

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES
MULTIPLE PROPERTY DOCUMENTATION FORM



NATIONAL
REGISTER

☒ New Submission ☐ Amended Submission

A. Name of Multiple Property Listing

KORPIVAARA, Cascade County, Montana 1890-1945

B. Associated Historic Contexts

Mining and the Industrial Development of Montana 1860s-1912
The Homesteading Era and Korpivaara Farmstead Development 1890s-1930s
Log Architecture in Finland and Montana 1880s-1940s
Craftsmen, Carpenters and Construction in Korpivaara 1890s-1940

C. Form Prepared By

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D. Certification

As the designated authority under the National Historic Preservation Act of 1966, as amended, I hereby certify that this documentation form meets the National Register documentation standards and sets forth requirements for the listing of related properties consistent with the National Register criteria. This submission meets the procedural and professional requirements set forth in 36 CFR Part 60 and the Secretary of the Interior's Standards for Archaeology and Historic Preservation. (☐ See continuation sheet for additional comments.)

Marella Sharp
Signature of certifying official

4-10-92
Date

MONTANA STATE HISTORIC PRESERVATION OFFICE

State or Federal agency and bureau

I, hereby, certify that this multiple property documentation form has been approved by the National Register as a basis for evaluating related properties for listing in the National Register.

Antoinette Lee
Signature of the Keeper of the National Register

6/1/92
Date

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E. STATEMENT OF HISTORIC CONTEXTS

INTRODUCTION

A collection of sites located within the length of the [REDACTED] comprise the rural Finnish log buildings of the Korpivaara, Cascade County, Montana, 1890-1945 Multiple Property Documentation Form. The name Korpivaara, or "potentially dangerous forest wilderness," was given to the area by its turn of the century Finnish homesteaders. These ranching and agricultural sites in the foothills of the Highwood Mountains are the only known cohesive grouping of such hewn log buildings associated with the Finnish ethnic group in the state. The structures and building groups in this "Fenno-Scandian"¹ cultural landscape include four property types which represent the late 19th and early 20th century homestead settlement patterns of Finnish immigrants to the state, as well as their acculturation and assimilation during the mid 20th century.

The multiple property group is associated with four historic contexts: 1) Mining and the Industrial Development of Montana, 1860s-1912; 2) The Homesteading Era and Korpivaara Farmstead Development, 1890s-1930s; 3) Log Architecture in Finland and Montana, 1880s-1940s; and 4) Craftsmen, Carpenters and Construction in Korpivaara, 1890s-1940s. Employment in the burgeoning mining and lumber camps had drawn the first arrivals to the state. Later many of these fortune seekers and their newly-arrived countrymen turned to more traditional farming practices on homestead claims. Not every homestead was originally settled by Finns, but each bears characteristics of North European building form, use and farmstead organization.

The multiple property group nomination for Korpivaara includes those multiple structure properties that were developed as active homesteads. It also includes those support structures that contributed to the development of the community. Additional sites associated with the same historic contexts and located within the area or the county may be identified in future surveys.

GEOPHYSICAL SETTING

[REDACTED]
The county occupies a geographic transitional zone; a "bench land" that combines elements of the mountainous western region of the state with the high plains found to the east. [REDACTED]

[REDACTED] contribute to the irregular topography. Twenty-five miles to the south and east extend the Big and Little Belt Mountain Ranges of the Rocky Mountains.

The coulee serves as drainage for [REDACTED] Water from the [REDACTED] snowpack and summer rain runoff travels down one of three upper forks [REDACTED]. They connect with [REDACTED] three-quarters of a mile downstream, where the steeply-pitched hills give way to the coulee floor. At its widest point, the creek measures about 10 feet across, and coulee floor about 500 feet. Drainage continues to descend to the southwest, dropping another 400 feet in elevation to the end of the coulee, where it exits through a narrow, scrub-lined gully. [REDACTED] eventually leaves the foothills to empty into [REDACTED] ten miles to the east. The year-round presence of the stream provides welcome moisture to supplement the county's 15 inches annual precipitation.²

Rich black alluvial loam covers the four and one-half mile long coulee floor, while erosion has revealed the clay subsoil on the surrounding hillsides. To the south, erosion has also created a small but dramatic shale wall. Grass and scrub

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vegetation cover the southern end and hillsides, while stands of cottonwood, hawthorne, box elder, spruce and aspen mark the water courses. Forests of lodgepole pine--the primary building material for the area--and fir appear at the elevated and narrow northern end.

Climate varies widely between and during the seasons. The coulee lies in the path of seasonal frontal storms, and winter air masses moving south from Canada have resulted in wind chill factors that drop the average 22 degree January temperature to -50 degrees and lower within a few hours. Mean July temperatures reach 84 degrees, with records set at over 105 degrees. Cascade County averages 140 frost-free days, although the valley's higher altitude would reduce that figure. The first killing frost usually arrives by September 20th, and frost-free nights begin after May 15th.³

[REDACTED] derives its name from the geological landmark that dominates the horizon ten miles to the southwest. The conical, treeless butte is divided at midsection by a layer of exposed rock, encircled as if by a stone girdle or belt. This distinctive formation is supposedly the namesake for most of the landscape features in the area. [REDACTED]

The butte's distinctive appearance caught the attention of a member of the 1805 Lewis and Clark expedition, as the group negotiated portage around the Great Falls of the Missouri River. [REDACTED] of trappers and freighters.

E. HISTORIC CONTEXT #1

Mining and the Industrial Development of Montana, 1860s-1912

The mining of gold, silver, and later of copper minerals have played an important part in the economic and cultural development of the state. In fact, gold and silver mining provided the initial impetus for Montana settlement, and attracted a diverse range of fortune seekers from as far away as Eastern Europe and China. Included within this group were people of Finnish heritage.

The land that would become Montana Territory in 1864 and later the state of Montana had its origins in the discovery of precious metals west of the Continental Divide. Previous to that time, the region was divided variously between parts of the Louisiana Territory, Missouri Territory, "Indian Country," Nebraska Territory, Dakota Territory, and Oregon, Washington and Idaho Territories. Native Americans, along with a few hunters and trappers roamed the land, and few Anglo-European farmers or ranchers settled permanently. This situation changed in the early 1860s, with a series of bonanza gold and placer discoveries at such locations as Grasshopper Creek, Alder Gulch and Last Chance Gulch. Shortly after these and other discoveries, Montana Territory was created to sufficiently govern the stampede of miners and businessmen who had flocked to gold fields. By 1866, the population stood at an estimated 28,000. Placer mining enjoyed a short but brilliant success. Within five years of their discovery, the combined value of gold from these three locations amounted to between roughly \$60,000 to \$100,000, ranking Montana territory second behind California in gold production. Yet by the 1870s, the gold fields had played out, and would not be replaced by the discovery of other precious metals for another decade.⁶

The second and third mining booms in the state followed the development of new railroad lines laid in the early 1880s which simultaneously allowed easy transportation to smelter and reduction works, and brought an influx of new miners to the area. The primary focus of the new mining activity were the silver and later, copper, veins of the Butte-Silverbow country. By the 1880s and 1890s, these precious and semi-precious metals had replaced earlier placer gold mines. By 1883, Montana ranked second in silver production, and by 1887, it ranked first. The gold and silver riches of the

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mountains were also integral to the creation of the state. In 1888, after five years of effort (largely by stockmen and mining entrepreneurs) the state of Montana was created. Yet it was not silver which would dominate Montana's economic future, but copper. Below the silver veins of Butte lay even richer copper ores. By 1889 Montana was producing 43.3 percent of the nation's copper from those ores. During the 1890s, Butte-Anaconda was identified as the greatest mining center in the United States, and earned Butte the title, "the richest hill on earth."⁷

With economic opportunities overwhelmingly centered on mining, the pronounced settlement pattern was located in mining communities or communities that provided the raw material for smelting. This persisted for decades. Of the 43,096 foreign-born immigrants listed in the 1890 census, 70 percent were concentrated in five locations associated with mining: 10,659 lived in the copper mining city of Butte and surrounding areas of Silver Bow County; the smelter town of Anaconda and Deer Lodge County totaled 5,687; and the gold fields of Lewis and Clark County 6,368. Missoula County's timber camps attracted 4,449; while the coal fields of Cascade County and the Great Falls smelters brought 3,174. This pattern was common to a great majority of Montana's early inhabitants, and reflects the preeminence of mining as the initial economic factor in the state's development.⁸

Although their points of origin were overwhelmingly rural, initial settlement for the majority of newly-arrived Finns in the 1880s also concentrated in the mining and logging camps of southwestern Montana--the source of ready cash and immediate employment.⁹ By 1880, at least 177 of 382 "Scandinavians" were employed as miners, compared to 60 agriculturalists.¹⁰ Most located in the gold and copper communities of Helena and Butte, and near the coal fields of Red Lodge, Sand Coulee, Lewistown and Belt. This select distribution persisted through several decades. By 1920, Silver Bow County numbered 1,229; Carbon County 887; Cascade County 415; Deer Lodge and Missoula Counties combined 142.¹¹

The concept of non-agricultural work would not have been alien to the Finnish immigrants. A study of their migration patterns concluded that the majority were males between the ages of 20 to 35, single, landless, and originating from the central Bothnias in western Finland. Of the 274,000 Finnish immigrants arriving between the years 1893 and 1920, 87 percent came from rural areas; 49 percent from the province of Vaasa in southern Ostrobothnia. Two-thirds had once been tenant farmers, small land holders or landless agricultural laborers. Their dispossession was a result of several factors begun in the 1870s, including changes in agricultural practices from small, grain-producing and self-sufficient farms to profitable dairy cattle operations requiring few employees. An enlarged rural, landless population gained their first unrestricted mobility with the repeal of Finnish land laws in the late 19th century. A third factor was the limitations of primogeniture, a nearly useless practice when 70% of all farm units were less than 22 acres.¹² The growth of industry, particularly in Ostrobothnia, drew many of the displaced. The result was a propertyless and mobile labor force employed in the newly-developed lumber, sawmill, railroad and mining industries. When the Finnish immigrants found inexpensive land difficult to procure in the U.S., particularly in the Lake Superior Region where they congregated, employment in the coal mines was often the only available choice.¹³

Mining and the Development of Belt

Processing raw copper ore into a useable metal required large amounts of coal to fire smelter furnaces. Bituminous, sub-bituminous and lignite coal fields underlie over 35% of Montana's surface area. Much of it is located in thick, pure seams near the surface, with the largest concentration of bituminous seams--more than 14 inches deep--located in the Belt and Sand Coulee areas of Cascade County.¹⁴ The vast coal fields of Cascade and Carbon Counties proved invaluable in processing Butte and Anaconda copper, and were the fundamental reason Finns settled in and around Belt.

The coal formations of the area were not immediately profitable to their discoverer, John K. Castner. Castner was a freighter operating out of Fort Benton who was exploring the Belt Creek area in 1870. When he return to the area in 1877, Castner filed on coal claims and began the state's first coal mine on the banks of Belt Creek. He supplied fuel for Fort Benton, over 40 miles to the north on the Missouri River. That year Castner founded the community of Little

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Pittsburgh near his coal mining operation, in honor of his Pennsylvania home town. The mining camp was later known as Beltane, then in April 1883, changed to Castner. That same year, it was officially listed as Belt.

Belt remained a small mining camp for several years, numbering only 30 citizens in 1880, and 75 in 1893. Serious development of both the coal seams and the town began in 1894, when Butte's Marcus Daly used Belt coal from the Castner Coal & Coke Company in his smelting process. That year, 185 miners processed 800 tons of coal a day. One year later, the company merged with Daly's Anaconda Copper Mining Company (A.C.M.C.) as part of the copper magnate's plans for vertical integration. The coal was shipped via the recently completed Great Northern railroad to the smelter city of Great Falls. Belt City increased to over 4000 inhabitants by 1897, transformed to a company town in three years. During the peak years of 1896 to 1898, A.C.M.C. employed 1000 men to mine 2500 tons of Belt coal a day.¹⁵

The workers who comprised this population boom were primarily of Finnish and Slavic (Serbian and Croatian) origin, but included groups from Italy and Greece, as well as many native-born Americans.¹⁶ Word of mouth, letters from friends and relatives, and advertisements placed in newspapers nation-wide spread the news of job opportunities. Some Finns came directly from Finland, although most had been living in the United States for several years. Some arrived from the copper fields of Calumet, Michigan, and coal fields of Rock Springs, Wyoming; others from the copper mines of Butte, the smelter towns of Anaconda and Great Falls, and the coal fields of Red Lodge, Montana.¹⁷

While prosperous times guaranteed steady employment, the work was often dangerous and hard. Most miners did contract work, averaging \$2.00 to \$3.00 for a 12 hour day, or up to \$7.50 a day loading 25 tons of coal at \$0.30-0.35 a ton. The miners might find themselves as far as one-half mile from the entrance, under seam roofs supported on 15 to 50 foot thick pillars of coal. Black lung and other respiratory diseases caused by poor ventilation and the inhalation of coal dust were constant health risks for any long-time coal miner. Malfunctions and operator error with newly-mechanized drilling and hoisting equipment further increased the threat of permanent disability or death. An active Miner's Union in Belt ensured that in the event of death or disability, the family of a Belt Creek Miner Union member received \$400; in the event of sickness, \$6.00 a week for 10 weeks.¹⁸

In addition, the miners were at the mercy of economic depressions and fluctuating market prices. Layoffs and mine closings could come at any time, particularly as a result of actions by Butte's "Copper Kings." Daly, his ally F. Augustus Heinze, and his rival William Andrews Clark, were responsible for innumerable layoffs and closings to "control" profits, their businesses and workers. On a larger scale, Heinze's spectacular failure to counter the power of the Amalgamated Copper Company, (the A.C.M.C., reorganized in 1899 as a holding company through a purchase by the Standard Oil syndicate, with Daly as vice president) through his creation of the United Copper Company, contributed to the economic Panic of 1907.¹⁹

Economic insecurity culminated in 1903, when coke production in Belt ended with the opening of more economical mines and coke ovens in southwestern Montana. By October, the Standard Oil-owned Amalgamated Copper Company shut down all its Montana mining enterprises. Amalgamated reorganized in 1910 under the old Anaconda Copper Mining Company entity, and in 1912, officially closed its Belt holdings. By that time, however, many Belt Finns had returned to their traditional agrarian occupations.²⁰ Their opportunity to acquire land came through a series of federal acts begun over 30 years earlier, and resulted in what is known as the Homesteading Era.

E. HISTORIC CONTEXT #2

The Homesteading Era and Korpivaara Farmstead Development: 1890s-1930s

The greatest land rush in the history of the state occurred in the first decades of the 20th century, and was a result of three major acts intended to develop what was once derided as "the Great American Desert." The Homesteading Era, which

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would see an estimated 70,000 to 80,000 people arrive in Montana between 1909 and 1918, resulted in an economic and geopolitical reorganization of the state. Over 28 new counties were created between 1910 and 1925 to service the increased population. Dryland farming became the most popular and very profitable form of employment, particularly along the Hi-line areas north of the Missouri River, and the vast rolling hills in the east half of the state.²¹

Montana's 20th century development had its beginnings in the 1862 Homestead Act. For a nominal \$16.00 filing fee, prospective property owners over the age of 21 could file a 160 acre claim on government-owned land, and obtain full title after five years' residency and proof of improvements to the land. One hundred sixty acres, however, could not support a family in the arid conditions of the Great Plains. Only the favored lands around Great Falls, the Judith Basin and Billings were settled in any great numbers by farmers prior to 1900. It was not until passage of two subsequent acts that intensive homesteading could begin. The first, the 1877 Desert Land Act, allowed purchase of a full 640 acres at \$1.25 an acre after three years residency and partial irrigation. This act scarcely aided farmers, most of whom could not finance the costs of irrigation themselves. The greatest aid was the 1909 Enlarged Homestead Act, which allowed for an additional 160 acres, and attempted to compensate for the western states' arid conditions. It marked the largest federal government-sponsored effort for individual, rural home ownership. In combination with new dry farming techniques and heavy promotional campaigning, the 1909 act created the greatest settlement rush in the history of the state.²²

It would appear that the Finns, who were closely identified with rural settlement and agrarian values, would flock to land offices to participate in the homesteading land rush. Certainly their reputations suggested such activity. During the cultural ethnocentrism of the 1910s and 1920s, descriptions of the Finnish agrarian character reached heroic proportions. One study described the Finn as a person "driven as if by a higher force, with an irresistible 'land-spirit'...to conquer the wasteland and to carve little holdings out of forest and rock-strewn soil."²³ This reputation had appealed to early Montana boosters who hoped to increase the state's population. As early as 1869, Territorial Governor James Ashley hired an agent to contact immigrants disembarking in New York. Ashley was eager to duplicate the numbers of Germans and Scandinavians flocking to Minnesota. He employed another "to prepare a series of pamphlets for distribution in the German and Scandinavian countries," praising the state's agricultural potential.²⁴

Similar efforts by state boosters and Montana's second largest property-owner, the Northern Pacific Railroad, may have had an effect: By 1930 and the end of the Homesteading Era, 49 percent of all Finnish immigrants and their progeny were located in rural areas. But this figure is misleading, and indicates that Finns did not uniformly chose to follow their "land spirit." Of the 6,051 Finns in Montana in 1930, roughly one quarter with the desire or financial support were engaged in farming activities. Another 22 percent comprised the rural-nonfarming population, and fully half lived in urban locations. The heaviest concentration of Finns remained in the copper industry-dominant Silver Bow County--where 1,861 of 2,122 lived within the Butte city limits.²⁵

Neither were the Finns the first homesteaders in the [REDACTED] Most homesteading activity in the area was underway by the 1890s, and by 1905, over 50 claims had been filed on the open land adjacent to the foothills of the Highwood Mountains.²⁶ The land included within the earlier claims was relatively flat and therefore easily tillable; few were located within the steeper coulees. [REDACTED] were by native-born Americans and date to the turn of the century. In fact, one area to the northwest was dubbed "Missouri Ridge" because of the numbers of settlers originating from that state.²⁷ The claims show a preference for the southern and more open areas within the coulee, and include land bordering the creek.

The Finnish immigrants began to move into the area about 1905. Upon settlement, the coulee became known by its inhabitants as Korpivaara, or "potentially dangerous wilderness," graphically describing the wooded, hilly surroundings, quite remote from urban settlement, in which the homesteaders found themselves. The experiences of the Korpivaara homesteaders were similar in many respects. Most men emigrated unmarried from Finland in the 1890s. The residents' arrivals in the Belt area were preceded by several years employment in other areas in the United States. Nearly all the

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men worked in the coal or copper mining industries, several for the Anaconda Copper Mining Company's smelters in Butte and Great Falls. It was as miners that most men met their future spouses. Less information exists on the homesteading women. Some immigrated as independent adults; presumably others traveled across the ocean with their families. Following marriage, the couples moved to Belt, where the men found work in the ACMC coal mines. Within ten years, the young families filed on the hilly and forested land of the Highwood Mountain foothills. Proving a claim required between four to ten years, depending upon the owner's resources and length of time spent off the land to earn money. The homesteaders tended to have large families, and the children usually married other second and third generation offspring in the area.

Although some Finnish Americans chose to remain employed in the mining industry, others intended to mine only as long as necessary to earn wages to purchase agricultural land, or to supplement expenses on homestead claims. The immigrants would mine during the winter months and make improvements during the summer. Land Patent Maps show that their claims were located further northeast along the valley, on what unclaimed parcels remained. It is significant that although open acreage remained unclaimed on the benchlands surrounding Belt, the Finns chose the more rugged and less easily tillable land of the Highwood Mountain foothills. Perhaps the forested land and accessibility to water provided reference to the Old Country. However, it should be noted that Finland is a country of varying landscapes--northern and coastal Finland are not the forested and water rich environments of the central areas. Yet compared to the dry, benchland conditions of the land between Belt and Great Falls, [REDACTED] would have seemed a homesteading paradise. A circa 1893 survey map depicts tree-covered foothills, open meadows and running water available year-round. Only the tops of mountains were listed as "unsuitable for agriculture." Furthermore, a rutted wagon road followed the creek into the mountains, and provided access to the claims.

The present appearance of the [REDACTED] is the result of over 80 years' development and three major construction phases. The first corresponds to the initial homesteading era between the 1890s through the early 1910s, when Finns began to move into the area from Belt. The second phase extends from the late 1910s to the 1930s and is marked by the growth and development of the farmsteads. Growth was halted by the Depression, and many families moved from the area. The third phase begins in the late 1940s and extends to the present. It is characterized by the use of modern frame construction techniques in place of horizontal log construction, and the appearance of mechanized equipment and storage buildings for that equipment.

The construction phases also correspond to the patterns of population growth within the [REDACTED]. Beginning in 1890 and for nearly 20 years, the area population remained at about 80, reaching a total of 86 by 1910.²⁸ Over the next 40 years, the community aged and renewed itself, while simultaneously dwindling in numbers. An influenza outbreak in the 1910s took many lives, but the greatest depopulation factors were the severe drought years between 1916 to 1920, and the following state and national depressions. Foreclosures, bank failures and widespread unemployment were too much for many homesteaders. In 1920, Burlingame School District #46 numbered 74; in 1930 it had shrunk to 43.²⁹ A modest population revival occurred in 1940 with a total of 59 inhabitants, as the second generation matured and raised their own children. By 1950 the population tumbled to 30 people.³⁰

The first phase is characterized by small, self-sufficient agricultural enterprises. Homestead final proofs indicate that the log buildings from this period tended to be small, gabled and rectangular, measuring between 10' x 12' to 16' x 30'. The corners were connected with a variety of notch types. In appearance and use, the first period buildings were similar to those in the Old World--forms with which the first generation Finnish immigrants were completely familiar. The buildings were arranged in loose courtyard plans, although the small number of initial buildings made any form of enclosure vague.

The homesteaders spent between four and seven years proving up their land. The minimum buildings on a homestead included a house, an outhouse, a barn or other form of stock shelter stock, fenced pasturage or a corral and between six to 35 cultivated acres. Most homesteaders built a sauna. The largest number of improvements on a final claim included a

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spring house, two chicken houses and a hog house. Interestingly, only two non-Finnish homesteaders initially listed root cellars. Crops raised included hay, oat and wheat, along with truck gardens for the families. The exact location of the original plantings, field plowing and fence placement during this time cannot be determined with any certainty, although they were probably located on the easily accessible open meadows and benchlands identified in an 1893 survey map. Aerial photographs taken about 35 years later indicate that by the end of the homesteading period, pastures were located on the valley floor, with agricultural fields on flatter sections on the coulee hillsides. The lack of ditches or open bodies of water suggests that irrigation was dependant upon precipitation.

The distinction between American versus Finnish settlement areas blurred after two Finnish families and one Austrian family relocated on established claims at the south end of the valley. Sixteen families eventually settled in [REDACTED], forming the nucleus of Korpivaara.³¹ In the process, the homesteaders tamed the "forest wilderness" by creating a cohesive community that featured a school, a library/social center, and wood and flour mills.

With families averaging between seven and ten children, a primary concern for the homesteaders was the creation of a school. In 1901, James M. Burlingame offered the use of his grain house as temporary quarters until the 18' x 24' frame Burlingame School and teacherage was built in 1903. It sits between the Maki/Jarvi ranch and the Stone Homestead, on land donated by Lars Nevala.³² Students from [REDACTED] walked up to five miles to attend the eight-grade school. Ironically, the school was the first focal point for the Finnish community, but also served as a tool of cultural assimilation. Most Finnish homesteaders spoke little English, and it was at the school that the homestead children learned the language of their parents' adopted land.

Despite this, Burlingame School remained a community center which bound the immigrant homesteaders together. Vivian (Heikkila) Urick, who met her husband Frank at one social gathering, recalled that "any time the community needed a meeting, that's where it was. School, you name it, it was done at the school."³³ A traveling Finnish minister tended the spiritual needs of the community, and held Sunday services and confirmation school in the building.³⁴

Burlingame School was the only public gathering space after May 19, 1925, the day the Finnish Hall burned down. Also known as the dance hall or the Little Belt Library Hall, the frame building stood directly across the county road from the school. The Finnish Hall featured a stage, complete with painted curtains depicting a waterfall and timberland. Weddings, dances, plays and Christmas pageants were held there.

Cooperative institutions are a characteristic of Finnish settlements, and appeared in the [REDACTED] in the forms of a flourmill and sawmill. By the first decade of the 20th century, while most homesteaders were busy proving up, the men in the neighborhood built a flourmill [REDACTED]. The head carpenter was Matt Maki, who would be active in the valley for the next 20 years. Homesteader Louis (Lars) Nevala milled the grain brought in by the new farmers. The building was swept away by a 1953 flood, although some say the stone remains buried under the debris.³⁵

The second cooperative venture was less long-lived. Between the years 1927 and 1928, four brothers--Jarvi, John, Frank and Ben Hendrickson--operated a sawmill on the Ernst Burlingame property, about 100 yards from the road. The mill consisted of a sawblade sheltered under a simple shed. The brothers would help saw logs brought to the mill by anyone desiring rough lumber, mostly fir for barn floors or shed walls. The reasons for the mill's short life are unknown, and nothing remains today. Perhaps the depopulation of the area in the 1920s, or the effort to maintain the mill discouraged the Hendricksons from continuing operations.

Those homesteaders that remained through the late 1910s and 1920s shifted their emphasis from agriculture to stock raising--a more suitable choice for the hilly and forested terrain. Their efforts were aided beginning in 1918 when county agents representing the Farm Bureau traveled the area with the purpose of amalgamating agricultural interests. Experts

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from Bozeman's Agricultural Station and extension office held lectures and demonstrations for the county farmers and ranchers.³⁶

Construction during the second period of the late 1910s to the 1930s continued the use of log materials, corner joining and traditional construction techniques, and expanded upon the courtyard plans. Contrary to the thousands of Montana homesteaders struggling to survive at this time, a number of the homesteaders [REDACTED] enjoyed enough success to replace older buildings and enlarge their holdings to serve expanded agricultural and stock operations. By the 1920s, Polk "Farmers Directories" show that the homesteaders acquired between 160 to 480 additional acres. These holdings remained fairly constant through the 1930s.

Aerial photographs taken in September, 1937, show land-use patterns that were adapted to the topography. Grain fields continued to be located on the flatter slopes of the coulee hills, and on the gentle slopes [REDACTED] where many owners purchased additional land. Enclosed pastures continued to be sited on the rich bottom land, and on the steep hillsides that were unsuited to existent farming techniques. Fence lines and differences in land use between owners show that as much of the original 160 acre claims were utilized as was possible. The resultant landscape created clearly displays the influence of the township and range land division system created by the United States government.

The historical photographs also indicate evolving agricultural practices. From the early single family subsistence efforts using horse drawn equipment, by the 1930s, the homesteaders used community involvement and mechanical equipment to harvest their crops. Based on farm practices elsewhere in the state and county, and on the photographs, the homesteaders continued to practice a multi-step harvesting process. It involved cutting the grains with horse or tractor-drawn equipment, then raking the wheat or hay into windrows that were later collected and brought to a more accessible point for threshing. After threshing, the grain was collected, and taken to elevators near town.

Most small acreage property owners at this time could not afford to purchase the massive, steam-driven threshers used to separate the grain from the chaff. Instead, they hired traveling threshing teams who specialized in such work, and moved from farm to farm in the fall. With the large crew required to operate the machines, the annual harvest season meant an influx of new faces to the community, and was a cause for festivity and community involvement. The farmers were often expected to provide housing for the workers.

This increase in farm size was expressed in additional service buildings to hold equipment and to shelter larger stock herds and their fodder. New and larger barns appeared, as well as chicken houses, brooders and granaries. To house the seasonal workers (for both farming and ranching), bunk houses were built or moved onto the homestead. Financially secure property owners with available time and energy had spring houses, saunas and larger, more elaborate homes constructed.

Significantly, some homesteaders, including the Kraftenbergs, the Mattilas, the Stones and the Uricks, left much of their property in pasturage. This indicates the difficulties involved in attempting to plow the steep and wooded hillsides at the north end of the coulee, and the growth of cattle ranching in Korpivaara's economy.

The distinguishing feature of this phase is the new range of non-traditional building types. The new homes on such properties as the Nevala, Urick, Heikkila and Kraftenberg homesteads bore unmistakable similarities to contemporary urban residential designs. Another interesting design development was the application of the toothed notch and horizontal log members for a very non-traditional, monitor-roof chicken house found on the three southernmost properties. Pole frame construction with milled or split log siding appeared on several homesteads, and were used for shelters, garages and calving sheds. The majority of buildings were completed by 1930. Development slowed during the Depression, and did not resume until after World War II.

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The process of acculturation continued through the third generation owners in the final period of construction, from 1945 to the present. Buildings of this period--usually garages--were of frame, sided in milled lumber and roofed in sheet metal or composition shingle. Some log farm buildings were torn down, while the number of garages and calving sheds reflects the properties' transformation to a cattle industry dependant upon mechanization. During this phase, large tracts of open land were converted to cattle pasturage. Several fields continue to be used for grain and hay production for use by the ranchers, and are planted using contour farming techniques.

Korpivaara, like the rest of the county and the state, has followed the trend towards fewer, but larger farms. The need for Burlingame School passed as family size and occurrence dwindled, and the remaining children began to ride busses into the town of Belt. Although some families remain, the closure of the Burlingame school in 1974 officially marked the end to an active 70-year old Finnish homesteading community.

HISTORIC CONTEXT #3

Log Architecture in Finland and Montana, 1880s-1940s

In addition to the few personal possessions carried to the Montana frontier, the European immigrants transported their values, customs, language and assumptions about proper building construction, use and appearance. Given the opportunity to build their own homes, some applied these traditions to their new homes. Variations exist between and within each homestead, yet all exhibit the sophisticated Fenno-Scandian log construction techniques.

The full recognition of the significance and historic context of the Korpivaara buildings involves the examination of several traditional Fenno-Scandian characteristics. These include the interrelated elements of building materials, construction technique, structure use and form, and farmstead organization.

In horizontal log construction, the primary factor in a building's overall dimensions and appearance is the log. The log's use as a bearing wall element and the necessity of secure corner connections usually confine structures to rectangular boxes. In Fenno-Scandian construction, the traditional building form, regardless of use, is a gabled, rectangular one-story enclosure. Log walls continue to the roof ridge, and the roof pitch is rather shallow. Indicators of building's use are its size; the appearance of windows and doors and their placement; log treatment and notch type; and the building's location within the farmyard. In Fenno-Scandian farmstead organization, buildings that are related by use are arranged into delineated areas or yards, and separated by human or animal use.

Finnish Farmstead Organization

It has been observed that the high number of small, use-specific structures, and their arrangement into distinctive courtyard plans, are characteristics of the Finnish farmstead. Depending upon the owner's economic resources, the farm could number between six to 40 buildings. European Finnish farmsteads of the late 19th century fell into three general categories, depending upon the arrangement of these buildings, and correspond to geographical regions.

The oldest "blockade" type, found in the windy coastal areas of western and southern Finland, showed the Swedish influence of connecting the buildings to form one or two enclosed courtyards. While specific siting of individual farm buildings within the general organizational framework depended upon the farmer, the grouping were done according to function.³⁷ The house and ancillary storage buildings (granary, summer sleeping quarters, woodshed, and domestic tools, etc.) face one human courtyard, or "MIESPIHA." The barns and attendant farm implement/ fodder storage buildings framed a second animal courtyard, or "KARJAPIHA." A fence, stable or second residence divided the two yards, and a roofed passage way allowed entrance or egress into the farmstead. All vacant space between buildings was walled in, and usually roofed over to provide lean-tos.³⁸ This type was no longer popular by the late 19th century, and was replaced by

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a more open, but still orderly plan about a central courtyard. Difficulty in maneuvering in enclosed courtyards; the fire danger from saunas and other heated buildings; and the reduced need for protection from animals or robbers were reasons for the abandoning the "blockade" plan.

The farmsteads of the heavily-laked interior Finland featured a second, more recent form. The Swedish influence is most evident in the westerly areas, with open courtyard plan, and one to two-story dwellings. Buildings might still be connected, but were more typically ranged apart, perhaps connected by fences. The second courtyard is not always present and is rarely complete.³⁹ An emphasis on a forestry rather than agricultural industry in this area resulted in fewer farm buildings, since the need for grain storage or farm implements was not as great.

In central Finland, further removed from the Swedish influence are found even more informal courtyards. Here the courtyards are commonly enclosed on three sides. The gate is gone, although there might remain a ceremonial entrance axis and a protective "street" of buildings. Animals no longer have their own courtyard, and may share the human courtyard.⁴⁰

The third form is localized in the eastern Finnish province of Karelia, and is characterized by its massive, two- to three-story construction. Nearly all domestic and agricultural activities were centralized under one roof.

Domestic Buildings

A variety of buildings served the domestic needs of the farmer. The primary structure was the house, supported by the sauna, clothes and food storage buildings, outdoor ovens, wood shed, and privy. The most significant are discussed below. The sources for this information are from works by Matti Kaups, specifically his "Finnish Log Houses in the Upper Middle West;" Nils Eric Wickberg's Finnish Architecture; Ranulph Glanville's "Finnish Vernacular Farmhouses;" Terry G. Jordan's "A Reappraisal of Fenno-Scandian Antecedents for Midland American Log Construction," and the 1964 and circa 1972 museum guides to the Seurasaari open air museum in Finland.

There are seven traditional house types found in Finland, most of which were directly influenced by Sweden. Sweden also introduced elements of the house, including the front porch, or KUISTI; the entry hall, or PORSTUA; eyebrow windows (small windows beneath second story eaves); the mansard and gambrel roof; and the use of wooden dowels as reinforcing elements. The following list of dwelling types would have been modified by the owners in terms of room dimension, details, interior finishes or exterior cladding. The traditional types would be modified by the late 19th and early 20th centuries by the widespread use of manufactured materials, including windows, doors and shingles.

The one story, one room house, or YKSITUPAINEN ASUINRAKENNUS, was used in the remote regions of central and eastern Finland into the 20th century. The building usually measured about 14' x 16', with all activities occurring in the large room, or TUPA. Very early fireplaces were set in the floor, and the smoke vented out a hole in the roof. Later stoves were set in the corner, and made of stone. An unheated front porch in the gable end served as winter storage. Interior subdivisions created spaces for a porch, and a heated bedroom. The one room house was widespread in Finland as the home of tenant farmers and small operation farmers. As such, it might have been introduced from Sweden in the 18th century, with the rise of the tenant farmer.

The two-room house, or PARTITUPA, was the most common dwelling found in Finland. The front door, as in the one-room house, opens into the kitchen/living room/bedroom, and is sheltered by a post-supported shed roof or enclosed gabled porch. The entrance on the two-room house is often on the eave end of the building. The second room is an unheated parlour-visitor's room. Sizes ranged from 12' x 22' to 16' x 32'.

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The one-story Nordic Pair House has a tripartite floor plan with a central unheated hall, or PORSTUA, flanked by two rooms, used for formal and domestic activities. This dwelling type can be traced back to the 17th century in south Ostrobothnia and the coastal towns on the Gulf of Finland. The floor plan may be further subdivided to provide a master bedroom, or more use-specific rooms. The house length can measure over 40'.

A building type popular with affluent urban residents in the late 17th and early 18th century was the symmetrical, two story KAKSIKERROKSINEN ASUINRANKENNUS. It was later adopted by affluent farmers and clergy, and had up to ten rooms. The living quarters were on the first floor. The chimney was located along the center dividing wall to heat both rooms, as there was no stove in the parlor. The buildings measured up to 30' x 90', commonly covered with milled lumber, and painted red, yellow or light brown.

A smaller and less elaborate version was the one and one-half story PUOLITOISTAKERROKSINEN ASUINRANKENNUS. Eyebrow windows are the distinguishing feature of these dwellings, an import from Sweden in the 18th century. Access to a less than full-height, unheated second floor was by an interior hall staircase, or through a door in the gable ends, reached by a ladder. The house has a variety of floor plans, including L- or T- forms, with bisected or trisected floor plans. The size varies from 17' x 29' to 26' x 46'.

The Karelian Dog Trot house, common to the Baltic area, was one and one-half stories, and featured an open breezeway between two log pens. It was common to the Savo-Karelian frontier. In form, it is very similar to the Fenno-Scandian gatehouse. Often the breezeway was later enclosed to form a type of Nordic double house. One room was the heated domestic half, the other was unheated, and used as storage, bedroom, sauna or summer kitchen. The type often began as one room, with the purlins left projecting and uncovered, forming the roof for the subsequent dog trot.⁴¹

The last house type, the Karelian house-barn is indigenous to southeastern Finland. The building is distinctive in that domestic and farm activities are combined under one roof. The monolithic buildings reach a height of 30' or more at the ridge, and have an average 100' x 40' plan. The first floor is given over to animal shelter, dairy processing, and storerooms. The second floor is used by the family. On one side of the interior staircase is a living room and bedrooms, on the other is a large combination hay barn, implement and carriage store.⁴²

[REDACTED] few of the traditional house types are represented. As temporary shelter, the one-room house was probably most often constructed until a larger dwelling could be built, although none exist unaltered. Surviving examples now serve as bunkhouses, and are apparently themselves sections of alterations or additions to the original buildings. The second log houses were distinctly American in design.

The SAUNA, on the other hand, was frequently built in the Montana setting, and is undoubtedly the most unique and characteristic of all Finnish structures. With extremely tight-fitting walls and a wood floor, the sauna not only served as a steam bathing room, but as multi-purpose living quarters until a first home was built. Its warmth and dryness made for a good birthing chamber, sick room, workshop and clothes washroom. The smoke from a heated fire and closed chimney could smoke and dry food, and darkness was good for temporarily storing potatoes.

The sauna building type is one story tall, and originally was of one room with no chimney or window openings. Smoke generated in this SAUVUSAUNA by the fireplace was vented through a small opening on the gable end or the opened door. Later a dressing room with windows and benches set against the interior walls was added, and an opening for light cut into the sauvusauna wall to provide illumination from the dressing room.

Sauna heat comes from a stove, or KIUAS, placed in the corner of the bathing room, adjacent to the door. In later saunas, the stove is of metal surrounded by brick. Upon the stove are set rocks which are heated from the stove. When water from a water tank in front of the stove is thrown on the rocks, steam is released, although the intent of the building

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is to create high temperatures rather than copious amounts of steam. Two tiered wooden benches across from the stove provide sitting areas for the bathers.⁴³

Storage buildings, or AITTAS, were used to hold both household food and goods, as well as farmyard grain and equipment. Aittas also appear in the Montana sites. The aitta is known to have existed as early as 1400, and is a ubiquitous building type found on all farmsteads. Each member of the family might have their own one-story aitta, and the building was considered personal property, often moving with the owner. The aitta was raised on small corner pillars to prevent rodent infiltration, and kept the interior floor dry.⁴⁴ A second type, the two-story forebay storage building or LUTTI AITTA, allows for storage rooms below upper story summer sleeping quarters. Later Lutti aitta were built with overhanging gable ends sheltering the storage room doorways, and sometimes included a railed balcony accessed by a ladder-like stair. Ostrobothnian lutti aitta were commonly enclosed. The lutti aitta was important to the social upbringing of Finnish daughters. It was expected that the female children would decorate their summer sleeping quarters with homemade weavings and other demonstrations of their domestic skills.⁴⁵

The more elaborate lutti aitta did not appear [REDACTED] nor did the conical structure made of poles, or KOTA. The kota was a rude dwelling predating the arrival of log construction. It was later used as a summer kitchen, and as temporary shelter by the Lapplanders.⁴⁶ Another type of outdoor oven was of brick protected by an open shelter. The outdoor oven was a very old custom, and used by poorer farmers even after the oven was integrated into the interior of larger farms.⁴⁷

Agricultural Buildings

Along with the aitta, several other use-specific farmyard structure types are found on Finnish farms, although fewer types were translated to Montana. Finnish farm buildings include animal barns, granaries, field barns, threshing buildings, blacksmith shops, fences, and windmills. The construction technique of the buildings were often similar, so that buildings were distinguished by use rather than appearance. Many of these use-specific buildings, particularly the windmill, threshing barns, summer sleeping quarter/storage building, crib barn, and small field barns were not translated to the Montana setting. However, animals and materials continued to be housed in separate buildings. The following descriptions are included to exemplify the degree to which farmers would segregate their farm activities into separate areas.

The most important animal barn was the stable, or TALLI. Horses were integral to the success of the farm, and the stable was often the largest and one of the more carefully constructed buildings on the farm. It usually was located within easy access to the house. The interior had wooden floors and ceilings to retain heat, and a hayloft. Like other buildings, it was typically one story tall. Small windows near the door provided light.⁴⁸

Before the rise of the dairy industry in the 1920s, the cow barn, or NAVETTA, was less well constructed, as cattle were not felt to need as much shelter as horses.⁴⁹

Other barn types are the double crib form, the bank barn, the Karelean house barn and the lutti aitta (the last two being previously mentioned). The double crib form is commonly found in southern and western Finland. It is typically one story tall, with two cribs separated by a wagon runway or threshing floor. The bank barn is multilevel, with a bank and ramp providing access to the upper story. Animals are sheltered on the lower floor, while tools and other materials are stored above. This type is common to Norway, "the heart of northern European bank barns," although few are found with a ramp in Sweden and Finland.⁵⁰

Another characteristic Finnish farm element is the one story field barn, or LATO. Measuring about 16' to 23' square, this ubiquitous building type was popular in south and west Finland. The lato was design to dry hay or forage harvested in the surrounding field. Peeled round logs, saddle notches and a raised floor ensured proper ventilation, and the walls commonly

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sloped inward. Piling the forage against the wall while leaving a central open space also encouraged circulation. Entrance is through the gable end. The lato, like the aittas, dates to the 15th century, and follows the Medieval tradition of storing crops in separate buildings. It was also the Medieval tradition of farming widely separated and small plots that necessitated the lato, so that farmers with few workers would not have to transport large quantities to a central storage area during harvest. The buildings were spaced at about 150 to 400 yard intervals.⁵¹

Another building which dates to the Middle Ages is the combination drying/threshing/winnowing shed, or RIIHI. Because of its use, the building is constructed of tightly-fitting logs, has a floor, and contains a fireplace. There are two types, the one room riihi, or YKSINAIIRIIHI, and the threshing barn, or LUUVARIIRIIHI.

The one room riihi is associated with small farms and tenant farmers. The fireplace is located within the building, and threshing and winnowing is done on the floor by tossing handfuls of grain across the room. The building is often enlarged for straw and chaff storage, by means of a lean-to structure attached to one end of either side wall or to a gable end.

The LUUVARIIRIIHI appeared in the 16th and 17th centuries, and is distinguished by a raised threshing floor attached lengthwise to the riihi room. The floor does not function as a threshing floor.⁵²

The last major building on Finnish farmsteads, particularly common to western Finland, is the windmill, or TUULIMYLLY. Designed to take advantage of the area's windy conditions, farmers used the lower, immovable section to house the granary and mill equipment. The upper superstructure could be rotated to face into the wind, and was boxy to achieve stability.⁵³

Finnish fences were of pole construction. The post and rail system was used in southern Finland and Sweden. In this technique, round posts of small, young trees support rails set at a slant into the ground. The posts are supported by withes.⁵⁴

Finnish Construction Techniques

Finnish log construction has progressed from a 2000 year-old central European tradition of crude overlapping logs. It evolved into construction with corner notches, and then on to increasingly sophisticated combinations of wood framing and boarding. While this work considers the most popular construction techniques in rural Finland in the late 19th century, it should be realized that Finnish builders were familiar with, or at least exposed to the changes brought about by the new tools and technologies of the industrial revolution, including frame construction.⁵⁵

In Finland, construction plans for log building began up to a year in advance of actual building activity. Pine, fir or spruce were felled in winter, during the lull in farm activity, and during the lunar interphase, when the trees were presumably "dead." This allegedly imparted strength and longevity to the wall logs. It also allowed for easier transportation. After allowing a period of time for curing, the logs were hauled to the building site, where construction began in late April or May.

Foundation work consisted of bare earth, fieldstone corner foundations or log posts. Buildings raised above the ground prevented deterioration of the log sills, but were more susceptible to drafts. An early solution to this problem was to pile sand or gravel between the floor and the ground, held in by interior log-soil benches, or MULTIPENNKI. Later options were short boards placed vertically against the outer logs, or the piling of loose rocks between the sill and the ground.⁵⁶

Building types fell into two categories, and were built following two different construction techniques. The corner joining technique and shape of the logs to be used depended upon the future building's use. If it was to be a heat-retentive structure, such as a house, horse barn, sauna, granary, or other storage building, the ends were squared, the logs hewn, and

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intricate corner notches cut. Hay barns and other buildings using natural air ventilation used unpeeled logs and a saddle notch corner joining technique. Half log construction appears only occasionally in northern Europe.⁵⁷

Finnish log-building technology required only a small repertoire of tools. These included axes, adzes, augers, squares, drawknives, chisels, sheath knives, ripaws, mallets and plumb levels. The most important was the metal scribe, or VARA, which was integral to create the tightly-fitted walls. The technique followed a method of construction 2,000 years old. When done correctly, this North European construction technique required no chinking to ensure an airtight fit. The vara was usually a hand-forged length of metal, measuring about ten inches with sharp prongs on one end. A ring adjusted the width between prongs. The vara was used to trace the natural curve and contours of the upper side of a log to the underside of the log to be placed immediately above. If a vara was unavailable, a sheath knife sufficed. The underside was then hewn out with an axe following the line enscribed by the vara. Finally, a longitudinal groove was cut the length of each log on its lower surface, and filled with moss or rags for insulation. Gaps around floor and ceiling joists let through the walls were similarly treated. The interior and exterior walls could be hewn flat before or after construction. Hewing logs flat required running a string the length of the log, and with a broadaxe cutting to the depth indicated by that line. The special design of the broadaxe, with its off-set handle and wide, beveled head, made it a useful tool.

Cutting a curve into the bottom of each log allowed logs walls to continue to the roofline on gable ends without corner joints. This solid wall design was more heat-retentive than those using frame or board gables, and was strong enough to hold purlins and ridgepoles.

Interior dividing walls were created the same as the exterior, with the ends let through to the outer wall. Sometimes the notch echoed the corner notch, but usually it was a simple square. Floor joists for barn hay mows were also let through to the outer walls.

Wherever doors and windows interrupted the structural stability of the walls, wooden pegs, with tapered ends were pounded into auger-drilled holes placed five to ten inches from the openings. This technique was also used to prevent warping of long walls, for walls in which two or more logs made up the wall length, and in gable ends.⁵⁸

The corner notching technique allow the stability necessary to prevent lateral slippage of the logs. Notching was accomplished with a saw and axe. For the more complex tooth notch, sometimes a template was used. A vertical cut was sawn into the top and bottom sides about six inches from the end of the logs, followed by two horizontal cuts into the end of the log. Shaving excess wood and executing more elaborate connections was done with an axe.

The vertical double notch, along with the dovetail, were the most common types of notch used in Europe and Scandinavia in the 19th century, and their close fit was used where heat retention is important. The vertical double notch, or SAHANURKKA, required a protruding crown to hold the corners secure. In contrast, the dovetail notch, or KIRKONURKKA, did not. The dovetail notch is a relatively recent introduction from Germanic central Europe. Its angled head provided sufficient strength against the pull of the logs, while simultaneously designed to shed water away from the joint. Its neater appearance made it widely popular for house and barn construction in Finland. Another import is the round or hewn log V notch, common to Norway.⁵⁹ Equally structurally effective, but more difficult to create is the tooth notch, or HAMMASNURKKA. The oldest and simplest corner notch is the saddle notch, or LADONURKKA. It was no longer used for homes in Finland in the 19th century, but is often found in conjunction with peeled log structures requiring ventilation.⁶⁰

Floors evolved from packed earth to split logs set into the buildings' sills and supported by partially hewn log joists. Milled lumber later replaced the split logs.

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A variety of roofing materials existed in 19th century Finland. Coverings progressed from moss to birch bark, thatch, closely-laid poles, hollowed half-logs to weather-proof shingles. The shingles were a form introduced from Sweden in the mid-19th century. Bark or board roofs were prevented from slipping by cantilevered butting poles projecting from the eaves logs. Weight poles hold down the roofs and are themselves anchored to the roof by short pieces of heartwood, or "knees" that rest perpendicularly against the butting pole. A second course of boards overlap the first in a manner similar to shingles, and rest against the weight pole. Subsequent weight poles and knee tiers secure the upper boards.

E. HISTORIC CONTEXT #4

Craftsmen, Carpenters and Construction in Korpivaara: 1890s-1940s

The continuity of Fenno-Scandian construction technique and building appearance among the homesteads of Korpivaara can be attributed to the limited number of craftsmen active in the area. While the earliest structures were likely done by the individual homesteaders, itinerant Finnish craftsmen periodically visited the community from the 1910s through the 1940s to construct new buildings in the Finnish vernacular tradition.⁶¹ A close examination of the buildings known to have been built by or attributed to certain carpenters reveals both obvious and subtle differences in their knowledge, skills and abilities. The buildings also document the builder's development over the years, and even their reception to alternate building styles. Later farm and domestic buildings show reference to modern design. The secondary dwellings in particular show reference to the Queen Anne and Craftsman styles, and an American vernacular design of one-story, foursquare cottage with hipped roof.

Construction Technique

First-hand descriptions of Korpivaara construction techniques exists for only three carpenters, but an examination of all the log structures indicates that the builders in the area followed the same traditional methods of preparing, hewing and raising logs.

As in Finland, trees were felled in the Highwoods during the winter months by the homesteaders, when the snow aided in hauling logs and farming demands slowed. The logs were allowed to cure until spring, or up to a year after felling. Construction began in the spring. In Finland, the in-place logs were allowed to season for a year before windows and door openings were cut. [REDACTED] the preferred method was to allow opening while the walls were going up.⁶²

For the majority of structures requiring heat retention, a broadaxe was used to hew the logs into eight to twelve inch square or plank-shaped lengths. Logs to be used for buildings requiring much air ventilation were only peeled. This distinction was less rigid with later buildings in Korpivaara. Buildings such as barns with mows which requiring less insulation used upright posts resting on the top sill, sided with board gables.

In the Korpivaara homesteads, tightly-fit walls were fashioned using a vara, and are predominantly connected with the toothed notch. Additional methods of insulation appeared on certain homesteads, such as flattened sheets of scrap metal and beer cans nailed to the interior joints of the Stone granary. Layers of straw laid on the top sides of rafters of some barns such as the Stone, Heikkila and Jarvi properties are additional heat retainers.

The buildings [REDACTED] stand on glacial boulder foundations, on wood piers, or sometimes sit directly on the ground. The homesteaders utilized indigenous materials for construction, and reserved manufactured materials for finish work. Fieldstone foundations are of shale and granite, occasionally reinforced at a later date with poured concrete. Traditional Finnish floors were of half-round logs, although the Korpivaara building floors are more often of rough-sawn fir.

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Roofing material originally consisted of hand split shingles or rough-sawn boards. In a few instances, two layers of boards infilled with straw insulation extend from roof ridge to eave. Most shingles have been covered with composition shingles on the houses, and corrugated metal on the barns and outbuildings.

There are several types of roofing systems on the Montana buildings, and have precedent in the systems used in Finland. The earliest gabled structures have ridge beams let into the log gables, with purlins either let through or set outside of the logs. They support peeled pole rafters and or rough boards. Smaller buildings do not use purlins or rafters, only large boards extending from ridge beam to sill. On larger roofs, diagonal bracing was added at the lower corners.

Notching was accomplished with a saw and axe. For the more complex tooth notch, sometimes a template was used. A vertical cut was sawn into the top and bottom sides about six inches from the end of the logs, followed by two horizontal cuts into the end of the log. Shaving excess wood and executing more elaborate connections was done with an axe.

Craftsmen and Carpenters

Because of their specificity to location, associating certain notch types with owner/builders is possible. Gust Heikkila used the vertical double notch with round logs for his "sauvusauna" or smoke sauna. The vertical double notch, along with the dovetail, were the most common types of notch used in Europe and Scandinavia in the 19th century. The protruding heads prevent slippage, and their close fit was used where heat retention is important. Square hewn versions on granaries also exist on the Heikkila/Mattila ranch and on the Jarvi homestead. The builders of the granaries are unknown, but it is presumed that the owners did the work. The Heikkila/Mattila granary was moved from an earlier Teppo homestead which the Mattilas purchased and lived in during the 1920s and 1930s. The notch is unlike the later work done by the Mattila brothers. The heads of the granaries on both properties point out the problem of this type of notch design: the exposed heads have suffered from water infiltration and are decaying.

The protruding crowns of the V-notch on the Stone homestead have similar problems. In order to prevent decay, Stone followed a traditional technique of nailing half poles to the crown ends; although few survive today. The design of the V-notch also allowed greater air penetration, so that Stone stuffed the gaps with rags and filled the wall interstices with wood chinking. His storage shed near the homestead cabin has the worst construction technique, and may have been one of his first buildings. The bank barn and stable are much tighter. The corners of Stone's homestead house are covered in cornerboards, but are probably the same notch type minus the protruding crowns. The internal wall division have the same notch, and are secured with several large nails. If this is true, then the corner boards are necessary to hold the crownless corners secure.

Stone's method of connecting additional lengths to his buildings is not duplicated on the other five homesteads. For example, instead of searching for 41' logs to extend the full width of his bank barn, Stone used two 11' lengths grafted onto a central 19' section. The graft was made by forming a modified rebated joint. A section was cut out of the end of each 11' log, and butting it up to a squared notch on the longer log. The crowns of the shorter side wall logs of the central section had the usual projection and were connected with a V-notch. To create a secure rebated joint, two rough milled poles were nailed to the graft and the interior of the corner.

The dovetail notch was used by Finnish homesteaders Fred Kraftenberg and Emil Maki, and are indistinguishable from one another. Unlike the large and nearly square dovetail done by Frank Lewis, these have a greater angle, and therefore provide greater strength against slippage than would a saddle notch. The dovetail notch does not require a projecting head, and with its neater appearance, was widely used for house and barn construction in Finland.

During the second construction phase, the more complex tooth notch was used by at least six carpenters, and appears in three log variations. This makes attributions of specific variations to individual builders much more difficult. It is

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compounded by the fact that some builders worked together, and shared techniques. The craftsmen, Matt Maki, John Makela, John Maunula, John Mattila, Fred Kraftenberg, Jr. and Hans Warila, used the tooth notch on square-hewn, half-hewn and peeled logs. Like the notch, the log appearance is not a reliable method of discerning the builder's identity, for several craftsmen changed their method of finishing logs over the years as they experimented with new designs and adaptations to their building techniques.

Location within the valley is one partial way of identifying the builder. Makela is known to have built only at the southern end of the valley, while Maunula, Mattila, Kraftenberg and Warila worked at the northern end. Matt Maki, however, traveled extensively, is believed to have worked on every homestead. Maki was probably the greatest influence and source of building knowledge in the area. He worked with John Makela on several buildings, and "apprenticed" John Mattila, the son of a homesteader. John Maunula did the same with Fred Kraftenberg, Jr.

[REDACTED] most of the circa 1910s to 1930s Fenno-Scandian work has been attributed to Finnish carpenter Matt Maki. Maki is sometimes known as Hummalamaki. More is known about Maki's buildings than his life. He is remembered by several families as a traveling carpenter who made annual [REDACTED] areas. Each spring, Maki walked over 60 miles from his homestead claim near Utica, and overnighted with Finnish families along the way. Some looked forward to his annual visits. Other, including Dolores Myllymaki and her siblings, ran to the attic to avoid his loud voice and extravagant gestures. They would come down at dinner and watch in amazement as he managed the task of maneuvering food past a luxuriously thick handlebar mustache.⁶³

Fred Kraftenberg, Jr. remembers most of what is known about Maki's life:

He was quite a bit of time out here, but I think he just worked for his room and board when there was carpentry work in different places. He had a homestead out up Judith River [near] Utica, but he never was able to prove it because he didn't get citizenship papers. [You couldn't prove a homestead unless you were a citizen.] And there was some say that when he had to go take citizen papers, he couldn't cross over. Well, they [the Land Office] wouldn't recognize anything like that. And then another story goes on, it was before... World War I, he didn't take [the homestead] papers he had, [because friends] said that he might be drafted in the army. But being he was an alien, why, they couldn't draft an alien.⁶⁴

Maki apparently billed himself as an architect, and told the authorities that "he was over here on behalf of the Finnish government and helping these people get established. He claimed to be an architect."⁶⁵

As a traveling craftsman, Maki's building tools were necessarily few and simple. In addition to a broad axe and scribe, he used a knotted string to measure lengths. For smaller dimensions, the length of his thumb from tip to first joint equalled one inch. Two fists held apart by extended thumbs that touched at the tip measured one foot. Maki did not find it necessary to use a level, yet his buildings are among the best-designed and crafted.⁶⁶

Matt Maki is known to have built several buildings on the Nevala, Urick, Jarvi, and Kraftenberg Homesteads, and attributed with another on the Heikkila/Mattila land. His work spanned over 20 years, and exhibits a facility in adapting new styles to the centuries-old construction technique.

During the years Maki worked in the area, he continued to secure his corners with a toothed notch, the head size varying according to the log and overall building size. The stoutest logs are always on the bottom, and measure 12 to 15" in height, tapering to about 9". Overall, Maki's notch heads are the squarest and largest of the toothed notches found in the valley. His smallest buildings, outhouses, have logs hewn to a height of seven to eight inches, with corner joint heads measuring 4 1/2 x 3" to 4 1/2 x 4". Maki's larger buildings--barns, chicken houses, saunas and houses--use larger and longer logs. This required a greater consideration of log taper during construction, and resulted in a greater variety of head sizes.

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His chicken house notches range from 6 x 4" to 6 x 6"; saunas, barns and bunk houses measure 5 x 3 1/2" to 5 x 6". The "tooth" section of the notch always remained 3/4".

Because Maki's corners were the same size as the body of the log, the notch size reveals that Maki used logs rectangular in cross section. The notches also show that the chicken houses had the thickest logs, to give the maximum insulation to the heat- and cold-sensitive animals.

Maki's buildings exhibit the craftsman's awareness not only of construction technique, but of building use, form and style. In his earliest-known building, Nevala's 1913 horse barn, the first floor logs are set tightly atop one another, while the hay mow has definite gaps to allow for air circulation. On this, the neighboring 1917 cattle barn and an earlier building moved from the first Nevala homestead, the first floor logs are not uniformly hewn flat. The smaller logs are not even completely hewn. This might be the result of an unrefined skill, or because of the building's use as a ventilated animal shelter. The latter reason seems more likely, because Maki was using carefully squared and tightly-fit logs on the Kraftenberg's 1918 house and the late 1910s Heikkila house. The logs are so closely fit as to resemble the horizontal milled wood siding found on urban houses of similar styles.

This aesthetic consideration continued through his last buildings. While the Finnish homesteaders persisted in retaining their log traditions, they hired Maki to build homes in the latest architectural styles. One of the first homes attributed to Maki is the foursquare, one story cottage with hipped roof on the Heikkila homestead. The vernacular style could be found throughout urban areas of the state. Maki adapted his log construction to the style, and added the exposed rafter tails popular with another style only recently gaining in popularity at that time: the Craftsman style. After Maki built a two-story house reminiscent of the irregular floor plan of Queen Anne style with "Tuscan" porch columns for the Wargelins in 1917 (since destroyed), Anna Kraftenberg hired him to build a similar house on her property the next year. The Uricks hired Maki in 1927 to build a house with Craftsman style detailing in the exposed rafter tails and eave brackets. In 1933, Maki built an even more Craftsman style cottage with clipped gables, exposed rafter tails and peeled logs. Maki was obviously a knowledgeable builder, and would have known that rounded logs were more susceptible to decay than hewn logs. Nevertheless, he constructed a building in a non-Finnish, "rustic" treatment then popular at vacation and resort homes.

A trademark Maki building is the half-monitor roof chicken house. The four such structures on the Nevala, Urick and Jarvi property are quite similar in design, although their dimensions vary. The largest is on the abandoned Jarvi property. The style is quite unlike traditional chicken houses found in Finland, and is probably patterned after examples Maki had seen or read about. The style was contemporary to that period, and in fact bears a close resemblance to one of four frame chicken house models suggested by the Montana Agricultural Station for the successful poultryman.⁶⁷

Old age and the lure of mining brought an end to Maki's carpentry career in the late 1930s. Again, according to Fred Kraftenberg, Jr.,

Maki couldn't have done much more building because he was in pretty poor shape. And for a number of years, [a mine] operator had a prospect behind Baldy [Mountain]. Maki was working out there to keep four claims going and get all them patented. You see, those mining claims, it was a rule that you had to get a hundred dollars worth of work on them a year, and mill operations paid about \$30.00 a month. He was out there for years. He got so he couldn't do anything.⁶⁸

Maki's health declined while working the mines, and he eventually retired to a rest home in Great Falls. Matt Maki died in about 1938.⁶⁹

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John Makela, John Maunula and John Mattila constructed buildings similar in appearance and construction to Maki's work. It is unclear if Maki taught Maunula his techniques, but the two did work together on the Nevala and Urick properties. Maki also taught John Mattila during the same period.

John Makela's construction technique is virtually indistinguishable from Maki's, both having used the same log dimensions and notch sizes. In fact, Makela worked with Maki on the Nevala's chicken house, and on the Urick's house. Makela took over Maki's work following a dispute Maki had with Matt Urick. The largest difference is seen in their roof treatment and door framing. Comparing outhouses, Maki's early work was more conservative, using two inch boards to cover the door opening log ends. Makela was more elaborate and framed the door with milled wood. This may have been a concession to style, for Makela's roof had exaggerated eaves which echoed the Urick's Craftman style-inspired house.

Even less is known of Makela's methods than Maki's. When he built the Urick's house, "He would get up at the crack of dawn, and he would be working on that building for an hour before breakfast was ready. Then he'd come in and eat and then go on his merry way and do his thing. He would put up about one round [of logs] a day."⁷⁰

Makela's development in building style also paralleled Maki's. In the only other building known to have been built by him, Makela used partially hewn logs to create the Nevala's 1940 brooder. A second distinction between this and Maki's work is that the tooth on the corner joint is 1/2 inch. Makela eventually retired to Belt, where he became increasingly alcoholic. According to Frank Urick, Makela fell on his stove and burned to death one night in 1946.

Maki's expansion into partially-hewn logs was continued through his "apprentice," John Mattila. Mattila was the son of homesteader Victor Mattila, born on October 25, 1897. It is unknown if Maki built any buildings on the Mattila's earlier farm, or how John Mattila first became involved in learning the trade from Maki. But by the 1930s they were constructing a octagonal log building on the local Arrow Creek Ranch. By 1939, Mattila's technique used peeled logs connected with the toothed notch. The most outstanding example of this variation is the 1939 40 x 30' gambrel roof horse barn on the Heikkila/Mattila property, which he constructed with brother Matt. John Mattila continued the tradition of passing on Old World methods by working with his brothers on the log buildings of their farmstead. His younger brother Bill Mattila built the 1942 family's tooth notch and peeled log outhouse. Mattila died before finishing a log cabin for Colonel Meredith in Augusta. Upon his premature death on 28 December 1947, John Mattila and his brothers were credited as "experts in the fashioning of logs and locking them together to make a tight and warm log house."⁷¹

The transference of ideas was also done on the Kraftenberg homestead. Fred Kraftenberg, Jr., learned how to make a log building by helping craftsman John Maunula erect their 1932 horse barn. It also has square hewn logs nine to twelve inches tall, with corner joints measuring about five inches square, and a 3/4 inch tooth. Maunula worked as a ranch hand on different ranches in the area, and was probably the least skilled of the six in log construction using the tooth notch. Fred Kraftenberg, Jr., would go on to copy Maunula's work on a milk house and chicken house.

The sixth craftsman to practice the tooth notch technique was Hans Warila. Warila did not arrive in the area until 1929, when he moved with his wife, Susan Lempi (Wargelin) to her family homestead at the head of Little Belt Creek. Warila was a miner who had immigrated from Finland at age 17.⁷² According to his nephew, Myllymaki, Hans mastered the technique of the corner notch by examining the Maki-constructed buildings on the Wargelin homestead. He built the granary on the Stone homestead in 1939, using Maki's same notch and logs sizes. Unlike Maki, Warila let the floor joists through the sill log, and used boards on his gable ends. Warila is also the only craftsman to have used beaded board to create a sheathed door, found on the granary.

The foundational design of log construction is most visible and elaborate on Warila's building. Large fieldstones support the corners, while the floor joists sit on short logs which are themselves set on partially hewn logs set on large stones.

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Large flat stones at the corners are reminiscent of a technique used in Finland to deter vermin. The building is set on a slope which raises it off the ground. This provides added ventilation for the grain inside.

The homesteaders of Korpivaara did not always build a new log structure when more were needed. Limited financing, combined with the durability of log structures and the length of time and effort required in hewing and raising new logs prompted most to reuse what they had. Buildings were either taken apart, or placed on skids to be hauled down the county road by horse or tractor. Recycling buildings was a common occurrence, and one that had precedence in Finland.⁷³ The buildings were not always used for the same purpose, and were often modified to suit a new use.

The Nevalas moved four of their six homestead buildings to the Lewis claim in 1917. The north wall of the Nevala's horse barn bears the marks of the move--Roman numerals carved into the wood ensured a correct reassemblage after the move. The bunkhouse/granary on the Jarvi property was similarly marked and moved. The house was built in the mountains, with the intention of disassembling it for transportation to Emil Maki's land, where available pine trees were sparse. The frame Jarvi residence is made up of two smaller buildings moved from Belt about 1919. In 1927 the Uricks moved the frame Myers house 100 feet to the northeast, set it adjacent to the granary, and put to use as a machine shop when Maki built them a larger, two story log house. The Mattilas moved two granaries and a portion of their sauna to the Heikkila homestead in 1940, and Roberts moved a storage building on his property to a new location nearer the horse barn. The Kraftenbergs have moved several buildings to new locations over a period of 50 years, and recently, Fred Kraftenberg, Jr., has moved two buildings off the historic homestead to his new ranch.

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SECTION E END NOTES

1. This term has been used for professor Matti Kaups to describe the particular log construction techniques found in the northern European counties of Finland and Sweden. Identifiable features include tightly-fitted, squared horizontal logs connected with wooden pins, and elaborate corner joinery. Matti Kaups, "Finnish Log Houses in the Upper Middle West; 1890-1920," Journal of Cultural Geography, 3, no. 2, Spring/Summer, 1983, p. 2.
2. "Highwood Baldy Quadrangle, Montana," U.S.G.S. 17.5 Minute Series Topographical Map (Denver: United States Geological Survey, 1979); The Montana Almanac, 1957 Edition (Montana State University Press, 1957), 29.
3. Ibid., 8-29. Ethel C. Kennedy and Eva L. Stober, eds., Belt Valley History, 1877-1979 (Great Falls: Advanced Litho Printing, 1979), 78.
4. Roberta Cakeek Cheney, Names on the Faces of Montana. The Story of Montana's Place Names (Missoula: Mountain Press Publishing Company, 1984), 19.
5. Kennedy and Stober, 20-21.
6. Michael P. Malone and Richard B. Roeder, Montana, A History of Two Centuries (Seattle: University of Washington Press, 1976.)
7. Michael P. Malone, The Battle for Butte: Mining and Politics on the Northern Frontier, 1864-1906 (Seattle: University of Washington Press, 1989), 6, 32, 140-156.
8. "Table 33. Foreign Born Population, Distributed According to Country of Birth, By Counties. Montana," Report on the Population of the United States at the Eleventh Census, 1890. Part I. (Washington, D.C.: Government Printing Office, 1895), 641.
9. S. Illmonen, Amerikan suomalaisten historia II [The History of the Finns in America] (Finland: Jyvaskyla, 1923), 328-329. part. trans. by Arnold Alanen for author, 1991; Michael Koop, "Ethnicity in the Landscape: A Finnish Log Homestead in Montana," Paper presented at the Vernacular Architecture West of the Rockies Conference, Reno, Nevada, 21 September, 1989; Gladys Pierson, "Acculturation of the Finns in Milltown, Montana," (unpub. Master's Thesis, Missoula: University of Montana, 1941). The number of Finns employed in the lumber town of Milltown was so great that by the mid-1890s, it was known as "Finntown." The Finnish propensity to locate in mining camps following initial arrival to the United States has been documented by several authors. See A. William Hoglund, Finnish Immigrants in America 1880-1920 (Madison: University of Wisconsin Press, 1960): 54; Michael G. Karni, Mati E. Kaups and Douglas J. Ollila, Jr., eds. Migration Studies (Turku: Institute for Migration, 1975); Arnold Alanen, "Back to the Land! Rural Finnish Settlement in Wisconsin," Wisconsin Academy of Sciences, Arts and Letters 65 (1977): 180-203; Michael G. Karni, ed. Finnish Diaspora II. (Toronto: Multicultural History Society of Ontario, 1981); and John I. Kohlemainen and George W. Hill, Haven in the Woods, The Story of Finns in Wisconsin (Madison: State Historical Society of Wisconsin, 1951), vii, 34.
10. "Table 34. Persons Engaged in Each Selected Occupation, Etc.: 1880. Montana," Statistics of the Population of the United States at the Tenth Census (June 1, 1880) (Washington: Governments Printing Office, 1883), 883. Finland was not identified as a separate geopolitical entity separate from Sweden until the 1900 census.

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11. U. S. Department of Commerce, Bureau of the Census. "Table 12. Country of Birth of the Foreign Born White for Counties and for Cities of 10,000 or More: 1920," Fourteenth Census of the U. S. Taken in the Year 1920. Volume III, Population (Washington: Government Printing Office, 1922), 586.
12. A. William Høglund, "No Land For Finns: Critics and Reformers View the Rural Exodus from Finland to America Between the 1880's and World War I," Migration Studies (Turku: Institute for Migration, 1975), 38.
13. Timo Orta, "Finnish Emigration Prior to 1893: Economic, Demographic and Social Backgrounds," Migration Studies, 21-35; Reino Kero, The Finns in North America: Destinations and Composition of Immigrant Societies in North America Before World War I (Turku: Turun Yliopisto, 1980), 55-57; Arnold R. Alanen and William H. Tishler, "Finnish Farmstead Organization in Old & New World Settings," Journal of Cultural Geography 1 (Fall/Winter 1980): 71.
14. Montana Almanac, 88-97.
15. Kennedy and Stober, 8-35, 90; "Polk's Cascade County Directory, 1913," (Portland: R. L. Polk & Co., 1913).
16. H. G. Merriam, "Ethnic Settlement in Montana," The Pacific Historical Review 13, no. 1 (March 1943): 163; David M. Emmons, "Social Myths and Social Reality," Montana Magazine 39, no. 4 (Autumn 1989): 4-5.
17. Locations culled from family biographies published in Kennedy and Stober's Belt Valley History.
18. Ibid, 31-33, 88; Brian Shovers, "The Peril of Working in the Butte Underground: Industrial Fatalities in the Copper Mines, 1880-1920," Montana Magazine 37, no. 2 (Spring 1987): 27-29.
19. Malone and Roeder, 176.
20. Culled from family biographies in Kennedy and Stober; "Cascade County Patents T19N R1E thru T22N R6E," compiled by Mary Melander for the Cascade County Historical Society, 1988; Land Patent Map, Cascade County Historical Society Archives, Great Falls Public Library.
21. Malone and Roeder, 182-190; K. Ross Toole, Twentieth Century Montana: A State of Extremes (Norman, OK: University of Oklahoma Press, 1972), 26.
22. Malone and Roeder, 185; Homestead Land Patent Map.
23. John I. Kohlemainen, "In Praise of the Finnish Backwoods Farmer," Agricultural History 24, no. 1 (January 1950): 2.
24. Merriam, 158.
25. U. S. Department of Commerce, Department of the Census, "Table 18. Foreign-born White by Country of Birth for Counties and for Cities of 10,000 or More: 1930," and "Table 19. Native White of Foreign or Mixed Parentage by Country of Birth of Parents, for Counties and for Cities of 10,000 or More: 1930," Fifteenth Census of the United States. Volume III, 1930. Population Montana-Wyoming no. 2 (Washington: Government Printing Office, 1932), 32-33.
26. Homestead Land Patent Map.
27. Kennedy and Stober, 445.

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28. "Table 1. Population of Minor Civil Divisions: 1910," Thirteenth Census of the United States Taken in the Year 1910, Volume II, Population (Washington: Government Printing Office, 1913), 1138. It should be recognized that the number is based on minor civil divisions, and includes all school age children.

29. "Table 53," Fourteenth Census, 50.

30. "Table 6. Population of Minor Civil Divisions, 1950, 1940, 1930," A Report of the Seventeenth Decennial Census of the United States, Census of the Population: 1950, Volume I (Washington: Government Printing Office, 1950), 26-29.

31. Marv Hoffer, "(Fred W.) Kraftenberg Homestead National Register Nomination," Sept. 1985.

32. Bertha Maki, "Rural Schools," in Kennedy and Stober, 492.

33. Vivian Urick, interview by author, 1 July, 1991.

34. Fred Kraftenberg, Jr., interview by author, 2 July, 1991.

35. Ibid.; Selma Talvi, in Kennedy and Stober, 444.

36. Kennedy and Stober, 152-153, 442.

37. Alanen and Tishler, "Finnish Farmstead Organization," 68.

38. Ranulph Glanville, "Finnish Vernacular Farmhouses," Architectural Association Quarterly 9, no. 1 (December 1977): 43.

39. Ibid., 41.

40. Ibid., 38.

41. Terry G. Jordan, "A Reappraisal of Fenno-Scandian Antecedents for Midland American Log Construction," Geographical Review 73 (1983): 73.

42. Glanville, 42.

43. Matti Kaups, "The Finnish Sauna: A Cultural Index to Settlement," Annals of the Association of American Geographers 53 (December 1963): 495.

44. Hilikka Vilppula and Toini-Inkeri Kaukonen, "Guide to the Seurasaari Open Air Museum," (Helsinki: Seurasaarisaatio [The Seurasaari Foundation], 1964), 5, 19-20.

45. Vilppula and Kaukonen, 6; Nils Erik Wickberg, Finnish Architecture (Helsinki: The Otava Publishing Co., 1959), 49.

46. Matti Kaups, "Log Architecture in America: European Antecedents in a Finnish Context," Journal of Cultural Geography 2 (Fall/Winter 1981): 134.

47. Vilppula and Kaunkonen, 26.

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48. Henry S. Heimonen, "Finnish Rural Architecture in South Ostrobothnia and the Lake Superior Region," Ph.D. diss, (Univeristy of Wisconsin-Madison, 1941), 165-167.
49. Ibid.
50. Jordan, 85.
51. Heimonen, 165.
52. Toivo Vuolea, The Finno-Ugric Peoples, trans. by John Atkinson. Vol. 39 of the Uralic and Altaic Series. (Bloomington: Indiana University Publication, 1964), 177.
53. Vilppula and Kaunkonen, 17.
54. Jordan, 92.
55. Matti Kaups, "Log Architecture in America," 133; Carolyn Torma, "Historic Context for Permanent Urban and Rural Pioneer Settlement Ethnic Enclaves, Finns," (Vermillion, S.D.: State Historical Preservation Center, 1990): 3.
56. Kaups, "Log Architecture in America," 138-139.
57. Jordan, 63.
58. Matti Kaups, "Finnish Log Houses in the Upper Middle West: 1890-1920," 11-12; Jordan, "A Reappraisal," 77.
59. Jordan, 67-71.
60. Hermann Phelps, The Craft of Log Building, A Handbook of Craftsmanship in Wood, trans. by Roger MacGregor, (Ottawa: Lee Valley Tools, Ltd, 1982); Vuolea 359-410.
61. Heimonen, 187. The tradition of traveling craftsmen is an old one in Finland. It was common for artisans and carpenters to travel regular circuits to ply their trade where needed. The farmers and villagers provided food and lodging, and gave the craftsmen land and a home in recompense.
62. Kaups, "Log Architecture in America," 138-139.
63. Dolores Myllymaki, personal interview with author, 28 July 1991; Bertha Maki, personal correspondence with author, 25 July, 1991.
64. Fred Kraftenberg, personal interview with author, February, 1991.
65. Ibid.
66. Fred Kraftenberg, Jr., personal interview with author 2 July, 1991; Frank Urick, personal interview with author 1 July, 1991.
67. W. F. Schoppe, "Poultry Houses," Montana Agricultural College Experiment Station Circular 72, (Bozeman: Extension Service, September 1917): 49-69.

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68. Ibid.

69. Ibid. No obituary can be found for Maki's death.

70. Frank Urick, personal interview with author, 1 July 1991.

71. Obituary for John Mattila, Belt Valley Times 54, no. 28 (Belt, Montana): 1.

72. Bertha Warila Gray, "Solomon and Elizabeth Wargelin," and "Hans and Lempi Warila," from Kennedy and Stober, 460-461.

73. When couples were married, it was common practice to haul storage buildings to a new farmsite, from Vilppula and Kaukonen, 23-24. Building reuse was practiced as well in New England and the desert West. See Thomas C. Hubka, Big House, Little House, Back House, Barn (Hanover and London: University Press of New England, 1984), 138-139; Jill Chappel, "Homestead Ranches of the Fort Rock Valley," unpub. master's thesis, 1990, 116-120.

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F. ASSOCIATED PROPERTY TYPES

1. Finnish-American Log Homesteads
2. Dwellings
3. Saunas
4. Granaries

INTRODUCTION

The benchlands of northcentral Montana bear little physical or climatic resemblance to the heavily forested and water-rich landscape of south and central Finland. Yet the homesteaders who settled here created a cultural landscape evocative of that North European country. The homestead/ranches and associated landscapes represent the architectural maintenance and adaptation of an Old World Finnish community to a New World setting and through a New World concept despite the fact that the homesteaders spent several years' occupation in urban mining communities.

Traditional Finnish concepts transferred were the Fenno-Scandian log construction technique, the courtyard plan and the construction of modest-size specialty-use buildings, particularly the sauna and granary. Construction tools used in Finland, such as the vara, broadaxe and auger, were used in the new Montana setting. Later, these construction concepts were applied to new building styles in house and farmyard building types, such as the chicken house and large, multipurpose barn.

The homesteaders and craftsmen utilized local lodgepole pine and fir for construction, and fieldstone of granite and shale for foundations. A durable wood, pine is weather-resistant and less susceptible to warping and shrinkage than other native softwood species. Pine is also superior to the indigenous Douglas fir for its gradual taper and relatively knot-free trunk. It was extensively used for walls, joists, rafters, purlins, doors and stairs, as well as for pole fencing and gates. As in Finland, the wood was allowed to cure for a time before construction began. The softer and lighter fir was usually reserved for finish flooring. The original hand split shingles or rough-sawn boards have been covered with composition shingles on the houses, and corrugated metal on the barns and outbuildings set over or in place of the original material.

Milled lumber was only sporadically used prior to the 1940s for barn floors and as siding for pole construction. Outbuilding doors are two batten rough milled lumber hung on metal hinges, with bent scrap metal or wooden door pulls. Windows on barns are commonly rough framed openings with shutters. The houses contain the most manufactured materials, from double-hung and plate glass windows to paneled and screened doors with metal and ceramic door knobs. Some houses have been clad in modern materials of composition siding, masonite or aluminum.

A variety of notch types are represented in the Korpivaara Multiple Property Documentation Form, and includes (in order of frequency of use) the tooth notch, the V-notch, the vertical double notch, the dovetail notch, the saddle notch, and the square notch. For those heat-retentive structures, some of these notches were used in conjunction with the vara to create tightly fit walls. The hewn logs were made by hand using a broadaxe, a saw and string. Stabilizing dowel pins were used on many structures to strengthen the log gable ends, while rags placed between logs aided in insulation and an airtight fit.

For over 40 years, the construction technique persevered despite changes in the building forms of the main house, barn and chicken house. The isolation of the area, the cooperative attitude of the farmers, a shared cultural background, a limited number of craftsmen, and limited financing in the initial years, along with the natural materials available in the area were strong elements in the rejection of cultural assimilation in Korpivaara.

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Some of those factors were also responsible for the individuality between homesteads, and their divergence from Finnish predecessors. Variations in topography and the availability of land impacted the siting and grouping of buildings. Siting and construction was also influenced by the experiences of the homesteaders and craftsmen, which were different in detail. This included varying degrees of acculturation and contact with Finland, differing personal preferences, and construction knowledge and skill. The variety of construction techniques represented indicates the range practiced in Finland during the same period. Financing to develop homesteads was earned at different times, and when different craftsmen were available.

The length of time spent in Montana also influenced the owners' decisions to integrate non-traditional forms and construction techniques, whether out of a desire to "fit in," or because of a perceived improvement for the success of the operations. "New" construction practices appeared in the form of frame outbuildings, composition shingles, metal roofing and masonite or composition siding applied to the houses. Affiliations with the Finnish culture weakened through the second and third generations, who adopted the architectural, agricultural and ranching practices of the United States.

The technology which contributed to the functional obsolescence of such structures as the sauna, granary, root cellar, spring house, wood shed and horse barn--electricity and the combustion engine--cannot deny the fact that the buildings were intended for long-term use. Their continued presence is aided by the fact that the arid conditions slow moisture deterioration, and cold winter weather curb insect infestation.

F. ASSOCIATED PROPERTY TYPE #1

I. Name of Property Type: FINNISH-AMERICAN LOG HOMESTEADS

II. Description:

Although examples of pole and frame construction exist, the most recognizable Finnish characteristic of the Korpivaara homesteads is their log construction and farmstead organization. The majority of buildings are one story, made of square hewn logs, with several barns and other outbuildings using peeled or partially hewn logs. Secondary homes have a second floor, and barns include haymows. The buildings sit on fieldstone foundation, often reinforced later with poured concrete. Variations on five corner notching methods are represented, although not all are used in each building group. Log structures include the first (later used as bunk houses) and second houses, saunas, horse barns, cow barns, large barns, chicken houses, brooder houses, granaries, and garages. Wood, hay and cattle sheds are nearly all of pole construction with half logs or milled log vertical siding. Later construction, usually for garages, is of frame.

The crudest log structures are attributed to early American homesteaders. The appearance of their homestead cabins, with chinked and daubed walls and loosely-fit notches, conform to the popular conception of log buildings as hastily-constructed structures intended as temporary shelter. The Finns, on the other hand, with their tradition of log construction, built whole log complexes intended for long-term use. The logs on heat-retentive buildings are elaborately hewn so as to obviate the need for daubing or chinking.

The Korpivaara homesteads are based upon the open courtyard plan, although their building arrangements are even less formal or compact than those in Finland. Their organization and spatial relationships have evolved over several decades of use, transformed to a greater or lesser degree through the changes from agriculture to ranching enterprises. These range from a few references to the enclosed groupings to more common open plans of central Finland. Other plans have little apparent organization. In the latter building group types, several buildings have been moved or demolished, and new structures built which obscure what was earlier a tighter ensemble.⁷⁴

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As discussed in Section E, the homesteaders usually built from three to five buildings during the proving up years, forming the nucleus of the courtyard plan. These initial buildings were the most integral to survival, and included a small house, a barn, an outhouse, and often a sauna. They were small, and used logs of a size that could be handled by one or two people--an important consideration during the difficult proving up years. During the next twenty years, depending upon finances and time, nine or more additional buildings were constructed to serve the expanded agricultural activities. These included a second, larger home, additional barns, chicken houses, brooder houses, granaries, sheds, spring houses and bunk houses.

On nearly every homestead, the animal yard buildings are or were historically grouped together with relatively little intervening space. Because of their greater number, larger sizes and closer proximity to one another, the animal and machine buildings more clearly define an animal yard than do those associated with human activity. Human yards are comprised of houses, saunas, outhouses, spring houses, woodsheds, bunkhouses and occasionally granaries.

All of the homesteads are located on relatively flat land, and are situated near a constant water source, [REDACTED] t [REDACTED] The greatest distance between water source and building is about 175' between the Jarvi house and springhouse.

Solar orientation appears to have been another important factor in homestead location. No documentation can be found to suggest that this was a traditional consideration, but here the pragmatic homesteaders chose warm locations as far west as possible within their chosen farmyard sites. During the short winter days, the homesteads were not warmed by the sun's first rays until they cleared the eastern hills about 9:00 a.m. Doors and windows on the first period houses, saunas and outhouses face predominantly east and south. Barns, sheds and other animal related structures show a similar orientation. All chicken houses and brooders, presently or historically, face southeast. Primary animal entrances to horse and cattle barns open to the south or east. Granary entrances are more apt to open to the north. This less structured orientation is probably a result of the attempt to cope with weather conditions while simultaneously conforming to a courtyard plan in which the house nearly always faced south. Outbuildings show the least uniformity of direction: the three spring houses face south, west and north, depending upon their relationship to the house and spring. Garages open variously to the east, north and northwest. This orientation also utilized the west hills' shadows in the summer, which provided relief to people and animals from the heat of late afternoon.

A noticeable similarity between these and Old World Finnish farmsteads is the physical division of the two yards by a fence or building. On nearly every site, a pole or chain link fence define the formal lawn surrounding the human area from central common areas used by machinery and animals.

Some farmsteads are distinguished by their uniform color schemes. The Nevala farm buildings are painted red, with the corners painted white, as if simulating corner boards. The window frames and door frames are also painted white. The Urick farm buildings are similarly painted, although only the notches themselves are painted white. To distinguish the farm buildings from the domestic area, the "human" buildings are painted white with green notches. Some of the Kraftenberg buildings have also been painted red.

The farms' most numerous buildings are used as animal shelters. The subtypes of the Finnish-American Log Homesteads include traditional crib form stables, gambrel roof barns, bank barns, and chicken houses. The log members vary in size from 8 to 15 inches, and are either peeled, partially hewn or square hewn. The buildings are joined with a variety of notch types.

Of all the animal shelters, the horse stables are the larger and better-constructed structures. As in Finland, they were commonly erected near to the house, signifying the importance of the expensive animal to farming operations. The well constructed, tight-fitting buildings of hewn or peeled logs vary in size between 19' x 20' to 30' x 40'. Doors can be single,

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double or Dutch, and are located on the eave or gable ends. Hay mow doors are on the gable ends facing into the animal yard. Small four-light or open windows provide light. In order to retain heat, the ceiling heights measure between about seven to eight feet. The smallest stable on the Stone property has three stalls, while the Mattila's has six. The stalls and mangers of the first period construction phase are made of peeled pole, while the later stables have rough-sawn lumber elements. Beams to aid in the support of the ceiling joists are themselves held up by poles marking the end of the stalls.

Chicken houses come in a variety of shapes. One type is a simple, shed roof building of about 13' x 18' with windows facing east and south. Wood floors and low-set multilight windows with screens provide the dry, warm interiors conducive to egg-laying. Within twenty years, however, the chicken houses had become as elaborate as the homestead second homes and horse stables.

The second chicken houses, all built within five years of each other and located towards the southern end of the valley, are quite similar in form and detail, although they range in size from 17' x 23' to 14' x 31'. They have a monitor roof, and are constructed of square hewn logs joined at the corners with the tooth notch. The eight inch thick log walls were overly large for the scale of the building in comparison to the barns and houses. The floors are milled lumber. Some have in addition a stove and whitewashed the interior to provide added heat. Window placement on the monitor section is variable. Regardless of the orientation to the courtyard location or compass direction, the batten human door on the buildings was placed to face the house.

Another outstanding feature of the Korpivaara community is the natural and man-made landscape. As described in Section E, "Geophysical Setting," much of the area appears little-affected by human influences. Rock outcroppings, topography, and trees and scrub vegetation in drainage areas are major features that define [REDACTED]. In other locations are found the man-made creations of farmsteads, pasturage and cultivated hay and wheat fields. Pastures and fields are surrounded by wire fencing. The building groups are generally located on the flatter areas on the coulee floor; to the north, they are sited on relatively flat sections near tributary streams. Within the farmsteads, ornamental vegetation--groomed lawns, flower beds, native and non-native trees and shrubs--are located near the main house, and are usually encircled by pole or wire fencing. Where historic building groups are unoccupied, the homestead site is used as pasturage.

III. Significance

The Fenno-Scandian log homesteads and associated landscape of Korpivaara are historically significant on a local and state-wide level according to National Register Criterion A for their associations with the evolution from a mining to an agricultural economy that occurred in Montana in the first decades of the 20th century. On a local level, they are significant for their associations with the development of [REDACTED]. Furthermore, the open fields, pastures, woods, meadows and other natural landscape features are significant for their ability to convey associations with this area's agricultural and ranching traditions. They provide a sense of continuity with the building groups, as well as with the ethnic and economic development of Korpivaara.

The building groups are also architecturally significant according to Criterion C as representatives of a distinctive folk vernacular building form and for the Finnish craftsmen who constructed them. The structures embody the functions, materials, construction methods and farmstead arrangement of late 19th century rural Finland, as well as their assimilation and adaptation to a new Finnish-American vernacular tradition. The homesteads comprise an important ethnic landscape, and are the only known such cohesive grouping in the state.

The log building groups represent the Finns and other ethnic groups who initially came to the state to make money in the booming coal and copper mining centers of Montana, and remained to establish permanent agricultural communities. This transition is exemplified in the fact that most homesteaders continued to work in the coal mines of Belt while proving up on their claims. The length of time required to prove up, and the time between construction of buildings represents the

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hardships encountered by homesteaders in attempting to create a new life. The homesteads were part of the late 19th and early 20th century development which transformed the state's cultural landscape. The buildings provide insight into the agricultural way of life in early 20th century Montana. It was a life that marked one of Montana's most important periods of development during the early 20th century, a period in which the population changed from a transient body concentrated around specific urban mining centers to one that was more widely distributed and permanent.

The importance of these homesteads extends beyond their associations with Montana's early economic development. On a broader scope, the Korpivaara buildings exemplify the transfer of European cultural ideals to a New World setting and to a New World concept--the homesteading claim. This was done in comparative isolation, without the broader cultural and social support available in such states as Michigan and Minnesota. By 1920, over 3570 Finns or children of Finnish immigrants were living in Montana, constituting less than four percent of the state's population.⁷⁵ Despite this "handicap," [redacted] succeeded in creating a cohesive and identifiable rural Finnish-American community in the Montana landscape. The building materials, design and construction methods provide a link to Old World traditions. The buildings indicate initial settlement patterns of the homesteaders, and their personal ideals and expectations of farmstead development.

Furthermore, the resources' architectural design and structural integrity are a testament to the skill of the local Finnish carpenters and contractors, particularly Matt Maki, John Makkela, John Maunula and John Mattila, who were active in this isolated community during the first decades of the 20th century. The variations between building groups--their construction, design and building organization provide indications about individual vernacular principles of the homesteaders and craftsmen, their evolving skills and perhaps even something of the construction methods practiced in their Finnish points of origin. Finnish farmsteads have been recognized by such noted scholars as Arnold Alanen for their display of a strongly organic and functional relationship with the land and landscape, and their "basic beauty and integrity of log building craftsmanship which seldom has been exceeded elsewhere in America."⁷⁶

The homesteads' building organization, multiple rooflines and high number of small, special use buildings is evocative of farms in Finland. The farmyard buildings in particular reflect the Finnish farmer's method of animal husbandry in which each species--horses, cows, chickens and even pigs--was housed in modest, use-specific buildings. This attitude towards "correct" building function contrasts with the American desire to centralize agricultural functions under one roof.

The chicken houses in particular are indicative of this attitude. The buildings are or were historically found on each homestead, and were an integral element to the success of the farm. The commercial importance of chickens went beyond the sale of adult birds in that eggs were commonly used to barter for necessary household goods when money was in short supply. The concern for the birds' welfare is seen in the elaborate shelters made for them.

These chicken houses are decidedly non-traditional in form, and indicate that Matt Maki, who is credited with introducing the form, was familiar with alternate design forms in more than just house styles. He may have seen frame versions on other farms, or read of the new style in farm publications. During the 1910s and 1920s, the Department of Agriculture provided information on various chicken houses, as did state experiment stations. Between the years 1903 to 1925, the Montana Agricultural College Experiment Station produced five separate circulars on the proper construction and design of chicken houses. In 1918, the first reference to the monitor roof was mentioned.⁷⁷ Because Maki was not fluent in the English language, if he obtained a circular, he might have only looked at the pictures, or had it translated, and applied the design to his traditional construction method.

The differences between buildings indicates that Maki experimented with the design. The earliest-known building on the Nevala property is also the tallest and has the only vertical windows on the monitor roof wall. Heat loss might have been too great on this building, for the house was later reused as a stable, and a new and smaller chicken house built in 1925. The next chicken house was not as tall, but noticeably longer. It is subdivided into three rooms, with the roosting area in

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the larger central room. The widely-spaced monitor windows were moved to a central position on the last and smallest chicken houses both built about 1925 on the Nevala and Urick homesteads. The cleverly-designed half-monitor roof provided additional light to the rear interior roosting area. The two-pitch roof also allowed greater floor space without raising the ceiling height. Horizontal, multipane windows placed close to the eaves fill nearly the entire width of the five foot tall front section. They allow sunlight and fresh air to enter without directing air directly on the birds.

The distinctive south Ostrobothnian appearance of some animal yards is reinforced by coats of red paint and white corner accents. This treatment was nearly universally used in Sweden, and was popular with 19th century Finnish farmsteads near the Swedish border. The dark "Falu Red," nearly rust in color, became fashionable for northern European outbuildings in the 1840s. An intensive study by Terry Jordan concluded that the application of red paint was associated exclusively with Scandinavian countries, being found nowhere else in Europe.⁷⁸

Regarding building orientation, a comparison with passive heating and cooling methods of traditional Finnish architecture cannot be covered here because of the lack of any published material on the subject. Oblique descriptions of orientation exist in site plans made of Finnish American farmsteads. For example, Inventory/Nomination forms for the Thematic Group National Register Nomination for Finnish Settlement in South Dakota (1984-1985) shows farmyards in which the house and sauna openings face primarily south and east. Barn openings are less likely to face a uniform direction, and are dependant upon adherence to a courtyard plan.

The presence of a courtyard plan implies the transference of an Old World tradition to a new setting, although it is important to note that the enclosed courtyard was a common rural feature of many European countries. Alanen and Tishler have observed that while a cultural connection can be made between Finnish and Finnish-American log buildings, the same connection regarding farmstead arrangement is much less explicit.⁷⁹

The relatively easy acquisition of 160 acres partially explains the divergence from the orderly plans of Finland, and is an important factor in the distinctiveness of these Finnish-American buildings. The concern for conservation of space was not necessary in Montana, while in Finland, every narrow strip of land was vital for survival. Also, while protection from roaming cougars, wolves and an occasional bear merited consideration, a sturdy building seemed to suffice as a defensive measure. The reasons for the lack of clear definition of human yards is less clear. Certainly the comparatively fewer buildings associated with human activity would result in a looser arrangement. Also, the fear of fires in heated buildings would necessitate greater distances between house, woodshed and sauna. Fences, groomed lawns and ornamental trees and bushes are the primary features used to define the human areas. In both here and in Finland, the fence (or another building) was used to prevent animals from entering the human yard. The difference here is that the fence has a greater role in defining a space.

As a study in the process of cultural transfer, assimilation and evolution, the resources are significant as examples of a "dead" vernacular building tradition. Most log structures date from the 1900s to the 1920s, during the homesteads' development by first generation immigrants. Second generation homesteaders continued to build or hire Finnish carpenters to build log structures, although the style and use of the buildings erected between the late 1920s to the 1940s are notably non-traditional. The later buildings assimilate elements of building styles and construction methods popular with urban America. Frame and pole buildings appear in greater number during this time. The decision to continue the Fenno-Scandian log tradition did not extend to the third generation, and from the late 1940s to the present, new construction was of frame.

The cultural landscape of Korpivaara extends beyond the building groups to include the meadows, pasturage fields, drainage courses and forests that constitute the greater area of Korpivaara. The landscape has remained largely free of modern development, and retains visible ties to Korpivaara's agricultural past. The greater landscape is integral to the interpretation of [REDACTED]

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Korpivaara was begun as a collection of homestead settlements, concentrated along the coulee and water courses [REDACTED]. The landscape was changed by homesteading activity: from an untouched "forest wilderness," it became a scattering of cultivated fields and fenced pastures. Korpivaara was further altered to accommodate clearly defined grain fields and pastures that followed the grid lines that identify most of rural agricultural America. This evolution reflects, and is an inherent part of, the development of Korpivaara, from its inhabitants to its building groups. Several buildings on each homestead site have been moved from their original locations to their respective building groups. However, the moving was done during the first and second periods of construction, and directly contributed to the historic economic development of the homestead and ranching ensembles. In fact, the significance of the development of Korpivaara is to a great degree dependant upon this movement. The tradition of moving buildings has precedence in Finland, as discussed in Section E. For this reason the moved buildings qualify for National Register Criteria Consideration B.

IV. Registration Requirements

In addition to the few personal possessions carried to the Montana frontier, the European immigrants transported their values, customs, language and assumptions about proper building construction, use and appearance. Given the opportunity to build their own homes, some applied these traditions to their new homes. However, because of the remoteness of many claims, the lack of records, and the ravages of time, the total number of Finnish folk buildings constructed will probably never be known, and surviving examples are rare in the state.

Finnish homesteaders met with varying success in attempting to create a working agricultural enterprise. As the discrepancy between the high number of homestead claims and fewer final proofs indicate, not every immigrant could meet the initial homesteading qualifications. Others gave up after years of effort, with no architectural remnants remaining of their homesteads. Depending upon their skills and finances, the homesteads which survived could be quite small, with only a few integral buildings, such as a house, barn and corral. Others boasted a number of specialty-use structures.

In regard to this variety, registration requirements for the Finnish-American Log Farmsteads is rather broad. To qualify under the area of homesteading in Criterion A, the building groups must indicate that they were developed as cohesive and functional homesteads during the Homesteading Era of the 1890s to the 1930s, with the minimum of a dwelling and animal shelter. They should, but do not have to include the subtype animal shelters of barns and chicken houses. In order to qualify under the area of mining in Criterion A, the building groups must be associated with immigrant homesteaders who came to Montana and Belt as miners.

Topography, vegetation and land uses are also important components of the Korpivaara cultural landscape. In order for the surrounding areas to qualify under the area of agriculture in Criterion A, they must retain sufficient setting, location, materials and workmanship to convey the spatial organization associated with the area's agricultural and ranching development. This includes features of creeks, streams, ponds, hills, rock outcroppings, meadows, woodlands, plantings, fences, pastures and plowed fields. Where present or continuing uses occur, they must be compatible with the historic uses of grazing and cropland in order to convey the general character and feeling of the historic period. Undeveloped drainage, meadows, forest areas and natural topography should also be retained to convey a sense of Korpivaara's forest wilderness setting. The cultural landscape must be associated with the immigrant homesteaders who developed this portion of central Montana.

In addition, the Finnish-American Log Farmstead must qualify for listing under Criterion C: the building groups should be primarily of log, and constructed according to the Fenno-Scandian vernacular building tradition. The sites must maintain a rural setting, and must retain sufficient architectural integrity to exhibit evidence of the functional, structural and design features described in Historic Context Statements #3 and #4. They should have been built by Finnish carpenters, contractors or immigrants with knowledge of the Fenno-Scandian vernacular building tradition. The buildings or

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complexes must not be so altered so as to destroy reference to Finnish prototypes. The building groups are eligible even if they contain a number of pole and frame constructions, so long as these alternate types do not seriously compromise the integrity of the sites' locations, designs, materials and associations with the Fenno-Scandian vernacular building tradition. Buildings which have been moved are considered eligible if they were moved in association with homesteading or ranching during the historic period. The farmsteads must be at least 50 years old.

For subtypes barns and chicken houses to be eligible under Criterion C, they must retain sufficient design, setting, location, materials and construction integrity as to provide reference to the Historic Context Statements #3 and #4 in Section E. They must be associated with the Homestead Era and the three phases of construction, and be associated with Finnish immigrant craftsmen.

For both subtypes, the application of non-traditional materials, such as corrugated metal roofing, asbestos shingles, or masonite siding may be considered non-compatible additions if they were added after the third period of construction (1944-present), and significantly impact the overall historic and architectural integrity of the resources.

Because of the variety of homestead sizes developed over the years, and because many have been abandoned, barns or other forms of animal shelter might be the only log structures remaining on a homestead claim that exhibit traditional Fenno-Scandian vernacular construction. In these instances, the log building may be considered as an individual resource if it meets the previously stated National Register Nomination requirements.

F. ASSOCIATED PROPERTY TYPE #2

I. Name of Property Type: Dwellings

II. Description

Two types of dwellings exist in Korpivaara: the homestead log cabin and the log house. The first dwellings were small, one-room cabins of a scale manageable by one person. The second homes were multi-room designs based on popular residential styles, with specific activities assigned to each room.

Unlike American-constructed log homestead cabins, the difference between the Finnish log cabin and log house was more a matter of size and degree of ornamentation than quality of construction, since the same Fenno-Scandian design principles were used on both house types. Logs are hewn square, scribed and fitted using a vara, and connected with a tightly-fitting corner notch. The individual log sizes vary between 8 to 10 inches. Some interstices have been daubed at a later date with a concrete mixture. The quality of construction improved to the extent that more skillful carpenter/contractors created the log homes instead of the immigrant homesteaders. Both subtypes have double hung windows with panes of one-over-one on the log cabins, and two-over-two or three-over-one on the log houses. The doors are manufactured, multi-paneled doors, sometimes with upper panels of glass.

The first dwellings constructed during the 1890s to early 1910s are functional first shelters, lacking in ornamentation. They are set on fieldstone foundations, and are one and one-half story, one room rectangular buildings with hewn walls enclosing between 118 to 130 square foot rooms. There is rarely an upper attic space. The room is large enough for one bed, a stand and a stove located across from the door. Few of these first shelters survive unaltered. One cabin in particular on the Stone property conforms to the Finnish tenant farmer's "one room house" arrangement in terms of its gable end entrance with front porch, and exterior gable end loft access. The second rear bedroom, placed on axis with the front room, conforms to an identical Finnish practice.⁸⁰ When homesteaders moved into their second homes, the first

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house became storage or bunkhouse space. First houses during the second building phase might be "rejuvenated" by the application of daubing or composition siding in the form of bricks.

The Finnish log cabins were replaced ten to fifteen years later by larger, more elaborate log buildings, often set above a root cellar. The foundations are of fieldstone in combination with poured concrete. The houses were identified as the domestic center by their painted exteriors, large size, degree of elaboration, and landscaping of fenced lawn and ornamental trees. They usually have the formal living room area facing the county road.

As part of the economic stability of the homesteaders during the second phase of construction beginning in the late 1910s, the new homes boasted imitations of the current vernacular styles in urban areas, as well as elements from the popular contemporary styles. The vernacular four-square, hipped roof house of low income rural areas appears in the area, although it is built according to the traditional log construction method. The Kraftenberg log house include references to the irregular Queen Anne ell-floor plan, and classical columns on the front porch. Elements of the Bungalow style appear on the Nevala's clipped gable roof, exposed rafter tails, "rustic" peeled log walls, and three-over-one windows. The Urlick house includes eave brackets, and the Stone house boasts french doors.

These second phase houses contain the most manufactured materials, from double-hung and plate glass windows to paneled and screened doors with metal and ceramic door knobs. Personal choice dictates the interior finishes of the houses, and ranges from the natural log to whitewash, paint, wall paper, bead board wainscotting, or stucco.

During the third and final construction phase that began in the late 1940s, some second phase log houses have been clad in "modern" materials of composition siding, masonite or aluminum. Roofs have been reshingled in composition shingle.

III. Significance

The log dwellings in Korpivaara are significant on a local and state level according to National Register Criteria A for their associations with the growth and assimilation of the immigrant homesteaders with their adopted country. According to National Register Criteria C, they are architecturally significant as the surviving examples of the Fenno-Scandian vernacular log building traditions, and for their display of log craftsmanship. After over 70 years of existence, the skill of the carpenters is evident the buildings' enduring structural integrity. The second phase log houses are also notable for their adaptation of non-traditional, historic American domestic styles to the Finnish construction method.

The first log houses are much more significant than their size would indicate. On one level, they represent one of the closest links to the Finnish immigrants' traditional dwelling types and their cultural backgrounds. Their materials, design and construction methods provide a link to Old World traditions. The buildings indicate the homesteaders' personal ideals and expectations for basic shelters. The log cabins are important as true example of folk vernacular architecture, because the homesteader usually built his own first dwelling, without benefit of formal architectural schooling.⁸¹ In addition to this element, the alteration of these buildings as later storage or bunkhouse structures reveals the history of the development of homesteading in Montana and its evolution towards a ranching economy. Furthermore, the physical alterations of modern siding indicate the assimilation of the homesteaders to a new culture: The siding was a cosmetic attempt to "fit in" with urban housing. Insulative integrity came from the well-crafted log construction, not the addition of new siding.

The second houses continue these significant associations, and in addition, expressed their owners' newly-gained prosperity and security, as well as the adoption of new architectural values. Their size, prominent ornamentation, design and nearly universal frontal orientation to the road indicate the importance the homesteaders attached to the buildings as the primary symbol of the values of the people living within.⁸² The houses represented the ability of their owners to exercise creativity and personal living standards which included the desire to live in non-traditional building forms. Another

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indication of the desire of the owners to display their prosperity and acceptance of contemporary architectural trends was that the log houses, compared to the log cabins, were painted, or accented with paint shortly after their construction.

The houses show an interesting dichotomy between the desire to retain ties to their culture and the desire to adopt new and more useful ideas. The differences between the log homes and 19th century Finnish dwellings are seen in the interrelated elements of style, floor plans, and methods of room division; finishing; and even stove types.

Given the opportunity to build a new house suitable to the needs of an enlarged family, the homesteaders persisted in using logs as a building material, although none chose the traditional three-room, rectangular houses of the affluent Finnish farmer with which they should have been familiar. As described by historian Henry Heimonen, the traditional farmhouse of South Ostrobothnia was two stories, often sided with vertical boards, and painted red with white trim. The door was on the side gable, and windows were at regularly-spaced intervals. The basic plan consisted of three rooms. A full-width kitchen/living room space occupied one end and was the most important, and usually largest, room. All the women's domestic activity (spinning, weaving, cooking, etc.) occurred in this room. In one corner of an interior wall sat a huge stone stove, and across from that sat double bunks for servants, travelers, or the grand parents. A parlour was at the other end of the house, separated by an inner porch and bedroom behind the porch.⁸³ Traditional Finnish dwellings sometimes achieved subdivisions of room space by arranging poles of varying thickness above head height. These poles inferred separate activity spaces without creating walls. This was never used in the Montana buildings, where solid log wall divisions or later stud wall construction divided rooms.

The house closest in intent to the South Ostrobothnian house, if not arrangement, is the Kraftenberg house. The kitchen, with its separate entrance, is given special emphasis, although domestic activity was split between it and the weaving room/entrance vestibule.

The application of modern exterior siding materials of simulated brick, milled lumber and aluminum indicates the further acceptance of the New World culture by the second generations. The rationale of wanting to appear modern, or even of protecting the logs can be associated with the influence of American values. Instead of choosing the Finnish technique of applying vertical boards, or painting the logs red to preserve the structural material, the Korpivaara owners used materials popular in the town of Belt and elsewhere in the nation.

The third difference involves stoves. Instead of the massive stone stove described by Heimonen, the Korpivaara inhabitants used iron stoves almost exclusively. The heat was vented through a chimney of brick set on brackets set into the walls. In terms of expense, purchasing and transporting an iron stove would have been greater than using indigenous granite and dry concrete mix. Conversely, buying an iron stove from a local store, hauling it home and building a brick chimney would require much less time and skill than constructing the traditional stone stoves. In Korpivaara, the stoves are of the type common throughout the United States, and many have served second and third generation inhabitants.

IV. Registration Requirements

In order to qualify for listing on the National Register, the dwellings must be of log, and have been used as rural residential structures during the Homesteading Era of the 1890s to the 1930s. The properties must retain sufficient setting, structural, construction, material and design integrity to be associated with the two identified subtypes: first construction phase log cabins or second construction phase log houses built by or for Finnish carpenters or craftsmen. They must be at least 50 years old.

Under the subtype of log cabin, the resources are eligible under Criterion A if they were the first residential structure, and associated with the proving up years of a homestead claim. They are also eligible even if they were later converted to a different use during the second or third historic construction phase, as this is an example of the evolution of the farmstead.

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They are eligible under Criterion C if they exhibit the elements of Fenno-Scandian vernacular building tradition as described in Section E, historic contexts #3 and #4. Because many have been sided with non-traditional materials during the second or third historic construction phases, this example of assimilation is considered equally historic and is considered a compatible addition.

Under the subtype of log house, the resources are eligible under Criterion A if they were the second residential structure, and are associated with the financial and physical growth of the homestead. They are also eligible under Criterion A if they exhibit the characteristics of cultural assimilation as described in Section E historic context #4. They are eligible under Criterion C if they exhibit the elements of Fenno-Scandian vernacular building tradition and adaptation of non-traditional construction and design concepts as described in Section E, historic contexts #3 and #4.

For both subtypes, the addition of non-traditional materials, such as corrugated metal roofing, asbestos shingles, or masonite siding may be considered non-compatible additions if they were added after the third period of construction (1944-present), and significantly impact the overall historic and architectural integrity of the resources.

Because of the variety of homestead sizes developed over the years, and because many have been abandoned, the homestead log dwelling might be the only log structure remaining on a homestead claim that exhibits traditional Fenno-Scandian vernacular construction. In these instances, the log dwelling may be considered as an individual resource if it meets the previously stated National Register Nomination requirements.

F. ASSOCIATED PROPERTY TYPE #3

I. Name of Property Types: Saunas

II. Description

Saunas survive on nearly all properties. All saunas are situated at a distance from the other wooden buildings, and set close to a stream for the purposes of fire safety, water source for the bathing steam, and post-sauna plunge. As with most of the log buildings on the farmstead, they are gabled, rectangular, one story, and rest on wooden sills set on field stones. Some foundations have been reinforced with poured concrete. Entrances are on the gable end, and may be set in the center of the wall, or off-set to one side. The doors are about five and one-half to six feet tall, of vertical or horizontal boards, and have wooden or metal knobs. Roofing material is either of shingles set upon skiplap milled lumber, shingles nailed to vertical boards, or two layers of vertical boards with an interior insulative layer of hay. Corrugated metal roofing has been applied on some roofs.

The sauna logs are hewn square or partially hewn, and vary in size from 8 to 10 inches. They are constructed following the traditional Fenno-Scandian construction technique which uses a vara to create a tight fit. The log walls continue to the gable ends to ensure heat retention. The concern for insulation continues through the choice of corner connections. A variety of corner notching is employed, from the vertical double notch to a V-notch and a tooth notch.

The interior height from floor to roof ridge varies between about seven feet and nine feet. The unpretentious structures range in size from 9 x 25' to 14 x 13', but include the traditional Finnish sauna floor plan of two rooms, a front dressing room and a rear bathing room. A log wall with a batten door separates the two rooms. In one sauna, a window is also cut into the wall to allow light into the bathing room interior. Dressing rooms have small multi-pane windows on the eave walls, and located between three and four feet off the ground. There are usually no windows in the bathing room.

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In the interior, well-fit milled lumber floors set on floor joists keep the floors dry and warm. One or two-tier wooden benches extend the length of the eave end dressing room walls, and are set between one and one-half to three feet off the floor.

Like traditional saunas in Finland, the bathing room stove is placed in a corner, usually adjacent to the interior door. The heat is generated in a metal stove surrounded by bricks. Upon the stove are set rocks which are heated from the stove. When water from a water tank in front of the stove is thrown on the rocks, steam is released, although the intent of the building is to create high temperatures rather than copious amounts of steam. Two tiered wooden benches across from the stove provide sitting areas for the bathers. Heat from the stove is vented through a metal chimney, or into a brick chimney set upon wooden brackets.

A variation on the building type is the sauvusauna, or smoke sauna. The building originally had no chimney or window openings, so that smoke from the heated fireplace was vented through a small opening on the gable end or the opened door. The walls are still blackened from this smoke.

III. Significance

The log saunas in Korpivaara are significant on a local and state-wide level according to National Register Criteria A for their associations with the initial settlement of the Finnish homesteaders and the predominant economy of the area as well as the state during the first decades of the 20th century. They are also important as representatives of an agricultural culture that was brought over from Finland to Montana. According to National Register Criteria C, they are architecturally significant as the surviving examples of the transfer of Fenno-Scandian vernacular log building traditions--the forms, materials and construction technology, and for their display of log craftsmanship.

Saunas represented the strongest ties to Finland, and is or was historically a feature of most early Finnish-American settlement. The tenacity with which the building form has survived in both rural and urban areas attests to its importance in the Finnish culture. Saunas were among the earliest structures built on the homesteads, along with the house and an animal shelter. Their importance went beyond bathing: They were often the first form of shelter, and served a variety of purposes. The dry and warm interiors were also used as sick houses, birthing rooms, drying rooms and smoke houses. It is not known if any of the saunas [REDACTED] served as the first house, a tradition which was begun in Finland.

It is noteworthy that the sauvusauna was present in Montana, for the form was little used in Finland by the early 19th century.⁸⁴ Because of its lack of dressing room, chimney or windows, it was easier and faster to construct. This reflects the considerations made by the Finnish homesteader during the first years of settlement regarding the importance and value of certain building types. It also reveals the limitations put upon the family due to time, finances, skill and available materials.

More than any other building type, the sauna is arguably the most identifiably Finnish structure in the Finnish-American rural landscape. The form and use of the sauna persisted over several decades, and contributed to the continuation of a distinctive Finnish community. While house and other farmyard forms were adapted or altered from their original form and use, the sauna maintained its usefulness until the advent of electricity in the mid-1900s.

IV. Registration Requirements:

In order to qualify for listing on the National Register, the sauna must be of log, and have been used as a sauna during the Homesteading Era of the 1890s to the 1930s. The structure must retain sufficient setting, structural, construction, material and design integrity to be associated with the historical contexts discussed in Section E. They must have been built by or for Finnish immigrant carpenters or craftsmen, and must be at least 50 years old.

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The sauna is eligible under Criterion A if it is associated with the proving up years of a homestead claim, and must be associated with the Finnish immigrants. Because most saunas are now functionally obsolete, the present use of the buildings as storage space does not make the resource incompatible, so long as sufficient visual reference remains.

They are eligible under Criterion C if they exhibit the elements of Fenno-Scandian vernacular building tradition as described in Section E, historic contexts #3 and #4. Because of their close affiliation with the Finnish culture, and because most are in various stages of disrepair, evaluation for eligibility is less strict. The buildings do not have to be completely intact, and must retain sufficient integrity to convey architectural and historical associations to setting, design, location, workmanship and materials.

A variety of homestead sizes have developed over the years, and many have been abandoned. The homestead sauna might be the only log structure remaining on a homestead claim to exhibit traditional Fenno-Scandian vernacular construction. In these instances, the log dwelling may be considered as an individual resource if it meets the previously stated National Register Nomination requirements.

The addition of non-traditional materials, such as corrugated metal roofing, asbestos shingles, or masonite siding may be considered non-compatible additions if they were added after the third period of construction (1944-present), and significantly impact the overall historic and architectural integrity of the resources.

F. ASSOCIATED PROPERTY TYPE #4

I. Name of Property Type: Granaries

II. Description:

There are two types of granaries in [REDACTED] Those with one general storage space vary in size from 18 x 14' to 28 x 20' and have a gable end entrance. Those with two cribs range from 22 x 18' to 25 x 17' and are divided by a central aisle. All have tightly-fit walls of square hewn log following traditional Fenno-Scandian construction practices to protect against moisture and insect penetration. The logs vary in size between nine and 12 inches. The buildings are raised above the ground by fieldstone foundations and wooden sills. Corner notching techniques used are the vertical double notch found on one room granaries, the dovetail, and the tooth notch. Log end walls may be continued to the gable, or rough sawn boards covering a king post roofing system. Roofing is of shingles set on vertical boards, or rough sawn skip lap boards. Later roofing of corrugated metal replaces or is set over the shingles.

On the two-crib variety, the interior dividing walls are constructed of pole studs sided with milled lumber. Doorways or hinged openings allow access into the cribs. The storage bays are open at the top, allowing air to circulate through the building. Air is allowed in through the gables via small gaps in the log walls, small open windows near the eaves, or through board gables.

III. Significance:

The log granaries are significant on a local and state-wide level according to Criterion A for their association with the agricultural economy which transformed the area and the state of Montana in the early decades of the 20th century. They are also important as the physical continuation of an agricultural way of life that was begun in Finland centuries earlier. The buildings are significant according to Criterion C as the surviving examples of the transfer of Fenno-Scandian vernacular log building traditions--the forms, materials and construction technology, and for their display of log craftsmanship.

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Like the sauna, the granary is one of the most characteristic farm buildings in Finland, and has been in existence for at least 500 years. Each farmstead had at least one such building to store the grain and animal fodder, household food, valuable implements and extra household goods. Special care was taken in its construction, since it stored the farms' most valuable goods. The roof was carefully waterproofed, and the floor set on an upraised platform to keep food and grains from spoiling.⁸⁵

When the Finnish immigrants returned to their traditional agrarian practices, granaries were built to hold the harvest, although not as many appeared per farmstead as they did historically in the Old World. It is important to note that granaries were passing out of usage in Finland at the time of homesteader emigration. An explanation for their lack of frequency in the Montana setting is that the raising of grain became secondary to raising cattle within fifteen to twenty years of settlement.

IV. Registration Requirements

In order to qualify for listing on the National Register, granaries must be of log, and have been used as storage space during the Homesteading Era of the 1890s to the 1930s. The structure must retain sufficient setting, structural, construction, material and design integrity to be associated with the historical contexts discussed in Section E. They must have been built by or for Finnish immigrant carpenters or craftsmen, and must be at least 50 years old.

Granaries are eligible under Criterion A if they associated with the agricultural or daily activities of homestead life in the [REDACTED]. Most importantly, granaries are significant for their traditional form and function. They are eligible under Criterion C if they exhibit the elements of Fenno-Scandian vernacular building tradition as described in Section E, historic contexts #3 and #4.

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SECTION F END NOTES

74. With the exception of the Kraftenberg homestead, original homestead building placement is not always known. Homestead proofs listed structures, but gave no indication of location.

75. U. S. Department of Commerce, Bureau of the Census. "Table 12. Country of Birth of the Foreign Born White for Counties and for Cities of 10,000 or More: 1920. Montana," Fourteenth Census of the U. S. Taken in the Year 1920. Volume III, Population (Washington: Government Printing Office, 1922), 586. Table 6. Country of Birth of the Foreign Born White, For the State and Butte: 1920," Fourteenth Census, 577.

76. Arnold R. Alanen, "In Search of the Pioneer Finnish Homesteader in America," Finnish Americana (New York Mills, MN: Parta Printers, 1981): 89.

77. For example, see the United States Department of Agriculture, "Poultry Facts," The River Falls Journal (River Falls, WI, 10 October, 1918); and publications by the Montana Experiment Station at Bozeman, particularly by F. B. Linfield, "Poultry Management," Bulletin No. 50 (October 1903); and William F. Schoppe's "Poultry House" series in Circulars 9 (July 1911), 72 (September 1917), and 79 (March 1918).

78. Jordan, 89-90.

79. Torma, p. 3.

80. This practice has been noted by Ranulf Glanville, 45-46.

81. Michael Koop, "Rural Finnish Log Buildings of St. Louis County, MN," National Register Nomination, 1990: Sect. F, 11.

82. Hubka, 32.

83. Heimonen, 14 and 151; In comparison, people of English heritage tended to place the fireplace in the center of the room, from Donald Hutslar, The Architecture of Migration: Log Construction in the Ohio Country, 1750-1850 (Athens: Ohio University Press, 1986), 414.

84. Michael G. Karni, "Honey Heat and Healing Vapors: The Sauna in Finnish Immigrant Life," Northwest Architecture 37 (March/April 1973).

85. Heimonen, 156.

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G. GEOGRAPHICAL DATA

The boundaries of the Korpivaara Multiple Property Nomination are determined



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H. SUMMARY OF IDENTIFICATION AND EVALUATION METHODS

The multiple property listing of the historic and architectural resources of [REDACTED] is the result of a comprehensive survey by Dena Sanford, under contract with the Montana State Historic Preservation Office during the summer of 1991. It is based upon a reconnaissance survey and graduate thesis on Finnish log homesteads identified in [REDACTED] begun by Dena Sanford in the summer of 1990. The second survey focused on those outstanding examples of log building groups and cultural support structures located along the upper reaches [REDACTED] which conveyed associations to Finnish homesteading in the area during the first decades of the 20th century. Integrity requirements for inclusion in the comprehensive survey and subsequent listing included:

1. association with a Finnish homesteading family, Finnish farmstead organization or the traditional Fenno-Scandian log construction technique
 2. evidence of complete, working homestead sites that are representative of the early 20th century agricultural settlement patterns
- [REDACTED]

All properties, identified from a visual survey or from oral interviews, regardless of age or condition, were located on a U.S.G.S. topographical map. Access to the sites was from the county road, or private roads leading to the properties. This survey identified eight sites and 86 buildings for inclusion in a multiple property nomination. Black and white photographs were taken of every building on sites which met the requirements for inclusion, along with at least four color slides of each site. Details exhibiting log construction or typical Finnish elements within a building--pegs, corner notching, sill construction, roof construction, benches, stoves, etc--were recorded on black and white film. Due to budget and time constraints, sites which did not meet the requirements for inclusion in the study of homestead sites, but include elements of Fenno-Scandian or Finnish homesteading activity were included on the map for possible future surveys, but not photographed or heavily researched.

Physical documentation of the sites also included field measurements to create accurate site plans. A collection of 1937 and 1946 U. S. Geological Service aerial photographs recorded the appearance of the valley at critical moments in the evolution of the homesteads. The photographs reveal the transitional period from original or early immigrant ownership to the second generation, showing additions and modification made to the original claims. Retrieval of useful information from these sources required the use of a binocular stereoscope. The images' greatly reduced size, however, allowed for potential misidentification of historic resources. Interviews with residents attempted to reduce the margin for error.

Additional information came from oral interviews, legal records, local newspapers, biographies and family histories. The memories of the residents were relied upon for much of the valley's social history, as well as for architectural information regarding

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construction/demolition dates and building uses. In addition to oral and written interviews and personal photographs, primary sources included county courthouse legal records. These provided information on original ownership, title transfers, and property descriptions. Outdated assessment forms described the size and plan of buildings no longer present. On file with the National Archives are Homestead Proofs. The proofs include legal descriptions of building type, size and number; and farm acreage and estimated value. Voluntary research and interview time was donated by the Cascade County Historical Society in Great Falls, and Marv Hoffer of Lewistown.

The properties are grouped under three historic contexts that define the three major themes associated with the development [REDACTED] and its properties:

1. Mining and the development of Montana and Belt between the 1860s to the 1890s.
2. The impact of homesteading legislation on agricultural activity in Montana and the greater Belt area from the late 1890s to the 1930s.
3. The architectural and cultural development: [REDACTED] as an extension of traditional Finnish vernacular values.

The vernacular nature and relatively short development period of the rural resources resulted in a typology based primarily on log buildings that are identified by function. A second typology for the resources is based on three construction periods associated with the historical development of the area.

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I. MAJOR BIBLIOGRAPHICAL REFERENCES

MONTANA HISTORY

Belt Valley Times. Belt, MT.

"Cascade County Patents T19N R1E thru T22N R6E," compiled by Mary Melander for the Cascade County Historical Society, 1988; Land Patent Map, Cascade County Historical Society Archives, Great Falls Public Library.

Case Files, Montana Homestead entries. General Archives Division, Reference Branch. National Archives & Records Service, Washington D. C.

Cheney, Roberta Cakeek. Names on the Faces of Montana. The Story of Montana's Place Names. Missoula: Mountain Press Publishing Company, 1984.

Emmons, David M. "Social Myths and Social Reality." Montana Magazine 39, no. 4 (Autumn 1989).

Hoffer, Marvin C. "(Fred W.) Kraftenberg Homestead National Register Nomination." September 1985.

Kennedy, Ethel C., and Eva L. Stober. Belt Valley History 1877-1979. Advanced Litho Printing, 1979.

Koop, Michael. "Ethnicity in the Landscape: A Finnish Log Homestead in Montana." Paper presented at the Vernacular Architecture West of the Rockies Conference, Reno, Nevada, 21 September, 1989.
Kraftenberg, Fred. Series of letters and interviews with Dena Sanford, October 1990 to August 1991.

Kuhlman, Erika. "From Farmland to Coalvillage." Unpublished M. A. thesis, University of Montana, 1987.

Linfield, F. B. "Poultry Management." Bulletin No. 50. (October 1903).

McClellan, Marjie. Series of letters and personal interviews with Dena Sanford, September 1990 to August 1991.

Malone, Michael P. The Battle for Butte: Mining and Politics on the Northern Frontier, 1864-1906. Seattle: University of Washington Press, 1989.

_____ and Richard Roeder. Montana: A History of Two Centuries. Seattle: University of Washington Press, 1976.

Merriam, H. G. "Ethnic Settlement in Montana," The Pacific Historical Review 13, no. 1 (March 1943).

The Montana Almanac, 1957 Edition. Bozeman: Montana State University Press, 1957.

Myllymaki, Gilbert and Dolores. Series of letters and interviews with Dena Sanford, June to August, 1991.

United States Department of the Interior
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NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET

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Page 2

Nevela, Matt. Series of letters and interviews with Dena Sanford, October 1990 to July 1991.

Pierson, Gladys. "Acculturation of Finns in Milltown, Montana." Unpublished M. A. thesis, Montana State University, 1941.

"Polk's Cascade County Directory." Issues 1900 through 1932. Portland: R. L. Polk & Co.

Schoppe, W. F. "Poultry Houses," Montan Extension Service, September 1917.

Shovers, Brian. "The Peril of Working in the Butte Underground: Industrial Fatalities in the Copper Mines, 1880-1920." Montana Magazine 37, no. 2 (Spring 1987).

Toole, K. Ross. Twentieth Century Montana: A State of Extremes. Norman, OK: University of Oklahoma Press, 1972.

U. S. Department of Commerce, Bureau of the Census. Statistics of the Population of the United States at the Tenth Census (June 1, 1880). Washington: Government Printing Office, 1883.

_____. Report on the Population of the United States at the Eleventh Census, 1890. Washington, D.C.: Government Printing Office, 1895.

_____. Thirteenth Census of the United States Taken in the Year 1910, Volume II, Population. Washington: Government Printing Office, 1913.

_____. Fourteenth Census of the U. S. Taken in the Year 1920. Volume III, Population. Washington: Government Printing Office, 1922.

_____. Fifteenth Census of the United States. Volume III, 1930. Population Montana-Wyoming, no. 2. Washington: Government Printing Office, 1932.

_____. A Report of the Seventeenth Decennial Census of the United States, Census of the Population: 1950, Volume I. Washington: Government Printing Office, 1950.

United States Department of Agriculture, "Poultry Facts." The River Falls Journal. River Falls, WI, 10 October, 1918.

Urick, Frank and Vivian. Series of Letters and Interview with Dena Sanford, May-July 1991.

HOMESTEADING & REGIONAL FINNISH SETTLEMENT IN THE U. S.

Alanen, Arnold R. "Back to the Land! Rural Finnish Settlement in Wisconsin." Transactions of the Wisconsin Academy of Sciences, Arts and Letters 65 (1977): 180-203.

_____. "In Search of the Pioneer Finnish Homesteader in America." Finnish Americana. New York Mills, MN: Parta Printers, 1981.

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES
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Page 3

- _____, and William H. Tishler. "Finnish Farmstead Organization in Old and New World Settings." Journal of Cultural Geography 1 (Fall/Winter 1980): 66-81.
- Blegen, Theodore C. "The Competition of the Northwestern States for Finnish Immigrants." The Wisconsin Magazine of History 3 (1919-1920): 3-29.
- Chappel, Jill A. "Homestead Ranches of the Fort Rock Valley: Vernacular Building in the Oregon High Desert." Unpublished M. S. thesis, University of Oregon, 1990.
- Fife, Austin and Alta Fife, and Henry H. Glassie, eds. Forms Upon the Frontier: Folklife and Folkarts in the United States. Monograph Series vol. 15, no. 2. Logan: Utah State University, 1969.
- Hoglund, William A. Finnish Immigrants in America 1880-1920. Madison: University of Wisconsin Press, 1960.
- Hubka, Thomas C. Big House, Little House, Back House, Barn. Hanover and London: University Press of New England, 1984.
- Hutslar, Donald. The Architecture of Migration: Log Construction in the Ohio Country, 1750-1850. Athens: Ohio University Press, 1986.
- Illmonen S. Amerikan suomalaisten historia II [The History of the Finns in America]. part. trans. by Arnold Alanen for Dena Sanford, 1991. Finland: Jyväskylä, 1923, 328-329.
- Jalkanen, Ralph J., ed. The Finns in North America: A Social Symposium. Hancock: Michigan State University, 1969.
- Jordan, Terry G., Matti Kaups and Richard Lieffort. "New Evidence on the European Origin of Pennsylvanian V Notching." Pennsylvania Folklife 36, no. 1 (Autumn 1986-1987): 20-31.
- _____. "Diamond Notching in America and Europe." Pennsylvania Folklife 36, no. 2 (Winter 1986-1987): 70-78.
- Karni, Michael G. "Honey-heat and Healing Vapors: The Sauna in Finnish Immigrant Life." Northwest Architect (March-April 1973): 69+.
- Karni, Michael G., ed. Finnish Diaspora II: United States. Toronto: The Multicultural History Society of Ontario, 1981.
- Karni, Michael G., Matti E. Kaups and Douglas Ollila, eds. Migration Studies. Vammala, Finland: Institute for Migration, University of Turku, 1975.
- Karni, Michael G., and Robert Levin. "Northwoods Vernacular Architecture: Finnish Log Buildings in Minnesota." Northwest Architect (May-June 1972): 90-97.

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Page 4

Kaups, Matti E. "Finnish Log Houses in the Upper Middle West: 1890-1920." Journal of Cultural Geography 3, no. 2 (Spring/Summer 1983): 2-26.

_____. "A Finnish Riihi in Minnesota." Journal, Minnesota Academy of Science 38, no. 2 & 3 (1972): 66-71.

_____. "The Finnish Sauna: A Cultural Index to Settlement." Annals of the Association of American Geographers 53 (December 1963).

_____. "Finns." America's Architectural Roots: Ethnic Groups That Built America, National Trust for Historic Preservation. Washington, D.C.: The Preservation Press, 1986.

_____. "Log Architecture in America: European Antecedants in a Finnish Context." Journal of Cultural Geography 2 (Fall/Winter 1981): 131-153.

_____. "Patterns of Finnish Settlement in the Lake Superior Region." Michigan Academician 3, no. 3 (Winter 1971): 77-91.

Kaups, Matti E., and Cotton Mather. "The Finnish Sauna: A Cultural Index to Settlement." Annals, Association of American Geographers 53, no. 4 (December 1963): 494-504.

_____. "Eben, Thirty Years Later in a Finnish Community in the Upper Peninsula of Michigan." Economic Geography 44 (January 1968): 57-70.

Kniffen, Fred B. "On Corner-Timbering." Pioneer America 1, no.1 (January 1969): 1-8.

_____. "Folk Housing: Key to Diffusion." Annals of the Association of American Geographers 55 (1965): 549-577.

Kohlemainen, John I. "In Praise of the Finnish Backwoods Farmer," Agricultural History 24, no. 1 (January 1950).

_____, and George W. Hill. Haven in the Woods, The Story of the Finns in Wisconsin. Madison: State Historical Society, 1951.

Koop, "Rural Finnish Log Buildings of St. Louis County, MN." National Register Nomination, 1990.

Koskela, Alice. "Finnish Log Homestead Buildings in Long Valley." Idaho Folklife, Homesteads to Headstones, ed. Louie W. Attebury, 29-36. Salt Lake City: University of Utah Press, 19.

Lockwood, Yvonne R. "The Sauna: An Expression of Finnish-American Identity." Western Forum 36, no. 1 (January 1977):

Perrin, Richard W. E. "The Finnish Farmstead." Architecture of Wisconsin. Madison: The State Historical Society of Wisconsin, 1977.

_____. "Log Sauna and the Finnish Farmstead." Wisconsin Magazine of History 44, no. 4 (Summer 1961): 284-286.

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Rapaport, Amos. House Form and Culture. Foundations of Cultural Geography Series. Englewood Cliffs, NJ: Prentice Hall Inc., 1969.

Russell, Horace H. "Finnish Farmers in America." Agricultural History 2, no. 2 (1937): 65-79.

Sommer, Lawrence J. "The Barns the Finns Built." Unpublished paper, University of Minnesota, Duluth, May 1971.

Tishler, William H. "The Site Arrangement of Rural Farmsteads." APT Bulletin 10, no. 1 (1978): 63-78.

_____. "Survey and Inventory Procedures for Historic and Cultural Features in Rural Areas." Echoes of History (October 1976): 54-56.

_____, and F. Townsend. "Tracing Patterns From the Past." Historic Preservation (October-December 1977): 38-42.

Torma, Carolyn. "Historic Context for Permanent Urban and Rural Pioneer Settlement Ethnic Enclaves, Finns." Vermillion, S.D.: State Historical Preservation Center, 1990.

Trewartha, G. "Some Regional Characteristics of American Farmsteads." Annals, Association of American Geographers 38, no. 3 (September 1948): 169-225.

Van Cleef, Eugene. "The Finns in America." The Geographical Review 6, no. 3 (September 1918): 185-214.

Wargelin, John. "The Finns in Michigan." Michigan History Magazine 24 (1940): 179-187.

NORTH EUROPEAN VERNACULAR ARCHITECTURE

Alnares, Eyvind, et. al. Norwegian Architecture Throughout the Ages. Oslo: H. Aschehoug and Company, 1950.

Glanville, Ranulph. "Finnish Vernacular Farmhouses." Architectural Association Quarterly 9, no. 1 (April 1977): 38-51.

Harris, R. Cole. "Simplification of Europe Overseas." Annals, Association of American Geographers 67 (December 1977): 469-483.

Heimonen, Henry S. "Finnish Rural Architecture in South Ostrobothnia and the Lake Superior Region." Ph. D. diss., University of Wisconsin-Madison, 1941.

Jordan, Terry G. "A Reappraisal of Fenno-Scandian Antecedents for Midland American Log Construction." Geographical Review 73 (1983): 58-94.

Jordan, Terry G., and Matti Kaups. "Folk Architecture in Cultural and Ecological Context." Geographical Review 77, no. 1 (January 1987): 52-75.

Kavli, Guthorm. Norwegian Architecture Past and Present. Oslo: Dreyers Forlag, 1958.

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Kero, Reino. Migration From Finland to North America in the Years Between the United States Civil War and the First World War. Vamala, Finland: Otava Publishing Co., 1974.

Leskinen, Marjatta. "Hames-Havunen." Arkkitehti 1 (1982): 50-56.

Paulsson, Thomas. Scandinavian Architecture. Newton, MA: Charles T. Branford Co., 1959.

Richards, J. M. 800 Years of Finnish Architecture. North Pomfret, VT: David & Charles, Inc., 1978.

"Skansen, Buildings and Animals: A Short Guide for Visitors." Stockholm, n. p., 1967.

Vilppula, Hilikka, and Toini-Inkeri Kaukonen. Guide to the Open Air Museum on Seurasaari Island, Helsinki. Helsinki: Seurasaraarisaatio [The Seurasaari Foundation], 1964.

Vuorela, Toivo. Etala-Pohjanman kansanrakennukset. (Das Volkstumliche Bauwesen in Sud-Ostbotten). Helsinki: Etala-Pohjalainen Osakunta, 1949.

_____. The Finno-Ugric Peoples. Translated by John Atkinson. Vol. 39 of the Uralic and Altaic Series. Bloomington: Indiana University Publication, 1964.

Wuorinen, John H. A History of Finland. New York: Columbia University Press, 1965.

GENERAL LOG CONSTRUCTION

Blaser, Werner. Wood Houses, Form in Rural Architecture. Veklar, Basel: WPF and Company, 1980.

Building With Logs. Miscellaneous Publication #579. Washington: U. S. Department of Agriculture, Forest Service, 1945.

Phelps, Hermann. The Craft of Log Building, A Handbook of Craftsmanship in Wood. Translated by Roger MacGregor. Ottawa: Lee Valley Tools Ltd., 1982.