the Delaware and Kickapoo in the 1830s and 1840s along the Missouri River near Fort Leavenworth (Socolofsky and Self 1972:map 15).

A few white settlers came to Leavenworth County with these missionary groups. In 1844, Major Robert Wilson settled near the Kickapoo Catholic mission near the mouth of Salt Creek in the northeastern part of the county and opened a trading post. He was followed by several others, including Major William Dyer, an agent for the Kickapoo, and his family (Andreas 1883:459). Another trading post was opened on Stranger Creek north of Potter in 1839. This post was run by Paschal Pensoneau, a French trader and the first white settler in Atchison County (Andreas 1883:369).

The Kansas-Nebraska Act was passed in May 1854. The Act had barely been established when a group of Missourians on June 13, at western Missouri organized the town company of Leavenworth which became the first town of Kansas. The town company of Atchison was established by another group of Missourians on July 27 that same year. Lawrence and Topeka were also formed later in 1854 (Dick 1979:55).

With the passage of the Kansas-Nebraska Act, Leavenworth County received a wave of white settlers bent on making Kansas a free or slave state. Several communities in Leavenworth County were organized at this time, including Kickapoo City, founded near Wilson's trading post on Salt Creek. Fort Leavenworth became the temporary territorial capital, and the City of Leavenworth was staked out south of the fort, even though all of Leavenworth County, excluding the military reservation, still belonged to the Delaware and other Indian groups.

In 1854, Delaware City was established near Leavenworth, and Easton was founded on Stranger Creek where Armistead Dawson had a ranch and store on the military road leading from Fort Leavenworth to Fort Riley. Joseph Potter and his family settled near Pensoneau's trading post in Atchison County (Andreas 1883:419-421, 485-464; Remsburg n.d.:91, 47). This influx of whites from Missouri into Leavenworth County and the rest of eastern Kansas forced the Indian tribes to relinquish their rights to the land. In May, 1854, the Delaware ceded most of their land to the United States, reserving for themselves a strip along the north bank of the Kansas River which was later sold to railroad interests. Within a month, nearly all of their former lands were claimed by Missouri immigrants (Andreas 1883:419).

Despite, or because of, the turbulence in Kansas over the slavery issue in the years before the Civil War, Leavenworth County rapidly gained in

population. By the end of the war, there were more than 18,000 people in the county, Leavenworth being the largest town. More towns were sprouted by the construction of railroads after the war. The government-sponsored Kansas Pacific, which eventually connected Kansas City with Denver, had reached westward to Topeka by 1866; and, by May of 1867, a branch line had been built from Lawrence to Leavenworth. Along the main branch of the Kansas Pacific in southern Leavenworth County grew the towns of Fall Leaf, Lenape, and Linwood while along the Lawrence-Leavenworth branch were Reno, Stranger (Tonganoxie), Hoge Station, and Fairmount (Andreas 1883:465-470; Zornow 1957:137).

The Missouri Pacific Railroad opened a line between Kansas City and Leavenworth in 1868 and extended it to Atchison the following year. In 1871, the Kansas Central Railway Company built a line northwest across the county along Stranger Creek to Holton in Jackson County (Zornow 1957:142-143). Lowmont was established along this line that was later acquired by the Atchison, Topeka, and Santa Fe Railroad. In 1872, the Leavenworth, Kansas, and Western Railroad established a line from Leavenworth, Kansas, and Western Railroad established a line from Leavenworth that passed through Easton; and the Leavenworth, Topeka, and Southwestern line was built southwest from Leavenworth, crossing Stranger Creek where Jarbalo is located.

By the mid-1880s, Leavenworth had a population of 19,000 and Fort Leavenworth had become an important military training school (Andreas 1883:423). West of these population centers were several small towns along the railroads and on Stranger Creek. In Atchison County, the village of Potter was started on Joseph Potter's old farm site (Remsburg n.d.:91). South of Potter on Stranger Creek, the village of Millwood was established around a water-powered flour mill built by Jacob Rapp in 1870. After the mill was torn down in 1910, Millwood quickly declined and vanished (Jones 1956:23-23). Easton had a population of about one hundred by 1885 with several stores and churches. Springdale, platted in 1860, was a small hamlet based around a sawmill and gristmill and supported by nearby farmers and stock raisers (Andreas 1883:46, 465).

Tonganoxie contained about three hundred people and, like Springdale, was surrounded by a strong agricultural community. Tonganoxie took its name from a Delaware Indian who owned a two-story frame house in the area while the county still belonged to his tribe. His house became a stopping place on the stage route from Fort Leavenworth to Fort Scott in the 1850s (Andreas 1883:465; Needham 1938:6-8).

At the mouth of Stranger Creek, Linwood was platted in 1867 with the coming of the railroad, although a sawmill and trading post for the Delaware had been previously established at the site. By the mid-1880s, it had a population of about 125. Senator W. A. Harris purchased several hundred acres west of Linwood and built a fifteen-room, three-story house in the town in 1883. Harris, a leader of the Kansas Populist Party, was a leading gubernatorial candidate in 1896 and was nearly elected governor of Kansas in 1906 (Zornow 1957:200-205, 213; Goff 1967:10). The Harris House is listed in the National Register of Historic Places.

The controversy over Kansas' prohibition law exploded along Stranger Creek early in 1901. Several men from Easton, armed with shotguns, raided the Lackner Saloon in Millwood. Two people died as a result (Jones 1956:100-101).

In early June, 1903, Leavenworth County experienced major flooding of its rivers and streams. Linwood, at the confluence of Stranger Creek and the Kansas River, was totally submerged and many of its homes and businesses were destroyed (Goff 1967:16). Many buildings, including frame houses and the Linwood Methodist Church, were relocated to their present locations on high ground overlooking the original town site.

Through the first half of the 20th century and to the present day, Fort Leavenworth has continued as a major military training center, and since World War II has been a part of the Army's communication and defense networks. The city of Leavenworth has grown into a major metropolitan area. Its manufacturing industries include furniture, food processing, millwork, steel fabrications, and farm implements (Zornow 1957:309). The rest of the county has remained primarily agricultural with the towns west of Leavenworth each containing only a few hundred people (Socolofsky and Self 1972:map 50).

ARCHITECTURAL CONTEXT

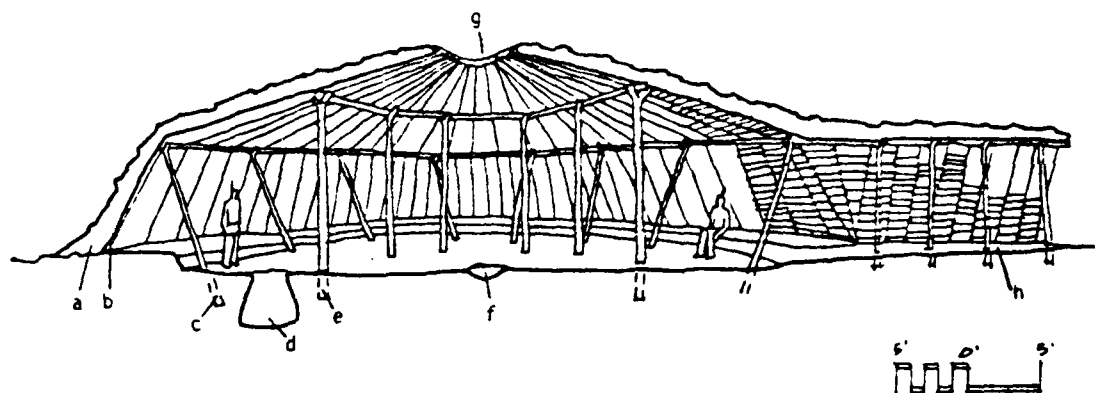
Architecture

The earliest known permanent, man-made structures in present-day Kansas were earth or straw lodges built by the Wichita, Kansa, Osage and Pawnee Indian tribes. These groups were agriculturalists as well as hunters, and their permanent homes were usually located near the valley bottoms where they raised small patches of garden products.

Coronado's exploration of the area in the mid-16th century included a visit to approximately twenty-five Quiviran villages of Wichitas, generally considered the region's pioneer agriculturalists (KSU 1975:5). In the early 1700s, the earliest documented Kansa village was reported by French explorers. The village consisted of 150 lodges close to the Missouri River near present Doniphan, northeastern Kansas (KSU 1975:5). Later explorers' reports indicate that the Kansa Indians began shifting to sites near the Kansas River in the latter half of the 18th century with the principal settlement from about 1800 to 1830 being located about two miles east of present-day Manhattan. Professor Thomas Say, a zoologist and naturalist who visited this Kansa village in 1819, described it as consisting of 120 earth lodges (KSU 1975:5).

Written accounts and photographic records of early explorations of the area now known as Kansas reveal much about the character of these early settlements. The earth lodges were either round or rectangular in shape. They were large enough (rectangular shaped lodges measuring about 25 feet by 60 feet) to house an entire family, its property, produce and livestock in the same structure (Plate 1). The framework was of logs and branches with sod walls and sod or thatched domes (Richmond 1974:5-6). Food stuffs were stored in pits dug below the level of the dirt floors of the lodges during the winter. Stockade type fences around the settlements kept deer, antelope, elk, and buffalo from crops (Slagg 1968:2). As late as the 1870s, the Kansa had small villages in other locations along the Kansas and Neosho Rivers (KSU 1975:5). The earth lodges located along the rivers provided permanent homes for the Kansa. The tipi, constructed of poles and skins, provided a lightweight portable shelter when the Indians went on hunting expeditions.

The early Euro-American settlers of the plains were confronted with the need to provide immediate shelter for themselves and their families. In order to secure a claim, it was necessary for the homesteaders to demonstrate that some type of building was under construction. Upon arriving at the spot to be claimed, settlers constructed a temporary shelter. Depending on available resources and time, the temporary house may have been a cabin of log or "shake" construction but was frequently a tent, a dug-out, or a "soddy." The covered wagon in which the immigrants had been traveling was often used for shelter while building the first house. Many of the canvas covered wagons were outfitted with a cookstove set in the center of the wagon with the pipe running through the top. Even after construction of the temporary house, it was often necessary to continue using the wagon for storing clothing away from the leaky roofs of the "soddies" and dug-outs. During storms, settlers frequently took refuge in the covered wagons which were heavier and more durable than tents.



- a. Sod and exterior tamped earth covering
- b. Grass and willow mats
- c. Secondary roof supports
- d. Food storage pit
- e. Primary roof supports
- f. Firepit
- g. Smoke hole
- h. Entrance

Plate 1. Cross section of a Pawnee earth lodge, after a drawing from Wedel (1936).

Log construction was employed in the plains where stands of timber were to be found. Timber was available along the rivers and streams and particularly in the eastern portions of the plains. Western and upland portions provided fewer large straight trees from which to make logs for building purposes. As a result, log construction was less common there.

During preemption days, it was customary for the claimant to stake off a tract and begin construction of a house which was frequently of log construction. This served to secure the tract while the claimant went back to town or returned to the old home for his family. In time, the anxious preemptors became less careful and resorted to fashioning a pen three or four feet high with logs dragged out of woods as proof of ownership. Eventually, speculators resorted to extreme and often deceiving measures in securing their claims. It was common for several pieces of land to be proved up using the same small frame house, mounted on wheels and moved from claim to claim in order to comply with the requirement for a residence on the plot. Other techniques included laying four poles on the ground and filing a claim based on this "foundation" for a residence or, more simply, by driving a stake in the ground to mark the center of the claim (Dick 1979:34-36).

The common log cabin consisted of one room only, measuring about twelve by sixteen feet. A large fireplace at one end was frequently of wattle-and-daub construction. The more primitive cabins had neither windows nor doors,

the doorway being covered with a piece of old carpet or buffalo skin which was later replaced with a door of batten construction. More comfortable cabins had a small window covered with greased paper. Bare earth served as floors at first, but puncheon floors were eventually laid loosely on top of poles and held in place by additional pole weights placed on top of the shakes (Dick 1979:77).

For many of the early settlers, log construction was a building technique not only environmentally suitable but culturally familiar. Many of the building traditions of the eastern and southern states were applied in Kansas. Structural types (single pen, double pen, and dog-trot cabins) and techniques (half dovetail and dovetail corner notching), which were common in the old home states, have been found in log buildings in Kansas. A single pen cabin has been moved to the Smokey Valley Roller Mill in Lindsborg, and a dog-trot cabin built in 1858 in rural Geary County has been identified (KSHS 1973).

One early account describes a cabin built by Samuel Dyer where the town of Juniata (Riley County) later developed. Dyer's cabin to house himself, his wife, and their thirteen children, was one story high and three stories long (Riley County Historical Society and Museum n.d.:11). The description does not make clear whether the cabin was of frame or log construction. However, L. A. Huffman's 1897 photograph of Bill Reece's Dance Hall in Miles City, Montana, reveals that log construction techniques were used in the Plains for buildings larger than just simple cabins. Horizontal logs between upright posts set at regular intervals allowed for construction of a long rectangular-shaped building (Brown and Felton 1955:145).

"Shake" cabins were commonly built as temporary shelters. The "shake" cabin was built by setting corner posts into the ground and nailing shakes (rough-hewn boards, split from trunks of trees) to them.

Further west and also in areas where timber supplies were less abundant, the earth itself provided materials for building temporary shelters. The urgency for getting settled and planting crops necessitated building a shelter as quickly as possible. Of the two common types of earth constructions, the dugout was more easily and quickly prepared. The dugout was essentially a room dug in the side of a hill or ravine (Plate 2a). A door frame and possibly a window were made with posts or rails. The front wall, facing into the ravine, was made of square cut turf or logs if they were available. The roof structure was made of poles or logs covered with brush, a layer of prairie grass thick enough to hold dirt, and a final layer of dirt over the grass.

The dugout was generally small in size and afforded minimal comforts. The Wright family in Nuckolls County, Nebraska, had a dugout 9 by 12 feet which housed a family of six. A boy and girl slept on the table, and a bed-tick placed on the floor at night had to be carried out during the day in order to have enough room to walk around in the house (Dick 1979:110-112).

Roofs invariably leaked and dirt continuously sifted through the brush and grass roof covering. Travelers driving across the prairie at night commonly drove over the inconspicuous dugout, and cattle occasionally wandered over the housetop. The constant "shower" of dirt from the roof, the danger of collapsing roofs, and the predictable leaks must have made the dugout a dismal introduction to prairie living. The reaction of Mrs. John McCashland



Plate 2a. Exterior view, Mead family dugout, Ford County. Photo - The Kansas State Historical Society, Topeka, Kansas.



Plate 2b. A soddy built in Dighton, Lane County. This building is reported to have been the first hotel in town. Photo - The Kansas State Historical Society, Topeka, Kansas.

of Fillmore County, Nebraska, was no doubt typical of many who anticipated greater things in the land of promise. When she first saw the dugout her husband had prepared, she was so discouraged she burst into tears. Mrs. George Shefer of Delphos, Kansas, objected strenuously to living in a hole in the ground like a prairie dog (Dick 1979:111).

In spite of the disadvantages of the dugout, it was an expedient and inexpensive shelter. The dugout was a very common structure and was used for many purposes, including blacksmith shops, post offices, and lodging places (Dick 1979:112).

The sod house was a more comfortable and durable house than the dugout. During the 1870s, three types of sod houses were reported as common in McPherson County, Kansas -- those which were laid up rough, those which were plastered, and those which were hewed off smooth (Dick 1979:113). Although sod houses varied in size, a common building plan-form was rectangular, measuring sixteen by twenty feet long (Plate 2b).

Sod "bricks" were made by turning furrows of turf of an even width and depth and cutting the sod into three-foot long sections. The sod bricks were laid up much like brick masonry. Broken joints were used, and cracks were filled with dirt. Third courses were laid sidewise to interlock and bind the wall together, and hickory withes were sometimes driven down into the wall as a sort of reinforcement. The roof was of frame rafters covered with wood sheeting boards and tar paper. The roof was then covered with thin sods placed grass-side down, and grass allowed to grow on the roof. A mixture of clay and ashes was used if the house was to be plastered. If wall were to be smooth, a spade was used to hew the wall to a smooth finish (Dick 1979:113-114).

Like the dugout, the "soddy" had a propensity for leaking. When the roof was saturated, it continued to drip for days afterward. Dirt and straw dropped from the roof into the house, making cleanliness a constant struggle. Light and ventilation were minimal, due to the few windows found in the "soddies."

Not all sod houses were humble one-room structures. A Mr. George Rowley built a seven-room sod house at Wauneta, Nebraska, in 1876 and had a piano among the furnishings (Dick 1979:116).

Sod construction was also used for building corrals, henhouses, corn cribs, windbreaks, and pig pens. Pig pens were commonly made by building a sod wall and digging a ditch around the inside of the wall to prevent the animals from rooting it down. Windbreaks were made by building a sod wall and lining it with stacks of hay. Sometimes a hay shed was built out over the wall (Dick 1979:115-116).

Although generally associated with the settlement period of Kansas, "soddies" became very common throughout western Kansas and were utilized as late as 1938 (WPA 1949:153).

An earlier type of sod house was reportedly common in Lawrence, Kansas, in the mid-1850s. Walls were of sod construction, but not the roof, as were the later frontier sod houses (Dick 1979:57-58).

Prefabricated frame houses were manufactured by companies in Pittsburgh, Cincinnati, and St. Louis for shipping to the frontier. An advertisement from an 1857 Cincinnati newspaper (Riley County Historical Museum Collection 1857) offered prefabricated houses manufactured by Hinkle, Guild, and Company of Cincinnati. The frame buildings were advertised as being "for Kansas and Nebraska" and "entirely different from the portable cottages we formerly built." Four models were available in varying sizes, weights, and prices. The simplest was a single-room house, 15 feet square, 7 feet 10 inches high, and costing \$80. A two-room model 15 feet by 30 feet long was also available at a higher cost. Two-story houses with separate entrances into each room were advertised for multiple family occupancy. A good example of a prefabricated frame house which was brought to Kansas is the Hartford House (Plate 3a) in Manhattan. The house was brought to present-day Manhattan on the steamboat Hartford in May, 1855 (Riley County Historical Society and Museum n.d.). The single-room house was built onto and eventually incorporated into a larger dwelling of which the Hartford House formed the living room. Recent efforts have resulted in the relocation of the original house to the grounds of the Riley County Historical Museum.

Balloon frame construction became possible with the development of crude sawmills. At first, the wood was rough and rather crudely sawn. As a result, houses and furniture built from the lumber tended to be of a similar character. In spite of their primitiveness by present-day standards, these early frame houses were enough to cause neighbors to consider their occupants to be putting on airs (Dick 1979:78).

More enduring than sod or frame buildings were stone buildings which were erected in parts of the plains. Simple one-room structures were built in portions of Kansas where stone was abundant and timber was scarce. These early structures tended to be straightforward and unadorned. Walls of rubble construction with quoin-like corners and gable roofs with wood shingles were common. The Easton Methodist Church (Plate 3b) is a good example of this straightforward building form. By the 1870s and 1880s, substantial stone houses, barns, and public buildings were being built in Kansas. Stone buildings observed in rural Riley, Wabaunsee, Pottawatomie, and Dickinson Counties reflect a wide range of stone construction techniques. Small, utilitarian outbuildings, as well as substantial residences, were built of locally available stone. The availability of local stone and masons in need of employment after construction of Ft. Riley made possible the exploitation of this abundant material. The stone buildings in various regions of Kansas provide an excellent opportunity to observe the use of diverse materials available to settlers and developers of the plains.

During the late 19th and early 20th centuries, Kansas architecture is more nearly akin to the mainstream of American architectural development. Architectural resources from this period are more abundant than from the mid-19th century. Several factors are responsible for this.

Kansas achieved a sense of stability in the wake of Indian relocations, the Civil War struggle, and early attempts at homesteading. The Homestead Act (1862), the Timber Culture Act (1873), and the federal land grants to the railroads in the 1870s opened the floodgates of immigration to Kansas. The liberal mix of settlers from the lake states, New England, the south, Mexico, and northern Europe enriched the cultural blend of Kansas in the last quarter



Plate 3a. The Hartford House, a prefabricated frame house shipped to Manhattan, Kansas in 1855 aboard the steamboat Hartford.



Plate 3b. Site 103-1740-002, Easton Methodist Church, Easton, Kansas, built ca. 1870.

of the 19th century. The influx of settlers during this period who were interested in establishing permanent homes provided greater stability in the developing state.

Architecture in Kansas during the last quarter of the 19th century contrasted greatly with that of the mid-19th century. The temporary shelters and hovels of the first settlement period quickly gave way to more permanent and stylish buildings of stone, brick, and frame construction.

Architectural styles which were popular in eastern cities became more frequent in Kansas during the late 19th century. Houses in the Italianate, Italian Villa, Second Empire, and Queen Anne styles became common in both small and large towns. Farmhouses also tended to be more stylish and pretentious. The large, two-story frame farmhouse with an irregular plan and profile with encircling verandas and porches tucked into corners of the buildings became ubiquitous throughout east and central Kansas. House types such as the double pen and the "I" house, which were common to the upper southern states, were also introduced to Kansas during this period.

Farmstead development was given greater consideration during the late 1800s and early 1900s as the agricultural potential of Kansas was more fully recognized. Mixed farming (stock and grain) became common in eastern and central Kansas. Farmsteads in eastern and central Kansas generally are large and consist of the farmhouse, one or more medium or large barns, and numerous sheds and outbuildings (Plate 4a). Although no longer used, windmills mounted on iron towers are still common features of the Kansas farmstead. While no formal analysis of farmstead composition was undertaken during the reconnaissance, certain characteristics were noted. Farmhouses generally faced onto the highway passing in front of the farmstead. Older barns and outbuildings were situated behind or to the side of the farmhouse. Garages, machine sheds, and other buildings which postdated the farmhouse and main barns were often placed in front of but at some distance from the farmhouse. Driveways between the farmsteads and service roads were rarely centered with respect to the house; rather they were placed on one side or the other of the house and provided access to the barn and outbuildings as well. Windbreaks of trees to the north and west of farmhouses are common features, as are isolated ornamental and shade trees around the house and outbuildings. In general, farmsteads correspond to Trewartha's (1948:201-204) category of cash grain farmsteads. Cash grain farmsteads are characterized by numerous and substantial buildings.

By the late 1910s, public and private buildings were generally reflecting the influence of the neo-classical style. Schools, stores, and residences tended toward simplification of massing and detail. Other buildings of the early 20th century continued to be built along the lines of the revival styles of the 19th century. St. Lawrence Catholic Church (Plate 4b) in Easton, built in 1916, is a good example of the use of Romanesque details in a substantial church building.

By the late 1920s, Kansas architecture was becoming simpler, reflecting the 20th century movement toward simplified, less ornamental buildings. Bungalow style houses became common throughout Kansas as the style gained in national popularity. The bungalow tradition also influenced public buildings, frequently being evident in modest size rural churches and schools.



Plate 4a. Site LV-R-03, typical farmstead in rural Leavenworth County.



Plate 4b. Site 103-1470-001, St. Lawrence Catholic Church, Easton, Kansas

Standardized buildings have become even more common in Kansas during recent decades. Ranch/tract type houses are found in rural and urban settings, replacing in many instances the large two-story frame or stone farmhouse so characteristic of the rural landscape. Mobile homes have likewise become familiar residential features of the area. Machine sheds of pole frame construction and of prefabricated component steel systems are being used to provide storage space for both machinery and livestock on many farmsteads.

Urban and Trade Centers

During the 1850s and 60s, Kansas was obsessed with town-building mania. Legislation passed by Congress on May 23, 1844 provided that 320 acres could be held as a town site when it was occupied. It was common for a group of speculators to incorporate by a special act of legislature and stake out 320 acres. Settlers were frequently engaged to preempt surrounding quarter sections purportedly for their own use and not for resale. However, the settlers frequently sold out to the town speculators, who then had a town site of 500 to 1,000 acres of land (Dick 1979:40-1).

After a town was laid out, the more difficult task of attracting investors and settlers to the "new metropolis" began. Several methods were popular. Newspapers, either hired or lured to set up shop in the new community, were effective mouthpieces. Town speculators, or sometimes citizens groups, had newspapers printed and then sent copies to the eastern states. The Herald of Freedom of Lawrence had a subscription list of 7,000 in 1857 when the fledgling town was but three years old (Dick 1979:44).

Another popular technique used in promoting a town was hotel building. Frequently the town company would erect the hotel which provided lodging for newcomers and, equally important, helped give the impression of a developing, stable community.

Free lots were often given to churches, lodges, business establishments, and other organizations. In some cases, lots were given to anyone who would build a house of a stipulated value. So keen was the competition to establish stable, successful communities that town promoters would offer free lots to anyone in order to undermine the development of nearby towns. When rivalry became extreme, town companies were compelled to buy out a neighboring town in order to save themselves (Dick 1979:45).

Some towns succeeded, but many failed to achieve their destinies as emporiums of the Midwest. Scores of towns were merely fabrications of crafty speculators who arranged a town company and had imaginative lithographs and maps printed. Shares in these paper towns were sold to naive investors back east (Dick 1979:48). John J. Ingalls, a native New Englander who later represented Kansas as senator, was lured from his Massachusetts home to relocate in Sumner, Kansas. Promoted in Massachusetts as a commercial city of large proportions, Sumner's purported accoutrements included four churches, substantial residences, schools, a commercial exchange, and a college. Ingalls found only one street interspersed with stumps which had any grade, the rest being footpaths between the cabins and shacks. The cabins themselves were shabby, some without chimneys, windows, and doors, some without shingles or

clapboards, set on stone pilings or tree stumps. Locals referred to Sumner as a "chromatic triumph of lithographed mandacity." Other writers and travelers related their impressions that these new western villages were indescribable and comparable to nothing but themselves.

It must have been discouraging to many settlers to discover that much of the development they had anticipated remained to be accomplished. However, growth of such towns as Leavenworth and Lawrence was rapid enough to easily gauge their progress. Within sixty days in 1855, some fifty dwellings were built in Lawrence with stone structures and other modest buildings being quickly erected (Dick 1979:45; Robinson 1856:66). Leavenworth was described in 1854 as consisting of an uncovered steam sawmill, a printing office under a tree, four tents, one house, a campfire, and a barrel of whiskey (Romsburg 1921:n.p.). During an eight-month period, the Kansas Herald reported that the town had mushroomed with the construction of a steam sawmill, two brick-yards, one three-story hotel, four boarding houses, five drygood stores, five groceries, five saloons, two boot and shoe stores, two saddlery shops, one tin shop, two blacksmith shops, one hundred tenanted houses, and twenty or thirty more in the process of construction (Dick 1979:45-56). Within thirty years, Leavenworth had grown to an important outfitting center for western travelers and boasted a population of 19,000.

Buildings in these early towns differed little from the temporary shelters of settlers in the rural areas. In 1854, Lawrence was a village of tents, although sod houses were common by the following year (Dick 1979:57-58). Dugouts, sod houses, log cabins, and shake structures were common to the early towns as well as to homesteads.

Prior to the Civil War, towns tended to be located along and oriented towards rivers and creeks. Common belief that the Kansas River and its tributaries would be navigable year round, resulted in considerable optimism for development of major streams. Speculative plats and lithographs showed commercial blocks fronting onto rivers, with residential districts complete with parks and churches laid out in a grid pattern back from the bustling waterfront. In addition, the general availability of timber in the stream environment facilitated early development of these areas. Places where a trail crossed a stream were particularly favored. Early isolated homesteads were also generally situated in the valleys, rather than in the uplands, for the same reasons. In time, settlers ventured farther upstream or into the uplands. In the 1870s, homesteaders had traveled in frame covered wagons -- boxcar-like creations equipped with stoves for winter travel (Dick 1979:121). But by the 1880s, railroad travel was well established.

Development of the railroad during this period resulted in greater flexibility in locating trade centers away from navigable streams. Simultaneously, widespread standardization and greater availability of manufactured materials in late 19th and early 20th century America affected town development, architectural styles, and, to an extent, farmsteads.

John C. Hudson in his essay on plains country towns has observed how many villages of the plains are oriented with respect to the railroad line rather than with the cardinal points on the standard grid system (Blouet and Luebke 1979:100-105). Plains towns of the later 19th and early 20th century are frequently characterized by what Hudson refers to as the

"T-town" form, where the business district is located on one side of the tracks, while the principal avenue is perpendicular beginning near the centrally located depot and terminating in a square or park containing a school or other public building (Blouet and Luebke 1979:103). Many small towns in Kansas reflect this basic orientation.

Standardized railroad depots were built by railroad companies during this period. Manufactured building components encouraged a homogeneous quality in many buildings and subsequently in small communities of the period. Sawn lumber available at local lumber yards and cast iron store fronts available as stock items from foundry catalogs represent but two examples of standard materials commonly available in Kansas during the late 19th and early 20th centuries. Small trade centers in Kansas, such as Enterprise and Wamego, still offer the opportunity to observe general town development and architectural patterns from this period.

Bridges

From the earliest days of settlement, the rivers and streams of Kansas have been the source of both blessing and frustration. While providing attractive locations for early settlements, their propensity to overflow and limited navigability were obstacles to early development of the state.

A number of ferries established on the Kansas River in the 19th century partially solved the transportation problem. However, many streams were too small for a ferry. In many cases where they were established, inclement weather prevented operation of ferries, resulting in delays to the overland traveler.

Early accounts relate the difficulties frequently encountered in fording streams. Stranger Creek was no doubt typical of the many small streams which were obstacles to the early traveler. A Major W. H. Emory, on a topographic expedition from Ft. Leavenworth to San Diego, reportedly met with considerable difficulty in crossing Stranger Creek and had to unload his wagons in order to cross. Francis Parkman, a noted historian and traveler, crossed Stranger Creek near Potter in the mid-1800s. He described the creek as being "wide, deep and of an appearance particularly muddy and treacherous" (Newspaper 1905). Parkman no doubt saw Stranger Creek after a heavy rain, as most descriptions of the stream commented on the placidity and natural beauty of the creek.

Technological advances of the late 19th and early 20th century permitted the widespread construction of bridges across both large and small streams. One of the first bridges was across the Kansas River at Topeka, opening on May 1, 1858 (Whittmore 1936:75). The Atchison Railroad Bridge (1875), spanning the Missouri River at Atchison, is the oldest bridge across the Missouri River.

During the early 20th century, numerous bridges were built on county roads across tributaries throughout Kansas. Bridges of the late 19th and early 20th centuries are basically iron and steel derivations of earlier wooden ones. Specialized bridge construction companies often prefabricated them and then erected them in both urban and rural locations (Comp 1977:1). The most common rural bridges in the project are which were observed or previously recorded

(HAER 1978) are of steel construction and are Warren or Pratt truss, pony type structures (e.g., site LV-R-01, Plate 5, Highway 92 bridge across Stranger Creek). Larger bridges across major streams (e.g., the Union Pacific Railroad Bridge at Linwood) are steel construction, through-type bridges of Warren, Pratt, Parker, Camelback, or Baltimore trusses. Deck type bridges of concrete construction, supported on concrete piers, became the norm for bridges built during the mid-20th century.



Plate 5. Site LV-R-01, Highway 92 Bridge across Stranger Creek.

CULTURAL RESOURCES WITHIN THE PROJECT
RIGHT-OF-WAY

Prehistoric and Historic Archaeological Sites

Table 1 summarizes the eighteen archaeological sites recorded during the course of this study. Twelve sites were obtained from the site files of the Kansas University Museum of Anthropology and represent survey progress to date on the Stranger Creek watershed project which is being conducted by that institution. Four sites were recorded from the Kansas State Historical Society files including sites 14LV10, 14LV369, 14LV310, and 5-0000-005. Two sites, LV-R-04, and AT-R-01, were located and recorded as a result of this reconnaissance survey. All archaeological sites are located on Map 3.

Although the information is sketchy at this time, the results of this study indicate that Early Ceramic sites are the most frequently occurring (five) prehistoric sites in the Stranger Creek area. There is one Archaic and one Middle Ceramic occupation indicated, and the cultural affiliation of the remaining eight prehistoric sites is undetermined at this time.

Site LV-R-04

The site is located on the Gene Hill farm on the west side of Stranger Creek Valley one mile north of the Highway 92 bridge. The site is located at the mouth of a ravine well above the floodplain at an elevation of 910 to 920 msl. Stranger Creek flows directly below the site at the base of a steep bank. Pasture obscured the surface at the time of this survey, but Mr. Hill had a small collection of artifacts in a glass frame which had been collected when the area was a garden. The Early Ceramic affiliation for this site is based on the examination of four small corner and side notched arrow points which the writer observed while at the Hill farm. Mr. Hill was cordial and would cooperate with future investigators.

Site AT-R-01, Village of Millwood

All that remains of this once lively little village which was located approximately 3 miles north of Easton, is a crumbling one-room jail made of limestone. Although this site is not within a designated reconnaissance area, stones from the old gristmill for which the village was named were used to build the Adams Hospital (ca. 1910) which still stands today on the main street of Easton (Jones 1956:72) (Plate 6). Since Easton was a designated reconnaissance area, it seemed advisable to follow this lead and visit the former site of Millwood.

As indicated earlier, Millwood was founded about 1870 by Jacob Rapp, a German immigrant miller and stone cutter. In addition to the large stone mill, the village supported a general store, post office, blacksmith, justice of the peace, taverns, ice house, jail, a doctor's office, and a sawmill

Table 1
Archaeological Sites
Stranger and Tonganoxie Creeks

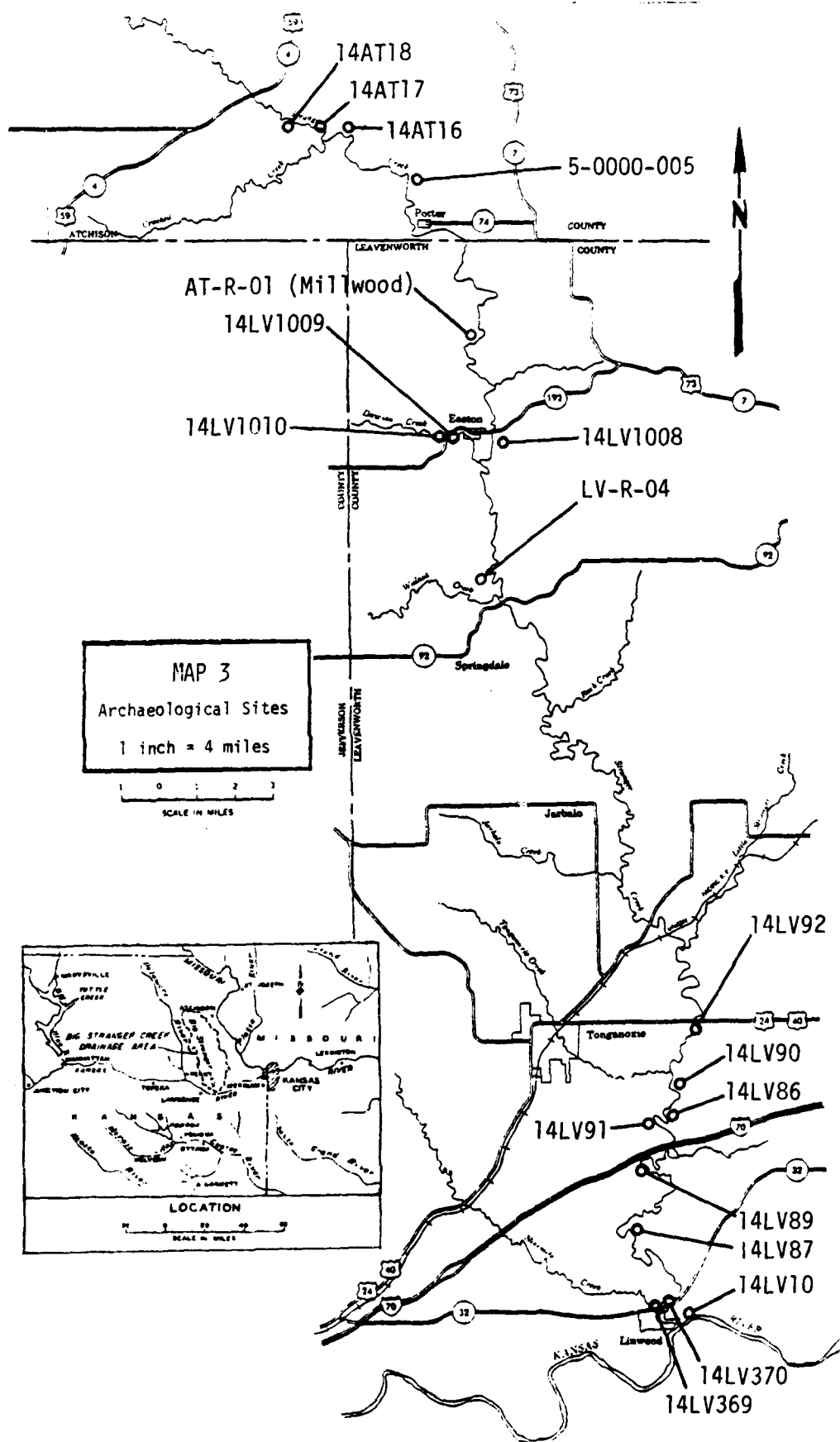
Site No. ¹	Quadrangle	Type ²	Comments
14LV10	Tonganoxie	P & H	Archaic, Mt. Sidney Cemetery
14LV369	Tonganoxie	H	Blue transfer ware
14LV310	Tonganoxie	P	Middle Ceramic
14LV87	Tonganoxie	P	Cultural affiliation undetermined
14LV89	Tonganoxie	P	Plains Woodland (Early Ceramic)
14LV86	Tonganoxie	P	Plains Woodland (Early Ceramic)
14LV91	Tonganoxie	P	Cultural affiliation undetermined
14LV90	Tonganoxie	P	Cultural affiliation undetermined
14LV92	Tonganoxie	P	Plains Woodland (Early Ceramic) Hopewell Affiliation
LV-R-04	Easton	P	Gene Hill Site, Plains Woodland
14LV1008	Easton	P	Cultural affiliation undetermined

Table 1 (con't)

Site No. ¹	Quadrangle	Type ²	Comments
14LV1009	Easton SW	P	Five associated localities of prehistoric artifact scatters (Early Ceramic)
14LV1010	Easton SW	H	Possible prehistoric component (1 waste flake)
AT-R-01	Oak Mills	H	Village of Millwood, ca. 1870-1920
14AT17	Potter	P	Cultural affiliation undetermined
14AT16	Potter	P	Cultural affiliation undetermined
14AT18	Potter	P	Cultural affiliation undetermined
5-0000-005	Potter	H	Paschal Pensineau Trading Post 1839

¹14LV10 - Kansas State Historical Society Number
 AT-R-01 - Fischer-Stein Field Number
 LV-R-04 - Fischer-Stein Field Number
 5-0000-05 - Kansas State Historic Site Inventory Number

²H - Historic
 P - Prehistoric



(Robert and Otto Seute, personal communication). The village was in a low area which flooded frequently; and, after the removal of the mill in 1910, the town declined rapidly. Herman Seute, Otto's brother, built a store on high ground across the creek from Millwood (Map 4) sometime after 1910. It served as a trading center until about 1935. Ernest Younger lives near the abandoned store (Map 4) which now serves as a storage facility and garage for his 1946 International truck (not operable).

Millwood offers several interesting archaeological features. The mill race is still clearly visible as a tree-lined depression (Map 4). It extends



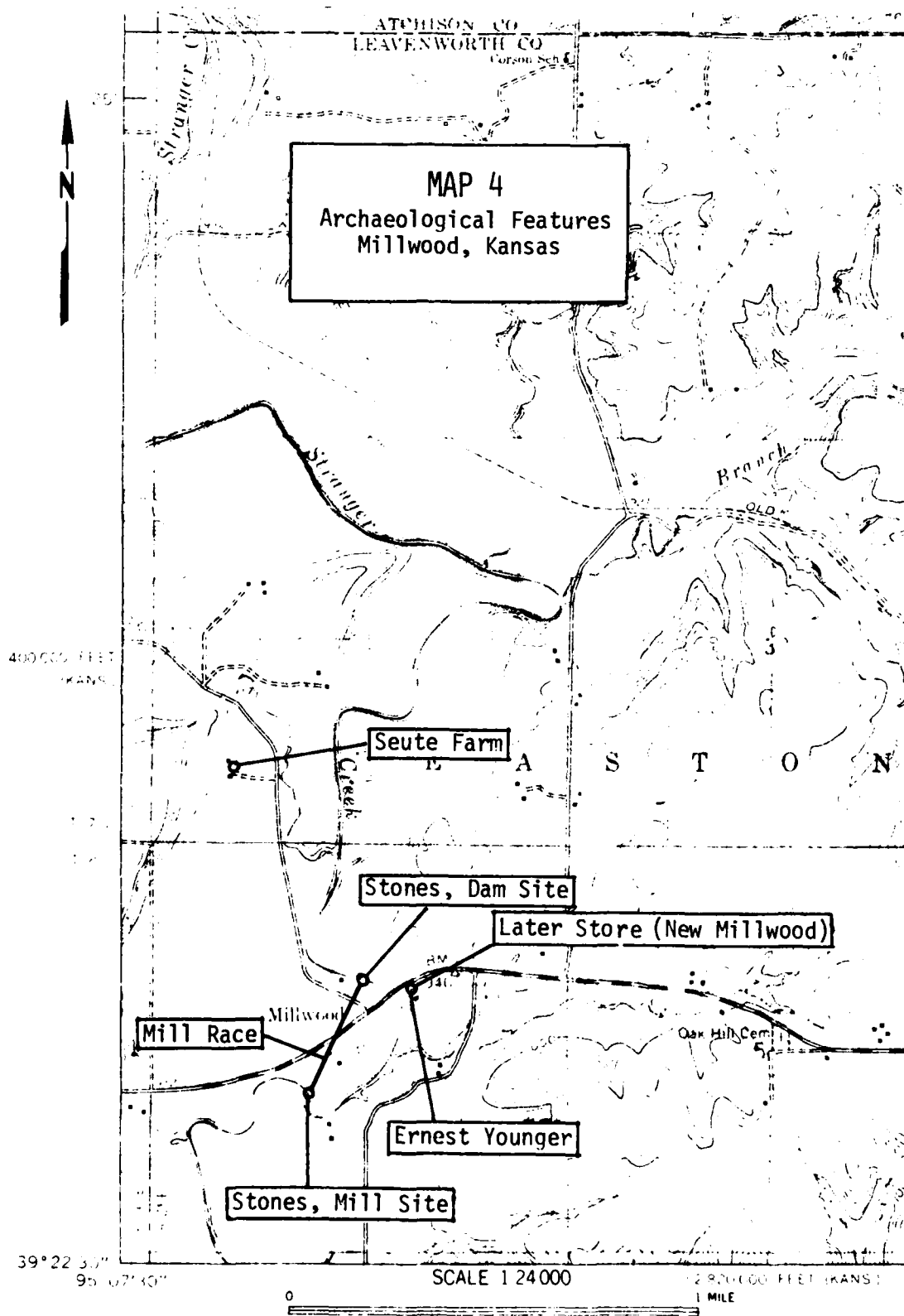
Plate 6. Commercial buildings along Riley Street, Easton, Kansas, including Adams Hospital building (2-story structure) built ca. 1910 with stone from the old Millwood mill.

diagonally for a distance of about one-quarter mile and apparently connected the dam (upstream) with the mill below. Stones were observed in the creek bank both at the dam site and the suspected downstream location of the mill (Map 4).

The site of Millwood provides an example of an early pioneer industry and associated village. The life span for both was brief. Robert Seute's sketch (cover design) of the old mill is his interpretation of how the old building may have appeared.

Site 5-0000-005, Pensineau Trading Post

Paschael Pensineau was a French trader who had apparently been among the Kickapoo since their removal from Illinois. In 1839, along with his



Kickapoo wife, he settled one mile north of Potter and established a trading post where he remained until 1854. Later, he served as an interpreter at the Kickapoo Agency. About 1850, Armistead Dawson started a trading post on the Fort Riley road at the Stranger Creek crossing (Easton) and a short time later married Pe-po-nie, the Pensineau's oldest daughter (Remsburg 1910). A man who attended the wedding reported that Dawson was obliged to give Mr. and Mrs. Pensineau a white pony for the hand of their daughter (The Potter Kansan May 30, 1907). According to the same informant, a feast of buffalo and dog meat was served at the wedding. The marriage did not last, and Pe-po-nie returned to her people and later remarried. The following quote from The Potter Kansan (May 30, 1907) provides a poetic summary of American-Indian relationships and reflects the romantic attitudes of the time.

The old Pensoneau farm near Potter is one of the most picturesque and romantic spots in this region. How weird to retrospect upon its by-gone scenes! In this primitive Stranger Creek solitude, Papoone and Mary Pensoneau, children of the forest, in whose veins coursed the blood of the rude, untutored, aborigine and the roving, romantic courier-debois, experienced a strange mingling of savagery and civilization.

Mary Pensoneau was Papoone's younger sister. The spelling used here is another variation which is present in much of the literature.

The foregoing review represents the sites presently recorded along Stranger and Tonganoxie Creeks. Many other sites and more detailed knowledge of the area will be available as Kansas University Museum of Anthropology completes its intensive survey of the area.

Summary of Architectural Sites, Structures, and Zones

Table 2 is a summary of known sites and structures within the study corridor. The resources listed there represent those previously recorded by other studies (KSHS 1973, 1974, 1975; HAER 1978) as well as those identified during the reconnaissance survey. For a description of features and locational data, the reader is referred to the data forms (Supplement 1). Sites are located on Map 5, and on USGS topographic and Corps of Engineers study maps which are submitted separately.

A total of twenty-five historic and architectural sites are included in this preliminary assessment. A detailed breakdown is as follows: Three urban zones of potential significance, eleven bridges, two farmsteads, eight individual buildings, and one highway. These resources are within the one-mile wide study corridor and are located in both rural and urban settings. None of the resources are listed in the National Register of Historic Places.

Most of the structural resources located within the study area and which are presently listed in the Kansas Inventory of Historic Sites are county highway bridges. Eight buildings listed in this study are already included in the statewide inventory.

The remaining buildings and structures were identified during the reconnaissance survey of the areas designated on USGS topographic and Corps of

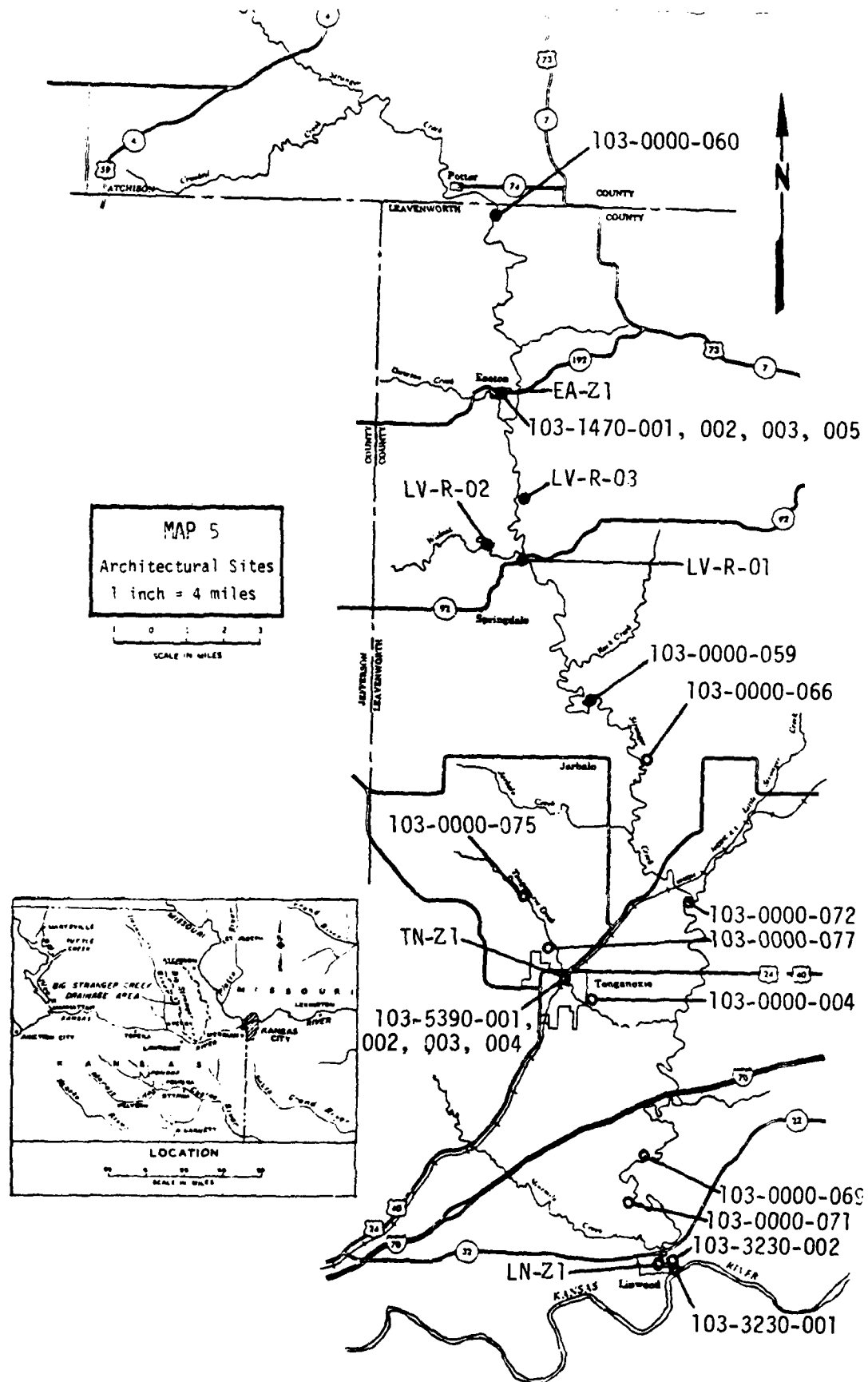


Table 2
Architectural Resources
Stranger and Tonganoxie Creeks

Site No.	Feature	Quadrangle	Comment
<u>Rural Leavenworth County</u>			
103-0000-071	Co. Bridge SH-20	Tonganoxie	1885
103-0000-069	Co. Bridge SH-14	Tonganoxie	C. 1908
103-0000-072	Co. Bridge ST-18	Jarbalo	C. 1908
103-0000-066	Bridge	Jarbalo	C. 1908
103-0000-059	Co. Bridge A-43	Jarbalo	C. 1900
LV-R-01	Bridge	Easton	
LV-R-02	Wayne Knapp Farmstead	Easton	Late 19th- mid-20th C.
LV-R-03	Thos. Domann Farmstead	Easton	Early 20th C.
103-0000-060	Co. Bridge E-34	Oak Mills	C. 1900
103-0000-004	Blackwell Barn	Tonganoxie	

Table 2 (con't)

Site No.	Feature	Quadrangle	Comment
103-0000-077	Co. Bridge T-73	Tonganoxie	C. 1920
103-0000-075	Co. Bridge T-43	Jarbalo	C. 1900
<u>Linwood</u>			
LN-Z1	Linwood Potential Zone	Tonganoxie and Eudora	Mid 19th- mid-20th C.
103-3230-001	Union Pacific Railroad Bridge	Eudora	1885
103-3230-002	Co. Bridge SH-56	Eudora	1910
<u>Tonganoxie</u>			
TN-Z1	Tonganoxie Potential Zone	Tonganoxie	Mid 19th- mid-20th C.
103-5390-001	Metzger's Dry Good Store and I.O.O.F. Lodge	Tonganoxie	
103-5390-002	City Hall	Tonganoxie	1912
103-5390-003	Old Highway 40/Victory Highway	Tonganoxie	Completed 1923
103-5390-004	Dr. Stevens/Geo. W. Greever Home	Tonganoxie	

Table 2 (con't)

Site No.	Feature	Quadrangle	Comment
<u>Easton</u>			
EA-Z1	Easton Potential Zone	Easton	Late 19th- early 20th C.
103-1470-001	St. Lawrence Catholic Church	Easton	1916
103-1470-002	Easton Methodist Church	Easton	C. 1870
103-1470-003	Easton Rural High School	Easton	1920
103-1470-005	Sherer Residence/ Rev. Robert Cook Home	Easton	19th C.

Engineers project maps are submitted separately. All known resources and those identified by this survey are discussed below.

Site 103-0000-071, Leavenworth County Bridge SH-20.

This structure is a two span 160', pinned pratt steel, through truss bridge, built by Missouri Valley Bridge and Iron Works of Leavenworth, Kansas. Each span is 79' in length. The structure is 12.7' tall, and the roadway is 14' wide. The bridge is supported on sandstone masonry piers.

This structure was surveyed by the Historic American Engineering Record in 1978, and is included in the Kansas Inventory of Historic Sites. The potential eligibility of this structure for inclusion in the National Register of Historic Places has not yet been established. It is recommended that evaluation of this structure be deferred to the State Historic Preservation Officer of Kansas and the Corps of Engineers.

Site 103-0000-069, Leavenworth County Bridge SH-14.

This structure is a 178.7' pinned pratt steel, through truss across Stranger Creek. the 139' span has timber approaches and a 14' wide wooden roadway. Vertical clearance is 18'.

This structure was surveyed by the Historic American Engineering Record in 1978, and is included in the Kansas Inventory of Historic Sites. The potential eligibility of this structure for inclusion in the National Register of Historic Places has not yet been established. It is recommended that determination of eligibility for this structure be deferred to the State Historic Preservation Officer of Kansas and the Corps of Engineers.

Site 103-0000-072, Leavenworth County Bridge ST-18.

This structure is a 181' long, pinned pratt steel through truss bridge across Stranger Creek. The 120' span has timber approaches and rests on concrete supports. The 12' wide roadway is wooden, the structure has 16.4' of vertical clearance.

This structure was surveyed by the Historic American Engineering Record in 1978, and is included in the Kansas Inventory of Historic Sites. The potential eligibility of this structure for inclusion in the National Register of Historic Places has not yet been established. It is recommended that determination of eligibility for this structure be deferred to the State Historic Preservation Officer of Kansas and the Corps of Engineers.

Site 103-0000-066, Leavenworth County Bridge.

This structure is a 55' pinned Queenspost steel pony truss bridge. The 52' span has timber abutments and a 14' wide timber roadway.

This structure was surveyed by the Historic American Engineering Record in 1978, and is included in the Kansas Inventory of Historic Sites. The

potential eligibility of this structure for inclusion in the National Register of Historic Places has not yet been established. It is recommended that determination of eligibility for this structure be deferred to the State Historic Preservation Officer of Kansas and the Corps of Engineers.

Site 103-0000-059, Leavenworth County Bridge A-43.

This structure is a 140' long, pinned pratt half-hip steel through truss bridge. The 100' span has timber approaches, rests on 4 steel and concrete columns. The bridge has a 12' wide wooden roadway and vertical clearance of 14'.

This structure was surveyed by the Historic American Engineering Record in 1978, and is included in the Kansas Inventory of Historic Sites. The potential eligibility of this structure for inclusion in the National Register of Historic Places has not yet been established. It is recommended that determination of eligibility for this structure be deferred to the State Historic Preservation Officer of Kansas and the Corps of Engineers.

Site LV-R-01, Bridge (Plate 5).

This feature is a pinned, warren truss, pony type bridge of two sections. The bridge has concrete railings and abutments and is typical of early 20th century county highway bridges across Stranger Creek. It is recommended that this structure be included in the Kansas Inventory of Historic Sites (See Recommendations).

Site LV-R-02, Wayne Knapp Farmstead.

This farmstead consists of a two-story frame house with an irregular plan form, a barn, sheds, and numerous outbuildings. The barn is a transverse crib type, frame structure. Two component steel machine sheds, one a quonset hut type, are used for machine storage. Outbuildings include a frame shed with a built-in corner water tower, a central type hog house of frame construction, two colony type hog houses of frame construction, a frame garage, a pumphouse of concrete masonry construction, and four miscellaneous frame outbuildings.

An oak tree, estimated to be 200 to 225 years old (Knapp, personal communication) stands in the center of the farmstead. The farmstead complex is representative of a local farmstead which has developed continuously over a period of 80 to 100 years. The house and granary are estimated to have been built in the early 1900s. Outbuildings and the machine shed date from the mid-20th century.

The architectural resources of this farmstead are standard architectural types. They do not appear to be of sufficient architectural or historical significance to be considered eligible for nomination to the National Register of Historic Places. However, because the farmstead as a whole reflects the development of farmsteads of this area, it is recommended that this site be included in the Kansas Inventory of Historic Sites (See Recommendations).

Site LV-R-03, Thomas Domann Farmstead (Plate 4a).

This is a farmstead situated on the first terrace above the floodplain. A vacant frame farmhouse with an irregular plan form, dating from the late 19th or early 20th century, is located on the farmstead. A mid-20th century tract type house is also located on the farmstead. Other structures include two medium size frame sheds, corrugated steel grain bins, and numerous small frame outbuildings.

As architectural resources, the structures on this farmstead are standard agricultural building types. They do not appear to be of sufficient architectural or historical significance to be considered eligible for nomination to the National Register of Historic Places. However, because the farmstead reflects the development of farmsteads in the Stranger Creek Valley, it is recommended that this site be included in the Kansas Inventory of Historic Sites (See Recommendations).

Site 103-0000-060, Leavenworth County Bridge E-34.

This structure is a 153' long pratt steel through truss bridge. The 105.5' span has timber approaches, abutments and decking, and rests on concrete piers. The roadway is 15.5' wide and vertical clearance is 15.4'.

This structure was surveyed by the Historic American Engineering Record in 1978 and is included in the Kansas Inventory of Historic Sites. The potential eligibility of this structure for inclusion in the National Register of Historic Places has not yet been established. It is recommended that evaluation of this structure be deferred to the State Historic Preservation Officer of Kansas and the Corps of Engineers.

Site 103-0000-004, Blackwell Barn.

This structure is a barn of frame construction with hexagonal plan form silos at each end, of frame construction. The barn appears to be of different phases of construction - part is on a stone foundation. The barn is sided with weatherboarding. One silo has horizontal siding, one has vertical.

This structure is included in the Kansas Inventory of Historic Sites. The potential eligibility of this structure for inclusion in the National Register of Historic Places has not yet been established. It is recommended that evaluation of this structure be deferred to the State Historic Preservation Officer of Kansas and the Corps of Engineers.

Site 103-0000-077, Leavenworth County Bridge T-73.

This structure is a 160' long pinned pratt steel pony truss bridge across Tonganoxie Creek. The 59' span is 12' and has a 16' wide concrete roadway.

This structure was surveyed by the Historic American Engineering Record in 1978 and is included in the Kansas Inventory of Historic Sites. The potential eligibility of this structure for inclusion in the National Register of

Historic Places has not yet been established. It is recommended that evaluation of this structure be deferred to the State Historical Preservation Officer of Kansas and the Corps of Engineers.

Site 103-0000-075, Leavenworth County Bridge T-43.

This structure is a 71' long pinned pratt steel truss bridge across Tonganoxie Creek. The 70' span has concrete abutments and a 13' wide concrete roadway.

This structure was surveyed by the Historic American Engineering Record in 1978 and is included in the Kansas Inventory of Historic Sites. The potential eligibility of this structure for inclusion in the National Register of Historic Places has not yet been established. It is recommended that evaluation of this structure be deferred to the State Historic Preservation Officer of Kansas and the Corps of Engineers.

Site LN-Z1, Linwood (potential zone).

Numerous houses dating from the early 20th century are located within the corporate limits of Linwood. Several of these houses were moved from the original town site (located in the floodplain adjacent to and southeast of the present town site) to their present locations. Most houses are vernacular style, frame structures, including one- and two-story box houses, classical cottages, Queen Anne style cottages, and bungalow houses. The Linwood Methodist Church (estimated date ca. 1890) and the former Linwood Elementary School are both frame structures. The church is a rectangular shaped structure with a side ell and a corner entrance tower at the ell. The building incorporates Queen Anne and Gothic Revival details. The two-story school is neo-classically detailed and incorporates an addition to the original 1864 school building. The Congregational Cemetery, founded in 1870, is within the zone of potential significance.

Many of the structures within this zone are good examples of late 19th and early 20th century vernacular architectural styles. In addition, several were built on the original town site of Linwood and moved to their present locations. This zone appears to be potentially significant because of the architectural features located there and for their historical association with the early development of Linwood. It is recommended that a survey of this area be completed and a determination of significance be established.

Site 103-3230-001, Union Pacific Railroad Bridge 27-86.

This structure is a riveted, Baltimore steel through truss bridge, built by the American Bridge Co. in 1905. The 138' span is a double tracked structure, known as a Harriman Common Standard after E. H. Harriman, president of the Union Pacific. The timber approaches were replaced with concrete in October 1916.

This structure was surveyed by the Historic American Engineering Record in 1978, and is included in the Kansas Inventory of Historic Sites. The

potential eligibility of this structure for inclusion in the National Register of Historic Places has not yet been established. It is recommended that determination of eligibility for this structure be deferred to the State Historic Preservation Officer of Kansas and the Corps of Engineers.

Site 103-3230-002, Leavenworth County Bridge SH-56.

This structure is a 169' long pinned, pratt steel through truss bridge. The 168' span has concrete abutments and a 13' wide concrete roadway. Vertical clearance is 17'.

This structure was surveyed by the Historic American Engineering Record in 1978, and is included in the Kansas Inventory of Historic Sites. The potential eligibility of this structure for inclusion in the National Register of Historic Places has not yet been established. It is recommended that determination of eligibility for this structure be deferred to the State Historic Preservation Officer of Kansas and the Corps of Engineers.

Site TN-Z1, Tonganoxie (zone of potential significance)

Structures located within the reconnaissance area include a one-story brick building occupied by the Wyco Manufacturing Company, a component steel shed and frame storage sheds housing the Safety Skate Company, Inc., a concrete deck bridge, and a mobile home park. All are standard, mid-20th century structures of no historic or architectural significance.

The half-mile project area includes a large portion of Tonganoxie beyond the reconnaissance area. Several buildings in Tonganoxie, including Metzger's Dry Goods/I.O.O.F. Lodge, the Tonganoxie City Hall, and the George W. Greever Home, are listed in the Kansas Statewide Historic Inventory. A number of late 19th and early 20th century houses of potential architectural significance and within the half-mile study corridor were observed while conducting the reconnaissance survey.

While no further study of the reconnaissance area is recommended, a survey assessment of the Tonganoxie zone of potential significance should be completed if the area is to be impacted.

Site 103-5390-001, Metzger's Dry Goods Store and I.O.O.F. Lodge, Tonganoxie, Kansas.

This structure is a two-story brick, commercial building with a metal cornice, rock face stone lintels and lug sills.

This structure is included in the Kansas Inventory of Historic Sites. The potential eligibility of this structure for inclusion in the National Register of Historic Places has not yet been established. It is recommended that determination of eligibility for this structure be deferred to the State Historic Preservation Officer of Kansas and the Corps of Engineers.

Site 103-5390-002, City Hall, Tonganoxie.

This building is a one-story brick structure with gabled roof, coursed stone foundation, brick, segmented arch window heads, and stone lug sills. An open wooden belfry is located above the front entrance.

This structure is included in the Kansas Inventory of Historic Sites. The potential eligibility of this structure for inclusion in the National Register of Historic Places has not yet been established. It is recommended that determination of eligibility for this structure be deferred to the State Historic Preservation Officer of Kansas and the Corps of Engineers.

Site 103-5390-003, Olde Victory Highway 40/Victory Highway.

This is one of the early paved roads in Kansas and forms part of the Trans-Continental Victory Highway. This highway is included in the Kansas Inventory of Historic Sites. The potential eligibility of the highway for inclusion in the National Register of Historic Places has not yet been established. It is recommended that determination of eligibility for this structure be deferred to the State Historic Preservation Officer of Kansas and the Corps of Engineers.

Site 103-5390-004, Dr. Stevens/Geo. W. Greever House, Tonganoxie.

This house is a two-story frame construction, box style house with a hip roof, and full width open front porch with round posts. Other features include 1/1 light sash, wood double hung windows, clapboard siding and boxed eaves. This is the former home of G. W. Greever, whose swing vote caused passing of the prohibition amendment by the Kansas State Legislature in 1879.

This house is included in the Kansas Inventory of Historic Sites. The eligibility of the structure for inclusion in the National Register of Historic Places has not been established. It is recommended that determination of eligibility for this house be deferred to the State Historic Preservation Officer of Kansas and the Corps of Engineers.

Site EA-Z1, Easton (zone of potential significance)

Several groups of buildings of potential historical/architectural significance and in Easton and which are located within a half mile of Stranger Creek were observed during the reconnaissance. A group of commercial buildings (Plate 6) on Riley Street date from the early 20th century. A two-story commercial building within this block is built of stone reportedly from the old Milwood mill. Groups of small frame cottages and two-story frame houses dating from the late 19th and early 20th century are also located within the half-mile study corridor. Classical revival as well as Victorian details are incorporated in these structures.

This area appears to have potential significance because of the architectural features located therein. It is recommended that a survey and assessment of this area be completed to identify resources and evaluate their significance.

Site 103-1470-001, St. Lawrence Catholic Church, Easton.

This structure is a church building of brick masonry construction and Romanesque styling. The building, erected in 1916, has a central tower which predominates the front facade. H. Brinckman of Emporia, Kansas was the architect and Mort V. Green of Manhattan, Kansas was the contractor for this building.

This structure is included in the Kansas Inventory of Historic Sites. The eligibility for inclusion in the National Register of Historic Places has not yet been established. It is recommended that a determination of eligibility be deferred to the State Historic Preservation Officer of Kansas and the Corps of Engineers.

Site 103-1470-002, Easton Methodist Church, Easton.

This church is a vernacular style structure of limestone construction. The building is characterized by its rectangular plan form, entrance in the gable end, and bell tower of wood construction. The period of construction is 19th century.

This structure is included in the Kansas Inventory of Historic Sites. The potential eligibility of this structure for inclusion in the National Register of Historic Places has not been established. It is recommended that a determination of eligibility be deferred to the Historic Preservation Officer of Kansas and the Corps of Engineers.

Site 103-1470-003, Easton Rural High School, Easton.

This building is a two-story structure of brick masonry construction. Decorative features include limestone window sills and banding.

This structure is included in the Kansas Inventory of Historic Sites. The potential eligibility of this structure for inclusion in the National Register of Historic Places has not been established. It is recommended that determination of eligibility for this structure be deferred to the State Historic Preservation Officer of Kansas and the Corps of Engineers.

Site 103-1470-005, Sherer Residence/Rev. Rober Cook Home, Easton.

This structure is a one-and-one-half story house of frame construction, with a one-story ell addition to the rear. This house is reportedly over 100 years old and one of the oldest standing structures in Easton. The house stands on land originally owned by Armistead Dawson, founder of Easton.

This house is included in the Kansas Inventory of Historic Sites. The potential eligibility of this structure for inclusion in the National Register of Historic Places has not yet been established. It is recommended that determination of eligibility for this structure be deferred to the State Historic Preservation Officer of Kansas and the Corps of Engineers.

RESULTS AND RECOMMENDATIONS

Archaeology

The reconnaissance survey, records and literature search resulted in the location of eighteen archaeological sites. Two sites are historic, and two prehistoric sites contain a historic component. Fifteen sites are prehistoric with Early Cermaic period sites being the most frequently represented. Cultural affiliation is undetermined on the remaining eight prehistoric sites.

A discussion of artifactual remains from the site is not practical at this time. Culturally diagnostic materials were limited to one or two body sherds and the affiliation of these was often questionable (Brockington and Logan, n.d.). Two sites, 14LV86 and 14LV92 contained diagnostic artifacts but they were in private collections (Brockington and Logan, n.d.).

Predictive Model

Topographically, most sites on Stranger Creek are located on ridgespurs which project into the floodplain or descend abruptly to the creek channel. On upper Stranger Creek, sites are located from 950 to 1,100 msl. In the middle Stranger Creek area, sites are located from 900 to 920 msl and on lower Stranger Creek from 790 to 850 msl. Near Linwood, there are two sites recorded in low areas (14LV369 and 14LV370) at 790 msl. All sites are very close to the main creek channels (within 1,000 feet).

The Easton, Tonganoxie, and Highway 92 reconnaissance survey areas are subject to frequent flooding and are generally of low cultural resource potential. An intensive pedestrian survey of the Highway 92 area may yield one or two small sites in the floodplain. However, it is unlikely that these sites would be any more than temporary activity areas.

The Linwood reconnaissance area is located on a terrace edge at an elevation of 800 feet. This is one of the few higher elevations in the immediate area and, of course, is occupied by the town of Linwood. At the time of our visit, the high area was obscured by lawns. This area has some prehistoric site potential; however, historic building activity has possibly reduced the integrity of possible sites.

Based on the limited survey completed at this time by the Kansas University Museum of Anthropology in the Stranger Creek Basin and other probabilistically based predictive model surveys (Williams and Woods 1978; Raab 1977) indicated that higher elevations near permanent water will contain the highest archaeological site densities. There is little reason to believe that the unsurveyed areas of Stranger and Tonganoxie Creeks are different in this respect.

Archaeological Recommendations

Based on the information obtained for this study, the following recommendations are offered.

1. Site location data indicates that all higher elevations along Stranger and Tonganoxie Creeks have high potential for containing as yet undiscovered archaeological sites. Therefore, an intensive archaeological survey is suggested for all zones which may be directly or indirectly affected by future Corps of Engineers projects. It is suggested that when project plans are formalized, a specific research design and survey outline could be prepared.

2. It is suggested that the Kansas City District Corps of Engineers maintain contact with the University of Kansas Museum of Anthropology regarding that institution's archaeological survey of the Stranger Creek drainage. Future Corps of Engineer cultural resource management activities in the Stranger/Tonganoxie Creek areas might incorporate the results of this research.

3. There is not enough information available at this time to make statements regarding National Register eligibility or potential eligibility. However, it is likely that as more research is completed, potential National Register sites will be identified.

4. Due to years of alluvial deposition there is the possibility that low, floodplain areas may contain buried sites. Conventional pedestrian survey would not locate such sites. Therefore, it is suggested that the Corps of Engineers inform contractors of this possibility. If artifacts or cultural features are encountered during construction, the Corps of Engineers cultural resource specialists should be notified immediately.

Architecture

The reconnaissance survey and records search identified twenty-five architectural sites. Categorically these sites are three urban zones of potential significance, eight individual buildings, two farmsteads, eleven bridges, and one highway.

Predictive Model

The preliminary nature of this study and the limited number of resources in certain of the reconnaissance areas allows for only broad generalizations regarding architectural resources in the study area. The Linwood, Tonganoxie and Easton zones of potential significance would appear to merit further investigation to identify and evaluate individual resources within their respective limits.

It is the opinion of this investigator that the Tonganoxie and Highway 92 reconnaissance areas have little potential for containing sites of historic architectural significance. However, it is likely that other farmsteads and rural structures outside the reconnaissance area of Highway 92 might be considered significant.

Architectural Recommendations

Based on available data and observations of this study. The following recommendations are made.

1. A survey and assessment is recommended for the zones of potential significance of Linwood, Tonganoxie and Easton. However, if only the reconnaissance area of Tonganoxie is impacted, no further architectural investigation is recommended there.

2. If only the reconnaissance area of Highway 92 is to be impacted, it is recommended that the farmsteads and rural structures be included in the Kansas Inventory of Historic Sites in order to increase the data base for the future study of rural architecture in this region of Kansas. Corps of Engineers regulations do not currently allow the Corps to document sites for inclusion in the Kansas Historic Inventory. It is suggested that the preliminary site information obtained by this study might be added to the statewide inventory, to be examined further and documented in more detail by the Kansas State Historical Society and other appropriate agencies or individuals. The site locations and summary descriptions included in this study provide a preliminary data base which can be expanded as research is completed and information becomes available.

3. If other structures within the study corridor, but outside the reconnaissance areas of this study, are impacted by construction activities, investigation of those structures may be required. This determination can be made as construction plans are developed further.

4. Final evaluation of the sites within this study area and which are already included in the Kansas Inventory of Historic Sites is deferred to the State Historic Preservation Officer of Kansas and the Corps of Engineers.

PHOTOGRAPHIC SUMMARY

A photographic summary of principal architectural sites within the reconnaissance areas is presented in this section. The purpose is to present a visual overview of architectural and structural resources located within these areas.

Photographs are generally arranged beginning at the mouth of and proceeding northward along Stranger Creek, and westward along Tonganoxie Creek from its confluence with Stranger Creek. The reader should refer to Map 5 for site locations, and the "Survey Results" portion of this report.



Old Linwood School



House



House



Linwood Methodist Church

LN-Z1: Linwood Zone of Potential Significance



House

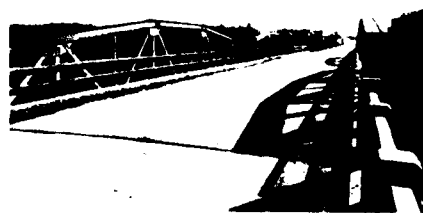


House

LN:Z1: Linwood Zone of Potential Significance



Tonganoxie Reconnaissance Area



LV-R-01: Bridge



House



Barn



Shed and Granary



Garage



Machine Shed



Oak Tree



Hog Houses

LV-R-02: Wayne Knapp Farmstead



LV-R-08



St. Lawrence Catholic Church



House



Commercial block - Easton, Kansas



Easton Methodist Church



Commercial block - Easton, Kansas

EA-Z1: Easton Zone of Potential Significance

BIBLIOGRAPHY AND REFERENCES CITED

- Alexander, Ray
1980 Millwood, Kansas, Personal communication, May 14.
- Anderson Publishing Company
1925 Atlas of Atchison County, Kansas. Anderson Publishing,
Des Moines.
- Andreas, Alfred T.
1883 History of the State of Kansas. A. T. Andreas, Chicago.
- Anonymous
1959 Little Stranger Church, High Prairie Township, County of
Leavenworth Kansas. In Daughters of the American Revolution, Kansas Society, Geneological Records. Topeka.
(Platted 3 December 1867, Sec. 21, T9 R22)
- Atchison Daily Globe
1924 Newspaper clipping, April 22.
- Blakeslee, Donald J., and Warren W. Caldwell
1979 The Nebraska Phase: An appraisal. Reprints in Anthropology
Vol. 18.
- Blouet, Brian W., and Frederick C. Luebke
1979 The Great Plains: Environment and Culture. University of
Nebraska Press, Lincoln.
- Blumenson, John J. G.
1977 Identifying American Architecture: A Pictorial Guide to Styles
and Terms, 1600-1945. American Association for State and Local
History, Nashville.
- Brockington, Paul
1980 Museum of Anthropology, University of Kansas, Lawrence.
Personal communication, May 13, December 19.
- Brockington, Paul E., Jr. and Brad Logan
n.d. Progress Report: Stranger Creek Watershed Archeological
Survey. Museum of Anthropology, University of Kansas,
Lawrence.
- Brown, Kenneth, and Mark Baumler
1976 Little Blue River channel modification project, archaeological
research design. Prepared for Department of the Army,
Corps of Engineers, Kansas City District. University of
Kansas, Lawrence.
- Brown, Mark H., and W. R. Felton
1955 The Frontier Years: L. A. Huffman, Photographer of the Plains.
Bramhall House, New York.

- Chambers, Mary E., and Sally K. Tompkins
1977 The Cultural Resources of Clinton Lake, Kansas: An Inventory of Archaeology, History, and Architecture. Iroquois Research Institute.
- Chapman Publishing Company
1899 Portraits and Biographical Record of Leavenworth, Douglas, and Franklin Counties, Kansas. Chapman Publishing, Chicago.
- Comp, T. Allan, and Donald Jackson
1977 Bridge and truss types: a guide to dating and identifying. Technical Leaflet 95. American Association for State and Local History, Nashville.
- Davis, Kenneth S.
1976 Kansas: A Bicentennial History. W. W. Norton, New York.
- Dick, Everett
1979 The Sod House Frontier 1854-1890. University of Nebraska Press, Lincoln.
- Everts, L. H. and Company
1887 Official State Atlas of Kansas. L. H. Everts.
- Fleming, John, Hugh Honour and Nikolaus Pevsner
1972 The Penguin Dictionary of Architecture. Penguin Books, Bungay, Suffolk.
- Goff, Eris
1967 Linwood, Kansas, centennial 1867-1967. Mimeographed. Kansas State Historical Society, Topeka.
- Grosser, Roger
1973 A Tentative Cultural Sequence for the Snyder Site, Kansas, Plains Anthropologist 18-61:228-38.
- Hall, J. A., and Leroy T. Hand
1921 History of Leavenworth County, Kansas. Historical Publishing, Topeka.
- Heffner, Michael L.
1973 Archaeological Survey of the Lower Mud Creek Basin. Douglas and Leavenworth Counties, Kansas. Manuscript on file, Museum of Anthropology, University of Kansas, Lawrence.
- Hill, Gene
1980 R. R. #1, Easton, Kansas. Personal communication, May 15.
- Historic American Engineering Record (HAER)
1978 Inventory: Industrial Buildings and Bridges, Between Kansas City and Topeka, Kansas. Historic American Engineering Record, Washington, D.C.
- Hunnius, Ado
1898 Map of Leavenworth County, Kansas, showing location of schoolhouses.

- Jones, Bruce A.
 1976 Phase II archaeological survey of Perry Lake Road improvements 1 and 2, Jefferson County, Kansas. Prepared for U.S. Army Corps of Engineers, Kansas City District. Kansas State Historical Society, Topeka.
- 1978 Phase II archaeological survey of Perry Lake Road improvements 3, Jefferson County, Kansas. Prepared for U.S. Army Corps of Engineers, Kansas City District. Kansas State Historical Society, Topeka.
- Jones, Herbert C.
 1956 History of Easton, Kansas. Wilson's Engravers and Printers, Clay Center, Kansas.
- Kansas State Historical Society (KSHS)
 1973 Historic Preservation in Kansas: Inventory of Historic Resources. Historic Site Survey, Topeka.
- 1974 Historic Preservation in Kansas: Inventory of Historic Resources, supplement. Historic Site Survey, Topeka.
- 1975 Historic Preservation in Kansas: Inventory of Historic Resources, supplement. Historic Site Survey, Topeka.
- Kansas State University Agricultural Experiment Station
 1975 From Desert to Breadbasket: Developing Kansas's Land Resources. A centennial publication of the Agricultural Experiment Station, Manhattan, Kansas.
- Katz, P. R.
 1971 Archaeology of the Sutter Site in Northeastern Kansas. Plains Anthropologist, 16-51:1-19.
- Katz, Paul
 1973 Radiocarbon Dates from the Sutter Site, Northeastern Kansas, Plains Anthropologist, 18-60:167-168.
- Katz, Susanna R.
 1974 Kansas City Hopewell Activities at the Deister Site. University of Kansas Museum of Anthropology Research Series, No. 1, Lawrence.
- Kanpp, Wayne
 1980 R. R. #1, Easton, Kansas. Personal communication, May 15.
- Lancaster, Clay
 1958 The American Bungalow. Art Bulletin, September XL, pp. 239-53.
- Leaf, Gary R. (editor)
 1979 Finding, managing, and studying prehistoric cultural resources at El Dorado Lake, Kansas (phase I). Prepared for U.S. Army Corps of Engineers, Tulsa District. University of Kansas Museum of Anthropology Research Series, No. 2, Lawrence.

- LeeDecker, Charles H., and Thomas C. Fahey, III
 1977 Preliminary management plan for cultural resources, Perry Lake, Jefferson County, Kansas. Prepared for the U.S. Army Corps of Engineers, Kansas City District. Iroquois Research Institute, Fairfax, Virginia.
- Logan, Brad (editor)
 1979 Cultural resources of Kansas City International Airport and its environs: An archaeological reconnaissance. Prepared for Kansas City International Airport. University of Kansas Museum of Anthropology Research Series, No. 3, Lawrence.
- Logan, Brad
 1980 Museum of Anthropology, University of Kansas, Lawrence, Personal communication, May 13.
- Lyons, Emory J.
 1945 Isaac McCoy: His plan of and work for Indian colonization. Fort Hays Kansas State College Studies, History Series, History Series, No. 1. Kansas State Printing Plant, Topeka.
- Missouri Publishing Company
 1878 Atlas Maps of Leavenworth County. Missouri Publishing.
- Muir, Robert G. and Associates
 1976 Analytical environmental assessment report, the master plan of Fort Leavenworth, Kansas, Phase II, future development documents. Report prepared for the U.S. Army Corps of Engineers, Kansas City District. Robert G. Muir and Association, Kansas City.
- Needham, H. V.
 1938 Some historical sidelights on the life of Chief Tonganoxie. Sunflower Petals, edited by Walter Neibarger, pp. 1-8.
- O'Brien, Patricia J.
 1977 Cultural resources survey of Smithville Lake, Missouri, Volume 1: Archaeology. Prepared for U.S. Army Corps of Engineers, Kansas City District. Kansas State University, Manhattan.
- Ogle, George A., and Company
 1903 Standard Atlas of Atchison County, Kansas. George A. Ogle, Chicago.
- The Potter Kansan
 1907 Newspaper article. The Potter Kansan, May 30.
- Quin, Richard
 1857 Map of Leavenworth County, Kansas Territory. Leopold Gast, St. Louis.
- Raab, L. Mark
 1977 An Archaeological Sample Survey of the Caddo Planning Unit, Ouachita National Forest, Arkansas. Archaeology and National Forest Land Management Planning. Archaeological Report No. 16, U.S. Forest Service, Southwestern Region.

- Remsburg, George J.
 n.d. Crossing Stranger in the Early Days. Assumed to be from Potter Weekly Kansan.
- n.d. Early Kansas Chronology. Assumed to be from Atchison Daily Globe, 1905-1920.
- 1909 The Naming of Our Streams. The Potter Weekly Kansan, Potter, Kansas, August 12.
- 1910 On the Banks of the Big Stranger. Leavenworth Times, December 25.
- 1921 Leavenworth and Atchison 67 Years Ago. Leavenworth Daily Times, October 27.
- Reynolds, John D.
 1979 The Grasshopper Falls Phase of the Plains Woodland. Kansas State Historical Society Anthropological Series, No. 7, Topeka.
- Richmond, Robert W.
 1977 Kansas: A Land of Contrasts. Forum Press, St. Louis.
- Rifkind, Carole
 1980 A Field Guide to American Architecture. New American Library, New York.
- Riley County Historical Museum
 n.d. The Land and the People: The Settlement of Riley County. A catalog of the museum exhibit. Riley County Historical Museum, Manhattan, Kansas.
- Riley County Historical Museum Collection
 1857 Newspaper advertisement for prefabricated buildings for Kansas and Nebraska, approximate date February 23-25, paper unknown.
- Riley County Historical Society and Museum
 n.d. The Hartford House, interpretive leaflet from the historical collections.
- Robinson, Sara, T. L.
 1971 Kansas, Its Interior and Exterior Life. Books for Libraries Press, Freeport, New York (originally published 1856).
- Rohn, Arthur H., and Craig F. Woodman
 1976 Cultural inventory for Hillsdale Lake, Kansas, Vol. I. Final report to U.S. Corps of Engineers, Kansas City District. Archaeology Laboratory, Wichita State University.
- Schmits, Larry J.
 1978 The Coffey Site: Environment and Cultural Adaptation at a Prairie Plains Archaic Site. Midcontinental Journal of Archaeology 3(1):70-185.

- Self, Huber
1978 Environment and Man in Kansas: A Geographical Analysis. The Regents Press of Kansas, Lawrence.
- Seute, Otto
1980 Leavenworth, Kansas. Personal communication, May 15.
1980 1339 Metropolitan, Leavenworth, Kansas. Personal communication, May 15.
- Shippee, J. M.
1964 Archaeological Remains in the Area of Kansas City: Paleo Indians and the Archaic Period. Missouri Archaeological Society, Research Series Number 2, Columbia.
- Shockley, Dennis
1977 Cultural resources survey of Smithville Lake, Missouri, volume 2: history. Report prepared for the U.S. Army Corps of Engineers, Kansas City District. Kansas State University, Manhattan.
- Siegele, H. H.
1946 Building Trades Dictionary. Frederick J. Drake & Co., Chicago.
- Slagg, Winifred N.
1968 Riley County, Kansas. Winifred N. Slagg, Manhattan, Kansas.
- Socolofsky, Homer E.
1970 Wyandot floats. Kansas Historical Quarterly 36:241-304.
- Socolofsky, Homer E., and Huber Self
1972 Historical Atlas of Kansas. University of Oklahoma Press, Norman.
- Trewartha, Glenn T.
1948 Some regional characteristics of American farmsteads. Annals of the Association of American Geographers 30(3):169-225.
- Tri-Tabula, Inc.
1972 Atlas of Atchison County, Kansas. Tri-Tabula, Minneapolis.
- Ware, Dora and Betty Beatty
1945 A Short Dictionary of Architecture. Philosophical Library, N.Y.
- Wedel, Waldo R.
1936 An introduction to Pawnee archaeology. Bureau of American Ethnology, Bulletin 122. Smithsonian Institution, Washington, D.C.
1943 Archaeological investigations in Platte and Clay Counties, Missouri. U.S. National Museum, Bulletin 183, Washington, D.C.
1959 An introduction to Kansas archaeology. Bureau of American Ethnology, Bulletin 174, Washington, D.C.
1961 Prehistoric Man on the Great Plains. University of Oklahoma Press, Norman.

Weekly Champion

- 1878 Atchison County: Topography, water power, timber, fences, etc.
Atchison Weekly Champion, June 8.
- Weichman, Michael S., and Craig Studevant
1977 A preliminary cultural resources reconnaissance within the
lower Kansas River Valley, Wyandotte County, Kansas.
Prepared for U.S. Army Corps of Engineers, Kansas City
District. Environmental Research Center Research Report
Number 26, Iowa City.
- Weslager, C.A.
1978 The Delaware Indian Westward Migration. The Middle Atlantic
Press, Wallingford, Pennsylvania.
- Whiffen, Marcus
1969 American Architecture Since 1780: A Guide To The Styles.
MIT Press, Cambridge.
- White, R. Gail
1981 Historical and Architectural Reconnaissance - Kansas and
Smoky Hill Rivers Bank Stabilization Study, Kansas. Fischer-
Stein Associates Cultural Resource Management Study #49,
U.S. Department of the Army, Corps of Engineers, Kansas City
District.
- Whittmore, Margaret
1936 Sketchbook of Kansas Landmarks. The College Press, Topeka.
- Williams, Kenneth R., and William I. Woods
1978 Predictive Model Study: An Examination of the Archaeological
Resources of the Big Muddy River Basin, a report submitted
to the Illinois Department of Conservation.
- Witty, Thomas A., Jr., and James O. Marshall
1968 Archaeological Survey of the Lower Salt and Plum Creek Valley.
Leavenworth County, Kansas. Kansas State Historical Society
Anthropological Series 4, Topeka.
- Witty, Thomas A., Jr.
1979 Preliminary archaeological literature search, eastern portion
of Kansas River and tributaries, bank stabilization study,
Kansas. Prepared for U.S. Army Corps of Engineers, Kansas City
District. Kansas State Historical Society, Topeka.
- 1980 Department of Archaeology, Kansas State Historical Society.
Personal communication, May 12.
- Works Progress Administration (WPA)
1949 Kansas: A Guide to the Sunflower State. Federal Writers
Project, Kansas Hastings House, New York.
- Younger, Ernest
1980 Millwood, Kansas. Personal communication, May 14.

Zornow, William Frank

1957 Kansas: A History of the Jayhawk State. University of Oklahoma
Press, Norman.

Appendix A
Scope of Work

STRANGER AND TONGANOXIE CREEKS
CULTURAL RESOURCES LITERATURE REVIEW AND RECONNAISSANCE

Scope of Work

1. INTRODUCTION

a. The Government is currently engaged in a study to gather information for the formulation and evaluation of flood control and other water related problems and solutions for Stranger Creek and its tributary, Tonganoxie Creek in Atchison and Leavenworth Counties, Kansas.

b. A literature search and reconnaissance shall be performed to locate archeological, historical, and architectural resources in the study area. Cultural resources identified will be further investigated to determine their potential eligibility for listing on the National Register of Historic Places and their significance relative to the study.

c. The work defined herein to be performed by the Contractor is called for in the National Environmental Policy Act of 1969 (PL 91-190) and the National Historic Preservation Act of 1966 (PL89-665) and is authorized for funding under Public Law 91-190.

2. SCOPE

a. The study area is approximately 60 miles in length and is limited to an area $\frac{1}{2}$ mile in width on each side of Stranger and Tonganoxie Creeks. This study encompasses a literature search and records review of the area exhibited in Incl 1 and in Incl 2 and a field reconnaissance of the areas outlined in red on Incl 2 attached to this Scope of Work.

(1) The literature search and records review is required for identification, location, and assessment of known archeological, historical, and architectural resources of the entire study area.

(2) The field reconnaissance will consist of an on-the-ground surface examination of those portions of the study area most affected by flooding. The reconnaissance is to locate potentially significant archeological, historical, and architectural resources and to assess the general nature of resources present.

b. The Contractor shall conduct this study in a professional manner, using accepted methodology in accordance with 33CFR305 and the proposed 36CFR66. The Contractor shall also be responsible for the preparation of a report of findings.

3. STUDY APPROACH

The Contractor shall perform the following activities as the requirements of the contract:

a. Conduct an extensive review of literature, Governmental reports, and other sources of information in the depth required for a comprehensive coverage of the study area and accumulate, develop, and interpret the acquired scientific and technological data.

(1) Review survey forms for all known sites in the study area and determine their relationship to identified problem areas.

(2) Review all previous and on-going reports concerning cultural resources associated with the study area.

(3) Review records and research pertinent library sources concerned with cultural resources within the study boundaries for archeological, architectural, or historical information.

b. Conduct a reconnaissance in accordance with 33CFR305 in the areas indicated. The number of areas to be examined during the reconnaissance are listed below.

Easton (70 acres)
Linwood (18 acres)

Tonganoxie (15 acres)
Highway 92 Bridge Area (300 acres)

(1) No testing to obtain data for determination of eligibility for the National Register is required.

(2) Artifacts will be collected only if permission is granted by the landowner.

(3) If any new sites are encountered, site numbers shall be coordinated with the Kansas State Historical Society.

(4) Photograph sites by black and white photography.

(5) Record provenience of features, including maps and graphs when applicable.

(6) Functional identification and temporal placement of materials encountered will be accomplished.

(7) Perform all measures using the metric system.

(8) Process, catalog and prepare for curation any materials recovered.

c. Determine which known and newly discovered sites require testing of any kind and indicate relative significance for ranking priorities in accomplishing recommended work.

d. Identify and outline a plan of intensive survey for the study area lands. Construct a predictive model for prehistoric cultural resources in the unsurveyed portion of the study area. Indicate which parts of the survey area should have priority for future studies, if any, and why.

4. SCHEDULE OF WORK

a. Coordination and Meetings. The Contractor shall pursue the study in a professional manner to meet the schedule specified. All work to be performed by the Contractor shall be closely coordinated with the appropriate Corps of Engineers cultural resources coordinator.

(1) The Contractor shall review progress of the work performed with representatives of the Corps of Engineers and the State Historic Preservation Officer (SHPO).

(2) The Contractor is to attend one meeting at the Kansas City District Office to discuss the review of the draft of the report.

(3) By written request, the Contracting Officer may require the Contractor to furnish the services of technically qualified representatives to attend coordination meetings in addition to those specified above. Payment for such services will be made at a rate per hour for the discipline(s) involved plus travel expenses computed in accordance with Government Joint Travel Regulations in effect at the time travel is performed.

b. Report Content and Schedule

(1) A report of findings shall be prepared by the Contractor and his staff. The main text of the report shall be written in a manner suitable for reading by persons not professionally trained as archeologists. Detailed presentation and discussion of data of interest to the archeological profession shall be included in a second part of the report or as appendices. The report is intended to be of use and interest to the general public as well as of value to the profession. Use of illustrations is encouraged.

(2) The report of findings shall be authored by either the principal investigator or project director. The principal investigator is the person responsible for day to day activities including field supervision, analysis of work, and write-up of the initial draft of the report. The project director is that person who oversees and administers the contract or purchase order and who does the final editing of the report. The archaeologist (regardless of title) whose credentials are used to justify the assumption of professional work being performed preferably should be either the author or co-author of the report.

(3) Thirteen (13) copies of a complete draft of the report shall be submitted to the Contracting Officer for purposes of Governmental review within seven (7) months after receipt of notice to proceed. After a review period of approximately three (3) months, the Government will return the draft to the Contractor. The Contractor then shall complete necessary revisions and submit the final report, which shall be professionally edited, within sixty (60) calendar days after receipt of the reviewed draft. The Contractor shall submit one set of originals and two copies of the final report of findings to the Government. The copies shall include all plates, maps, and graphics in place so that they may be used as patterns for assembling the final report. The Government will edit the final report and after approval, will reproduce this report and provide the Contractor ten (10) copies for personal use, plus two (2) copies for each major contributing author.

(4) The report shall include the following:

(a) An abstract and a brief narrative summary of the referenced literature and primary sources.

(b) Description and culture history of the study area.

(c) A discussion of each site investigated by this and past studies and identification of data mentioned above. A detailed description of sites and limited discussion of the artifacts encountered, presented both in support of the discussion in the text and also as valuable data for professional use of the report;

(d) A discussion of each type of cultural resources encountered or which may reasonably be expected to occur in the study area.

(e) A detailed discussion of recommendations for protection and management of known sites including:

(1) statements of eligibility for nomination to the National Register of Historic Places, if any; and sufficient documentation to support any evaluation, i.e., eligible or non-eligible in accordance with 36CFR63.

(2) mitigation needs of sites that appear to meet National Register eligibility criteria; and

(3) action, if any to be applied to all sites; if no action is to be applied to a site, so state in the body of the report.

(4) Brief narrative describing relative significance and priorities of work to be done at a later date including an intensive survey outline.

(f) Provide a summary and inventory of known/recorded sites discovered by others within the study area.

(g) Brief narrative describing relative significance and priorities of work to be done at a later date including an intensive survey outline.

(h) Illustrations, photos, maps, tables, and graphic representations of data appropriate to the text.

(i) One map showing those areas that were previously surveyed in other studies. This map shall indicate which sites were surveyed in each study and indicate areas surveyed in which no sites were found.

(j) One map of the project area with known sites, indicating those sites which were excavated, which were tested, cultural affiliations, and other pertinent information. (Color overlay reproduction is available.) Map for inclusion in the report must be presented in such a manner that exact site locations are not disclosed.

(k) One map showing those areas that received an on-the-ground surface examination for cultural resources during this study and those which were previously surveyed in other studies. These maps shall indicate which sites were surveyed in each study and indicate areas surveyed in which no sites were found;

(l) A glossary of terms.

(m) Reference section with all sources referred to in text or used for report, personal communications, interviews, bibliography, etc.

(n) Copies of all correspondence pertaining to review of the draft report. These are to include the comments of the State Historic Preservation Officer, Heritage Conservation and Recreation Service, and peer reviews (if applicable) by professional archeologists requested by the Government, together with the contractor's responses to each of the comments given. The Scope of Work is to be included in this section; and

(o) List of principal investigators and field and lab personnel with their qualifications, as an appendix.

(5) The final originals and two copies of the report shall be typed single-spaced on one side of paper with the margins set for reproduction on both sides of 8X10 $\frac{1}{2}$ inch paper. One of the copies shall be assembled in accordance with the attached style sheet.

c. Other Information. Six copies of materials not suitable for publication in the report shall be submitted with the draft. These materials include feature maps, repetitious photographs, and where records are maintained, and other documentation not of interest to most readers of the report.

d. Materials Not for Release. Materials dealing with exact archeological site locations are considered confidential and are not to be published or released. Materials which shall accompany the report but which are not to be included in the report consist of:

X (1) Six (6) copies of 7 $\frac{1}{2}$ minute USGS base maps indicating exact locations of all archeological resources and areas which were physically surveyed, including two of which are to be furnished directly to the SHPO. (If 7 $\frac{1}{2}$ minute USGS maps are not available, 15 minute maps are to be used).

(2) Six (6) copies of survey forms for newly recorded sites discovered incidental to this contract, including two copies which will be furnished directly to the SHPO.

(3) Tables, showing approximate location of each site by real estate tract number, site designation, relation to study features, types of threats, and recommended actions, if any.

(4) Photographs of representative cultural resource sites and collections from this study, if any.

e. Storage of Materials. Attached to the letter of transmittal for the final report shall be a listing of all cultural materials found during the field investigations and a Certificate of Authenticity for these materials. Collections shall be properly stored in containers clearly marked "Property of the U.S. Government, Kansas City District, Corps of Engineers." Retrieval of these materials by the U.S. Army Corps of Engineers for use by the Government is reserved. If the materials are to be removed from the curatorial facilities, this action must be approved in writing by the Contracting Officer.

5. FURTHER RESPONSIBILITIES OF THE CONTRACTOR AND GOVERNMENT.

a. Additional Work. The work identified in this document shall be complete in itself. There will be no assurance from the Government that additional work

will follow, nor should such work be anticipated.

b. Data Availability. The Government shall provide the Contractor with available background information, maps, remotely sensed data reports (if any), and correspondence as needed. In addition, the Government will provide support to the Contractor regarding suggestions on data sources, format of study outline and report, and review of study progress.

c. Right-of-Entry and Crop Damages. The Contractor shall have right-of-entry on all property owned by the Government. Compensation for damages to crops shall be the responsibility of the Contractor. It will be the responsibility of the Contractor to obtain right-of-entry on lands not in Government ownership.

d. Publication. It is expected that the Contractor and those in his employ, may during the term of the contract, present reports of the work to various professional societies and publications. Outlines or abstracts of those reports dealing with work sponsored by the Corps of Engineers shall be sent to the Kansas City District Office for review and approval prior to presentation or publication. Proper credit shall be given for Corps of Engineers' sponsored work, and the Corps of Engineers shall be furnished six (6) copies of each paper presented and/or published report.

e. Court Testimony. In the event of controversy or court challenge, the Contractor shall make available, as appropriate, expert witnesses who performed work under this contract and shall testify on behalf of the Government in support of the report findings. If a controversy or court challenge occurs and testimony of expert witnesses is required, an equitable adjustment shall be negotiated.

f. Safety Requirements. The Contractor shall provide a safe working environment for all persons in his employ as prescribed by EM 385-1-1, "General Safety Requirements," a copy of which will be provided by the Government.

g. Evaluation for National Register. The Contractor shall evaluate known sites to determine their suitability for nomination to the National Register of Historic Places and shall make recommendations to the Government for the preservation, management, and nomination of those sites which appear to qualify. In those cases where the contractor does not recommend that the site be nominated to the National Register, his decision should be supported by facts and give the contractor's rationale justifying the decision.

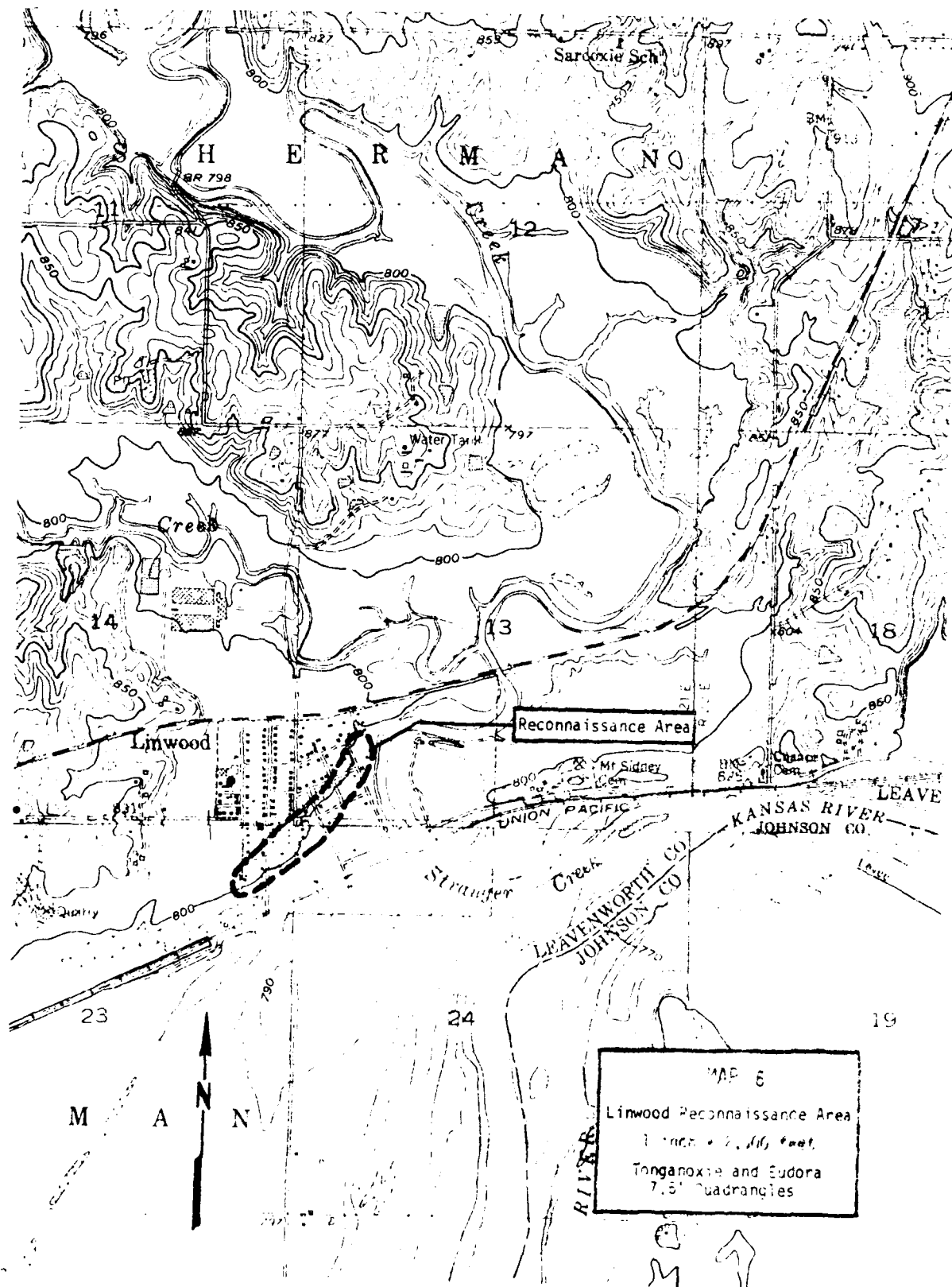
6. STAFF AND FACILITY REQUIREMENTS.

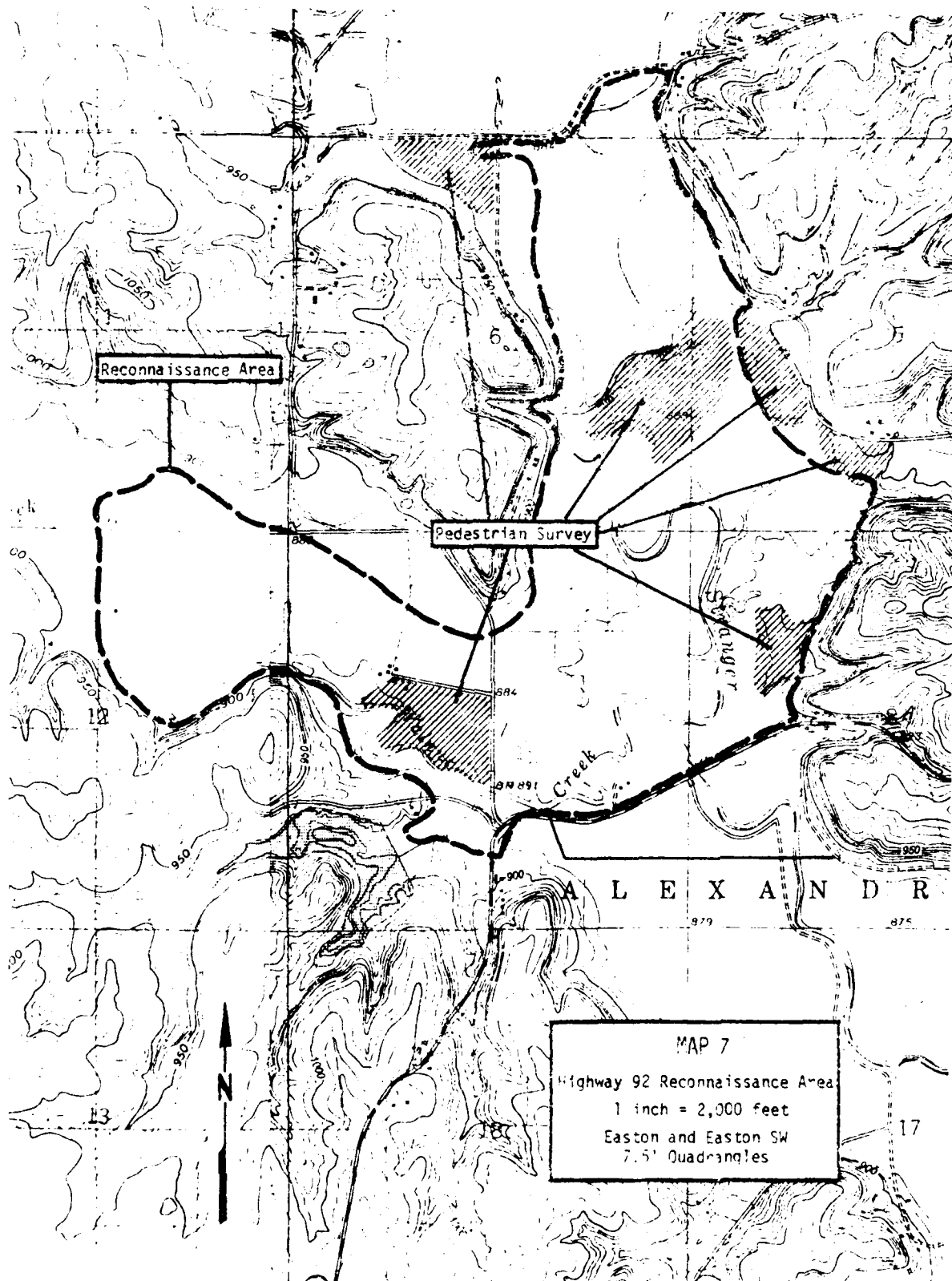
a. Project Director and Archeologist. Minimum qualifications are set forth in the proposed 36CFR66, Appendix C, which is provided on page 5381 in the Federal Register, Volume 42, No. 19 - January 28, 1977.

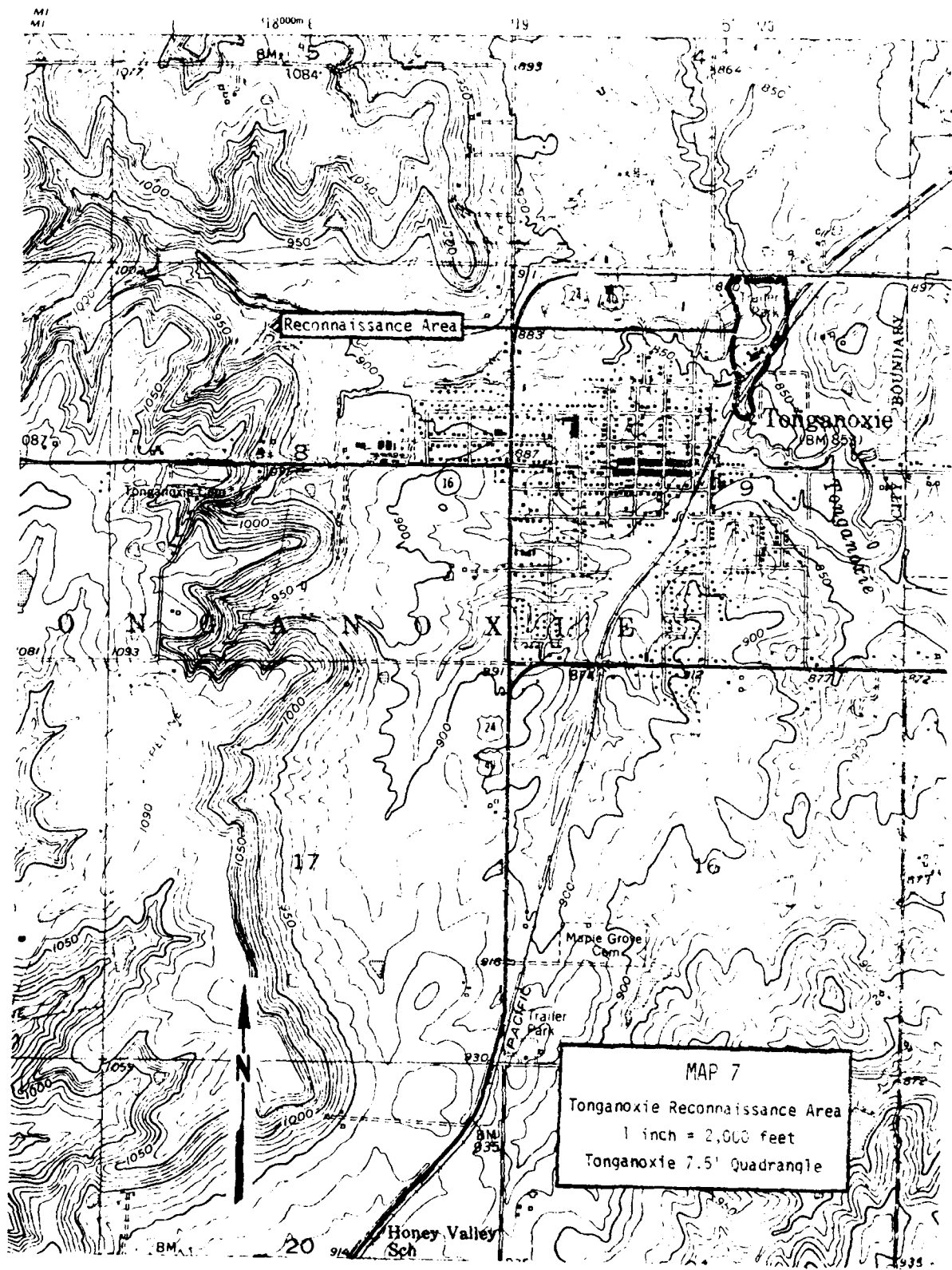
b. Consultants. Personnel hired or subcontracted for their special knowledge and expertise must carry academic and experiential qualifications in their fields of competence.

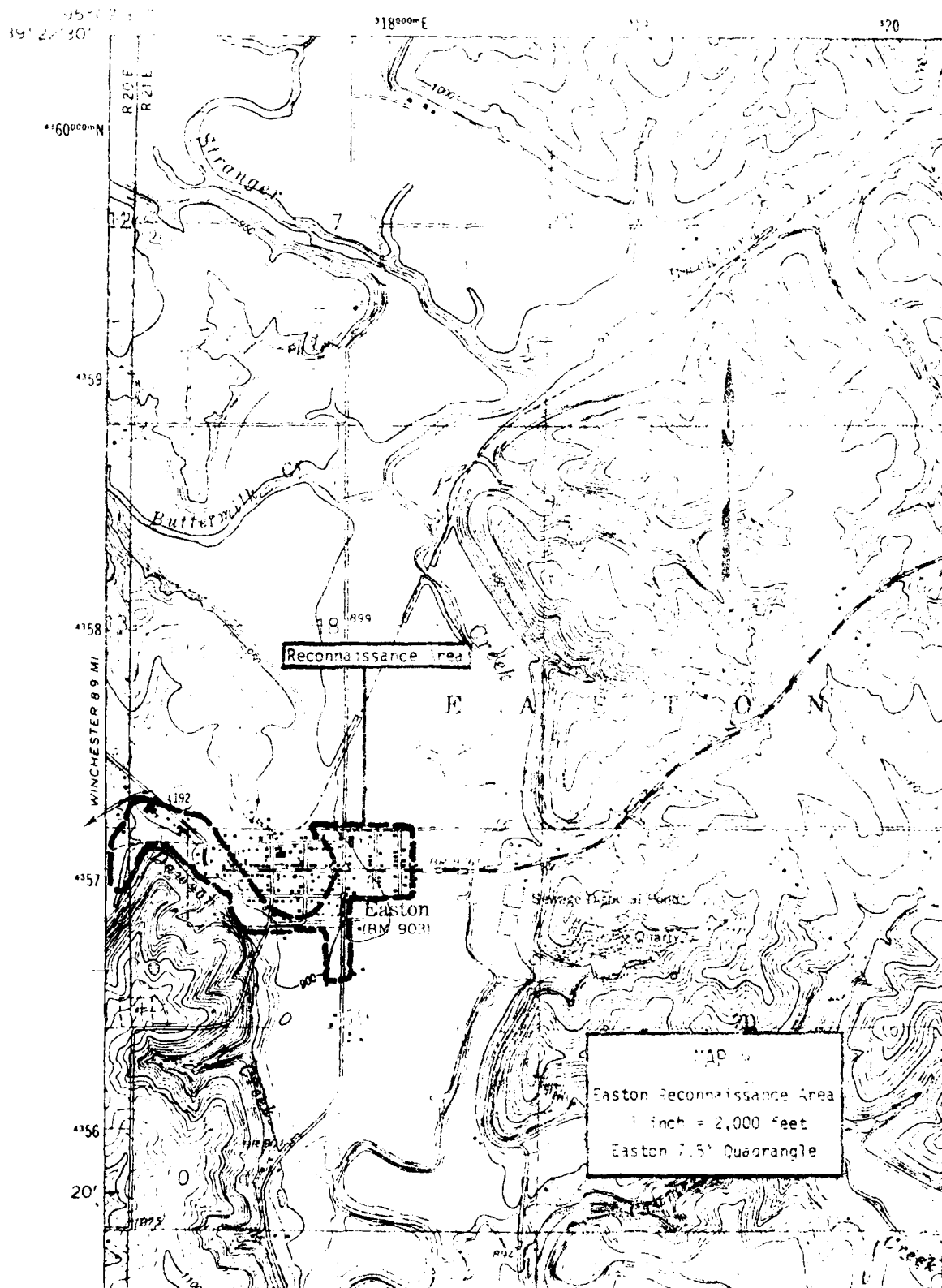
c. Equipment and Facilities. The Contractor also must provide or demonstrate access to adequate office space for proper treatment, and storage of records likely to be obtained from the project.

Appendix B
Reconnaissance Areas









Appendix C
Qualifications of Principal Investigators

RÉSUMÉ
Michael J. McNerney

EDUCATION

University of South Dakota, Business Administration, B.S., 1958
University of Nebraska, Anthropology, M.A., 1971

CULTURAL RESOURCES MANAGEMENT EXPERIENCE

Fifteen years of archaeological experience in the plains, midwest, and midsouth and served as Principal Investigator on a variety of projects for federal, state, local, and private agencies. These projects represent diverse scopes of work for the U. S. Forest Service, U. S. Army Corps of Engineers, Illinois Department of Conservation, Consolidation Coal Company, and other agencies

PROFESSIONAL CERTIFICATIONS AND ASSOCIATIONS

Certified Field Archaeologist, Illinois Archaeological Survey
Certified Contract Archaeologist, Illinois Archaeological Survey
Missouri Association of Professional Archaeologists
Society of Professional Archeologists, Field Research

PROFESSIONAL ORGANIZATIONS

Society for American Archaeology
Sigma Xi
Illinois Archaeological Survey

SELECTED PUBLICATIONS

- 1975 (Editor) Archaeological Investigations in the Cedar Creek Reservoir, Jackson County, Illinois, Southern Illinois University Museum, Southern Illinois Studies No. 12
- 1977 A Preliminary Cultural Resources Management Plan for Pomme de Terre Lake, Hickory and Polk Counties, Missouri. Prepared for Kansas City District, Corps of Engineers. Fischer-Stein Associates, Carbondale, Illinois
- 1977 A Cultural Resources Survey and Assessment of Selected Exchange Lands in the Mark Twain National Forest. Prepared for the U. S. Forest Service, Rolla, Missouri. Fischer-Stein Associates, Carbondale, Illinois

RÉSUMÉ

Michael J. McNerney

Page Two

- 1978 A Cultural Resource Overview of the Shawnee National Forest.
Prepared for the U. S. Forest Service, Eastern Region,
Milwaukee, Wisconsin. Fischer-Stein Associates, Carbondale,
Illinois
- 1980 Phase I, Cultural Resources Survey and Assessment of Deep
Strip No. 3, Burning Star Mine No. 2, Perry County, Illinois.
Prepared for Consolidation Coal Company, Midwestern Region.
American Resources Group, Ltd., Carbondale, Illinois

RESEARCH INTERESTS

Cultural Resources Management
Lithic Technology

ROGER GAIL WHITE

University of Illinois - 1973 - Bachelor of Architecture (with honors)
Boston University, Graduate Studies in American Vernacular Architecture
and Folklife
Smithsonian Institution, Museum Programs Workshop in Horticulture in
Museums and Historic Houses and Sites

EXPERIENCE:

- | | |
|-------------|--|
| 1980 | Entered private practice as historic buildings consultant. |
| 1976 -1980 | Historic architect on staff of Fischer-Stein Associates, Carbondale, Illinois. Responsibilities included conducting historic structures analysis, restoration/rehabilitation planning, and completing historic/architectural surveys and assessments for public and private agencies in the midwest and upper south |
| 1973 - 1976 | Technical assistant to Ministry of Public Works, Venezuela, through Peace Corps program. Responsibilities included working with architectural/urban planning team in preparing master plans for three communities and a development plan, including guidelines and policies for restoring the historic central city area |

PROFESSIONAL AFFILIATIONS:

Licensed Architect, State of Illinois, Certificate No. 001-0009578;
professional memberships in: American Institute of Architects, Society of Architectural Historians, The Victorian Society in America, The National Trust for Historic Preservation, and The Society for the Preservation of New England Antiquities

PUBLICATIONS: (Selected)

- | | |
|------|--|
| 1977 | <u>Historical-Architectural Evaluation of Vernacular Architecture in the Meramec Park Lake Area.</u> A report prepared for the University of Missouri, Columbia. Fischer-Stein Associates, Carbondale, Illinois |
| 1978 | <u>Vernacular Architecture of Early Southern Illinois. In A Cultural Resources Overview of the Shawnee National Forest.</u> Prepared for the U.S. Forest Service, Eastern Region, Milwaukee, Wisconsin. Fischer-Stein Associates, Carbondale, Illinois |
| 1978 | <u>Preliminary Assessment -- Historic Sites and Historic Architecture, Kansas River and Tributaries, Kansas.</u> A report prepared for the U. S. Department of the Army, Corps of Engineers, Kansas City, Missouri |

Resume of Roger Gail White (continued)

- 1978 (Co-author) Cultural Resources Survey and Assessment -- West Broadway Widening Project, Columbia, Boone County, Missouri.
Fischer-Stein Associates, Carbondale, Illinois
- 1979 (Co-author) A Cultural Resources Overview and Assessment, City of Perryville, Perry County, Missouri. Fischer-Stein Associates, Carbondale, Illinois
- 1980 A Preservation Plan; Aaron G. Cloud Home/Mary E. C. McCoy Memorial Library, McLeansboro, Illinois. Fischer-Stein Associates, Carbondale, Illinois

Appendix C
Correspondence

Kansas State Historical Society

120 West Tenth • Topeka, Kansas 66612 • 913/296-3251

September 16, 1980

Paul D. Barber
Chief, Engineering Division
Attn: MRKED-BR
Kansas City District, Corps of Engineers
700 Federal Building
Kansas City, Missouri 64106

Dear Mr. Barber:

Staff review of the draft report "Cultural Resources Literature Review and Reconnaissance, Stranger and Tonganoxie Creek" by Michael McNeerney and R. Gail White has been completed. We have a comment and question about Section 3b (2) in the scope-of-work for this project that states, "No artifacts are to be collected." This office and the State Archeologist commented negatively on this point in correspondence dated July 11, 1979, in the review of the proposed scope-of-work for this project. In response the Kansas City District on August 9, 1979 stated the scope-of-work would be changed to read, "Artifacts will be collected only if permission is granted by the landowner." This amendment does not appear in the scope-of-work included with the report. A handwritten notation is present as part 3b (8) which reads, "Process and catalog materials recovered." The instructions in the scope-of-work seem contradictory. Was the point regarding the collection of artifacts changed? We recognize that when working on private property permission should be sought for making a collection, but we stand firm in our insistence that without supporting collections any field study lacks qualifying documentation.

The report failed to address all of the items called for in the scope-of-work for the project. Specific comments are given below following the outline of the report.

Setting

The map on page 2 is a small scale map of the overall Stranger creek project area and those locations in which reconnaissance was performed. Larger scale maps should be included for the specific survey areas to indicate more exactly the limits of inspection. The streams in the Stranger creek drainage are ranked



JOSEPH W. SNELL, Executive Director
ROBERT W. RICHMOND, Assistant Executive Director
PORTIA ALBERT, Librarian
EUGENE D. BECKER, State Archivist
MARK A. HUBB, Museum Director
THOMAS A. WITTY, State Archeologist
PATRICIA A. MICHAELS, Curator of Manuscripts
FORREST R. BLACKBURN, Director of Publications
RICHARD R. FANKHAUS, Director, Historic Preservation Dept.
THOMAS P. BARR, Historic Properties Supervisor
LARRY JOCHIMS, Research Technologist
M. D. KIDWELL, Fiscal Officer

OFFICERS: President, Sr. M. Evangeline Thomas, Saint Mary's; Vice President, Lawrence, Thayer, Wichita; and Vice President, Donald R. McCoy, Lawrence; Secretary, Joseph W. Snell, Topeka; Treasurer, Robert W. Hubbs, Topeka.

EXECUTIVE COMMITTEE: Clifford H. Hope, Jr., Garden City; Winford L. Hope, Emporia; Gene R. Gibson, Topeka; William H. Seiler, Emporia; Helen L. Smith, Colby; Howard E. Gorenzky, Manhattan; Floyd H. Sproull, Topeka; Arthur L. Stearns, Leavenworth; Calvin Strong, Abilene.

by order. The criteria for this ordering should be included to make this meaningful.

Research Methods

No map was supplied to indicate the areas covered in the survey in accordance with Section 4d (1) of the scope-of-work. The narrative describing the survey does not mention the Tonganoxie survey area. The citation of 36 S.F.S. 66 does not indicate these are proposed regulations. These points should be corrected.

Archeological Context

Hillsdale is not southwest of the Stranger creek survey area as stated in the report.

This section includes much information and many references; however, some traditional accounts and recent intensive surveys have been left out. Not included are references to Lewis and Clark and their identification of the first archeological site in the state at the mouth of Independence creek, as well as the first excavations in the state carried out by Isaac McCoy on mounds near Leavenworth in 1830. Also omitted was the work by George Remsburg and Mark Zimmerman. While the latter's conclusions are generally not accepted today, Zimmerman did locate and excavate a large number of sites in this part of the state which includes the study. Contemporary work which certainly should have been cited was the State Historical Society's work on the Salt Creek survey, dealing with Fort Cavagnoli and the Kansa Village of 12. Curiously omitted was the work in the Clinton reservoir, though the writers discussed Hillsdale reservoir which is farther from the study area. An extensive watershed survey of the Wolf Creek drainage including parts of Atchison and Doniphan counties should be referenced. No mention was made of the extensive highway corridor work that has been done in Atchison and Doniphan counties. This omission is curious considering two of the sites listed in the report, 14LV369 and 370, were recorded as a result of these highway studies.

The statement is made that little archeology has been done on Archaic sites in Kansas. The report on the Coffey site, cited in this section, also includes discussions of two other distinctive Archaic manifestations, the Munkers Creek and El Dorado phases, of eastern Kansas.

The Lansing man site is listed on the National Register of Historic Places. Work subsequent to that reported by Wedel produced a radiocarbon date that places the site in the Archaic period. This should be noted and the date referenced.

The Stranger Creek Survey referenced in the report is not funded by the Kansas City District as implied in the text. This survey is a project of the Museum of Anthropology at the University of Kansas and is partially funded by a grant from the Heritage Conservation and Recreation Service. The Corps will be welcome to use the survey results, but the project is not designed to specifically address the needs of the Kansas City District.

Plains Woodland is a cultural entity within the Early Ceramic period and not an alternate term for this time period as stated in the text. The Early Ceramic period includes taxonomic units assigned to both the Middle Woodland, for example the Kansas City Hopewell, and the Plains Woodland, for example the Grasshopper Falls phase. This distinction is not brought out in the discussion.

The Pomona Focus has been defined, but there is no defined Pomona phase as stated in the text.

The discussion of the Late Ceramic period failed to include such well known sites as the Fanning site, listed on the National Register of Historic Places, and the Rulo site just north of the Kansas border. Both of these sites appear to be affiliated with protohistoric Dhegiha Siouan groups.

History

This section contains a number of typographical errors, for example, citing dates in the 1950's when the 1850's were meant.

The discussion of the Kansa omitted the important site of Fort Cavagnolle established by the French, and the Kansa Village of 12, probably located in the vicinity of Fort Leavenworth.

This section incorrectly implies the Wichita and Comanche occupied the state at the same time and omits any mention of the Dismal River or Plains Apache groups.

Also missing is a reference to the expedition of Bourgmont through northeast Kansas. This is the first documented European presence in the study region.

The text states that W. A. Harris built a house in Linwood in 1876. There is a large house just west of Linwood on K-32 highway which Harris built in 1865. This property is listed on the National Register of Historic Places. Are there two Harris properties in Linwood, or is the text in error? The Harris house listed on the National Register should be mentioned in the report. The 1876 property in Linwood should be documented with photographs and a description if it still exist.

Cultural Resources Within the Project Right-of-Way

Section 3 (b) 3 called for coordination of site numbers with the Kansas State Historical Society. The use of field numbers to identify sites in the report index this was not done. Appropriate site forms should be submitted to the Archeology Department for archeological sites described in the report and site numbers awarded.

Information in Table 1 giving section, township, and range locational information is too specific for a report that will receive public distribution. These references should be deleted.

Site 14LV370 is referenced in the text but not included in Table 1 listing resources of the study area. Of lesser importance is the misidentification of site 14LV10 as a site recorded in the Historical Society series. This site was recorded

September 18, 1980

by Jack Schock, a University of Kansas student, and first recorded for their files.

The discussion of site LV-R-04 states the cultural attribution was made on the basis of a collection of artifacts made by the landowner. A photograph of these points should be included in the report as documentation. The Early Ceramic identification can be supported by the small corner-notched points said to be present, but side-notched points, also said to be in the collection, as a class usually indicate a later Middle Ceramic period. This should be clarified.

Results and Recommendations

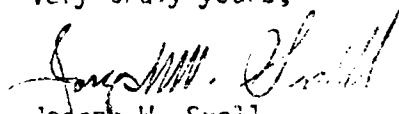
Information provided in this chapter was too general. No information was given about the potential project impact upon any of the identified cultural resources. Section 3 and 4 of the scope-of-work call for planning an intensive survey for the study areas and formulating a predictive model for prehistoric resources, providing recommendations for protection and management of known sites and indicating any action to be taken; providing statements about work priorities to be done at a later date and providing an outline for further survey. None of these points is adequately addressed in the present document.

The recommendation for utilization of the Stranger Creek Survey results in future cultural resource management decisions is fine, but it should be stated that this survey was not designed for the Kansas City District.

The list of principal investigators and their qualifications was not included as required by Section 4 b (4) (c) of the scope-of-work.

In conclusion the report is deficient in the identification and description of known resources, particularly those listed on the National Register, it fails to describe project impact on these resources and does not adequately describe future actions that should be taken.

Very truly yours,



Joseph W. Snell
State Historic Preservation Officer

JWS/maw

AD-A127 154

CULTURAL RESOURCES LITERATURE REVIEW AND
RECONNAISSANCE; STRANGER AND TONGANOXIE CREEKS KANSAS
(U) FISCHER-STEIN ASSOCIATES INC CARBONDALE IL

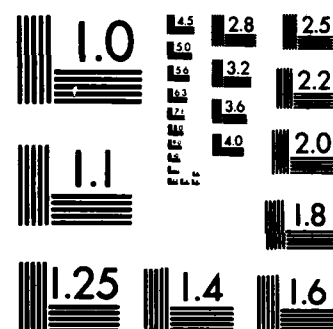
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NL





MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A



United States Department of the Interior
HERITAGE CONSERVATION AND RECREATION SERVICE
• INTERAGENCY ARCHEOLOGICAL SERVICES—DENVER
P.O. BOX 25387, DENVER FEDERAL CENTER
DENVER, COLORADO 80225

IN REPLY REFER TO:

1201-05 (W530)

SEP 10 1980

Mr. Paul D. Barber
Chief, Engineering Division
Department of the Army
Kansas City Dist.. Corps of Engineers
700 Federal Building
Kansas City, Missouri 64106

Attention: Mary Lucido

Dear Mr. Barber:

We acknowledge receipt in two copies of the draft report entitled, "Cultural Resources Literature Review and Reconnaissance, Stranger and Tongunoxie Creek." We regret that our curtailed resources prevent us from reviewing this report in response to your request of September 3, 1980. However, lack of review and comment does not constitute our agreement with any or all parts of the report.

Enclosed please find one copy of the subject report.

Sincerely,

Jack R Rudy
Chief, Interagency
Archeological Services - Denver

Enclosure

XXXXXXXXXXXXXXXXXXXX 127 North Washington
XXXXXXXXXXXXXXXXXXXX

November 4, 1980

Mr. Joseph W. Snell
State Historic Preservation Officer
Kansas State Historical Society
120 West Tenth
Topeka, Kansas 66612

RE: Response to Your Review of "Cultural Resources Literature
Review and Reconnaissance, Stranger and Tonganoxie Creek"

Dear Mr. Snell:

This correspondence is in response to your letter to Mr. Paul D. Barber dated September 16, 1980. I will follow the format of that letter and answer each of the comments in order.

Corps scope of work: "No artifacts are to be collected." This section was superseded by a change in the scope of work. The scope of work included in the draft report was the earlier scope and is incorrect. Attached is a copy of the revised scope under which the work was conducted. This scope indicates the collection requirements.

Setting:

(a) USGS topographic maps showing reconnaissance areas will be included as background material. In addition, these areas will be shown in more detail as an appendix in the final report.

(b) If you could supply a reference for the rank ordering of Stranger and Tonganoxie creeks, we would be glad to include this information.

(c) Two USGS topographic maps showing areas surveyed will be supplied to the SHPO in accordance with scope of services 4d(1).

(d) 36CFR66: "proposed" regulations will be indicated.

Archaeological Context:

(a) Hillsdale: direction will be changed.

(b) The visit of Lewis and Clark to the mouth of Independence Creek and the activities of Remsburg and Zimmerman will be mentioned in the final report.

Mr. Joseph W. Snell
November 4, 1980
Page Two

(c) Work at Clinton Reservoir will be mentioned.

(d) We would be happy to include the references to the Salt Creek, Wolf Creek, and highway corridor surveys if you could provide copies of these reports or the proper references.

(e) "Little archeology on Archaic sites": this statement was simply relative to the greater amount of attention paid to sites of the ceramic period. In a report of this type, a detailed review of one cultural period does not seem appropriate. However, in the final report, mention will be made of other Archaic sites in northeastern Kansas.

(f) Clarification of the KU survey of the Stranger Creek drainage and who is funding the project will be made in the final report.

(g) Clarification of Plains Woodland, Early Ceramic, and Pomona taxonomic units will be made.

(h) The Fanning and Rulo sites will be mentioned.

History:

(a) Typographical errors will be corrected.

(b) Fort Cavagnolle will be mentioned.

(c) Clarification of points regarding the Wichita, Comanche, and Plains Apache will be made.

(d) Bourgmont trip will be mentioned.

(e) W. A. Harris house: text is in error; this will be corrected.

Cultural Resources within the Project Right-of-Way:

(a) The final report will have state site numbers.

(b) Section, township, and range will be deleted from Table 1.

(c) Information on sites 14LV370 and 14LV10 will be clarified.

(d) Site LV-R-04 is outside the reconnaissance area but was included because it was close. A photograph of the small points contained in the picture did not seem necessary to the investigation at the time. I hope that the reviewer will consider the observations made as adequate documentation. In the future, photographs will be taken.

Mr. Joseph W. Snell
November 4, 1980
Page Three

Results and Recommendations:

(a) This project is only in the early planning stages, and specific impacts are not known at this time.

(b) Sections 3 and 4: these sections of the final report will be expanded within the limits of available information.

(c) Résumés of principal investigators will be included in the final report.

(d) National Register sites in the project area will be mentioned.

It would be much appreciated if you could provide the archaeological references which you mentioned. If you have further questions, please call or write. Thank you for your detailed review of the report.

Sincerely,

Michael J. McNerney
President

MJM:fbp

Enclosure

END

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