

Merkel Farmstead, Barn
8570 Louella Lane
South Side of U. S. 64
Shiloh vicinity
Shiloh Valley Township
St. Clair County
Illinois

HABS No. IL-1191-D

HABS
ILL
82-SH1.V,
ID-

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN BUILDINGS SURVEY
Rocky Mountain Regional Office
National Park Service
P.O. Box 25287
Denver, Colorado 80225-0287

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MERKEL FARMSTEAD, BARN

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PART II. ARCHITECTURAL INFORMATION

A. General Statement:

1. History:

Based on the materials used in its construction (wire drawn nails, yellow pine lumber, and poured concrete foundations), it is suspected that the barn at the Merkel Farmstead was constructed during the early twentieth century (circa 1905-1920).

2. Architectural Character:

The Merkel Barn is a large, frame structure with vertical board siding, concrete foundations and gable roof. Whereas the lower story provided grain storage and livestock shelter, the upper loft functioned solely as hay storage. Although the barn initially was used to shelter horses and, possibly, milch cows, by the middle twentieth century it appears to have functioned as a feed barn for sheep. This barn is typical of the multi-purpose barns constructed during the late nineteenth and early twentieth centuries.

3. Condition of Fabric:

The Merkel Barn is in a good state of preservation and has been modified little through the years.

B. Description of Exterior:

1. Overall Dimensions:

The Merkel Barn measures 32'-2" (east/west) by 42'-3" (north/south).

2. Foundations:

This early twentieth century structure has perimeter concrete

foundations approximately 9" thick. The depth of the foundation below the present ground surface is unknown. Many of the posts associated with the interior of the structure rest on concrete piers.

3. Walls:

The walls within the Merkel Barn are of frame construction typical of the early twentieth century and utilize elements from timber frame, balloon frame and plank frame construction. The barn sill consists of a 4"x6" circular sawn oak timber. The corners of the sill are joined with mortice and tenon joints. The upright posts, spaced at approximate 7'-0" intervals, are a combination of 4"x4" and 6"x6" timbers (circular sawn oak).

The rafter plate (along the long side walls) consists of two 2"x6" planks nailed into the top of each post using wire drawn nails. The upper plate along the gable end walls consists of three 4"x6" circular sawn oak timbers (joined by half lapped joints) morticed into the upright posts. Additionally, a long knee brace rising from the sill to the rafter plate was morticed into both the corner post and sill. Most mortice and tenon joints are secured with large wire drawn nails.

The only interior walls within the barn consist of those that enclose the grain bins. The original grain bin walls were constructed with 2"x6" circular sawn oak studs covered with horizontal yellow pine planks (surfaced four sides). More recent interior walls within the grain bins were constructed using 2"x4" oak studs. Stalls are framed using similar 2"x4" and 4"x4" circular sawn oak stock.

Whereas the exterior surface of the walls have been sheathed with vertical board and battens, the inside surface has not been covered.

4. Structural System, Framing:

Both the floor and ceiling joists are 2"x8" circular sawn oak planks placed on 16" centers. The floor joists and associated wood floors are present only in the aisle and grain bins (not within either of the animal pens). The floors within the west animal pen are dirt, and those in the east animal pen are concrete. Along the side walls, the ceiling joists rest on a 2"x8" ribbon recessed into each of the upright posts. Rows of posts along each side of the aisle support a header (constructed of three 2"x8" planks spiked together) which in turn supports the

ceiling joists.

The rafters consist of 2"x6" circular sawn oak lumber placed on 2'-0" centers. The roof sheathing consists of 1"x6" planks spaced widely to receive the original corrugated sheet metal roof. For details on the framing system, see discussion in II.B.3, Walls.

5. Porches, Stoops, Balconies, Bulkheads: none

6. Chimneys: none

7. Openings:

a. Doorways and Doors:

Several doors, all of plank construction, were located in the Merkel Barn. The doors associated with the animal pens and aisle were two-part (upper and lower), "Dutch" doors. The personnel doors were 3'-5" wide, while the animal doors were 3'-3" wide. Additionally, several doors (both personnel and overhead grain doors) were associated with the grain bins. The overhead grain doors, all located on the exterior walls of the barn, were approximately 1'-6" tall by 2'-9" wide. The bases of these doors were 5'-0" above the floor of the grain bin. Each of the grain bins also had an interior personnel door, each approximately 2'-8" wide.

b. Windows and Openings:

Only two windows, one in each of the animal pens, are present in the Merkel Barn. Both windows are six-light, tilting sash.

8. Roof:

a. Shape, Covering:

The Merkel Barn has a high pitched, gable roof covered with corrugated sheet metal. The roof pitch approximates a 12" rise over a 12" run.

b. Cornice, Eaves:

The eaves have exposed rafter ends with a simple fascia board. No gutters are present on this house.

c. Dormers, Cupolas, Towers: None

C. Description of Interior:

1. Floor Plans:

a. First Floor Description:

The ground floor of the Merkel Barn consists of a central aisle flanked each side by a set of animal stalls (one set of box stalls, the other tie-down stalls) and grain bins. Originally, on the west side of the aisle were four tie-down stalls with side walls (approximately 4'-3" wide), a large animal pen, and a large grain bin. With time, the grain bin was partitioned into two compartments. When this was done, a second grain door was added to service the new compartment, and a second doorway (without door) was added onto the aisle. It appears that this new entrance did not have a door, and thus this compartment must not have functioned to store loose grain. As such, it may have stored bagged feed and/or commercially produced seed.

On the east side of the aisle are seven tie-down stalls without side walls (spaced approximately 3'-3" apart) and two large grain bins. Each animal pen had two doors. A personnel door was located at each end of the aisle.

The four stalls with side walls and associated pen probably functioned to stable horses. It is suspected that the adjacent seven tie-down stalls with associated concrete floors probably functioned as milking stalls. At some later date, short feed bunks were added around the perimeter of each animal pen, probably to feed sheep.

b. Second Floor Description:

The large loft, with its associated mow door and overhead hay track system, functioned as a loose hay storage area.

c. Basement/Cellar Description: none

2. Stairways:

Access to the upstairs loft was gained via one of two ladders located at both ends of the aisle.

3. Flooring:

Both the lower story and loft floor consist of approximate 1"x5" tongue-and-groove yellow pine flooring.

4. Wall and Ceiling Finishes: none

D. Site:

1. General Setting and Orientation:

The Merkel Barn, which probably functioned as a multi-purpose granary, horse barn and cow barn, was located approximately 100' northeast of the Merkel House. The long axis of the barn is oriented north/south, unlike the earlier house and wine press building, which are oriented approximately 5 degrees west of north.

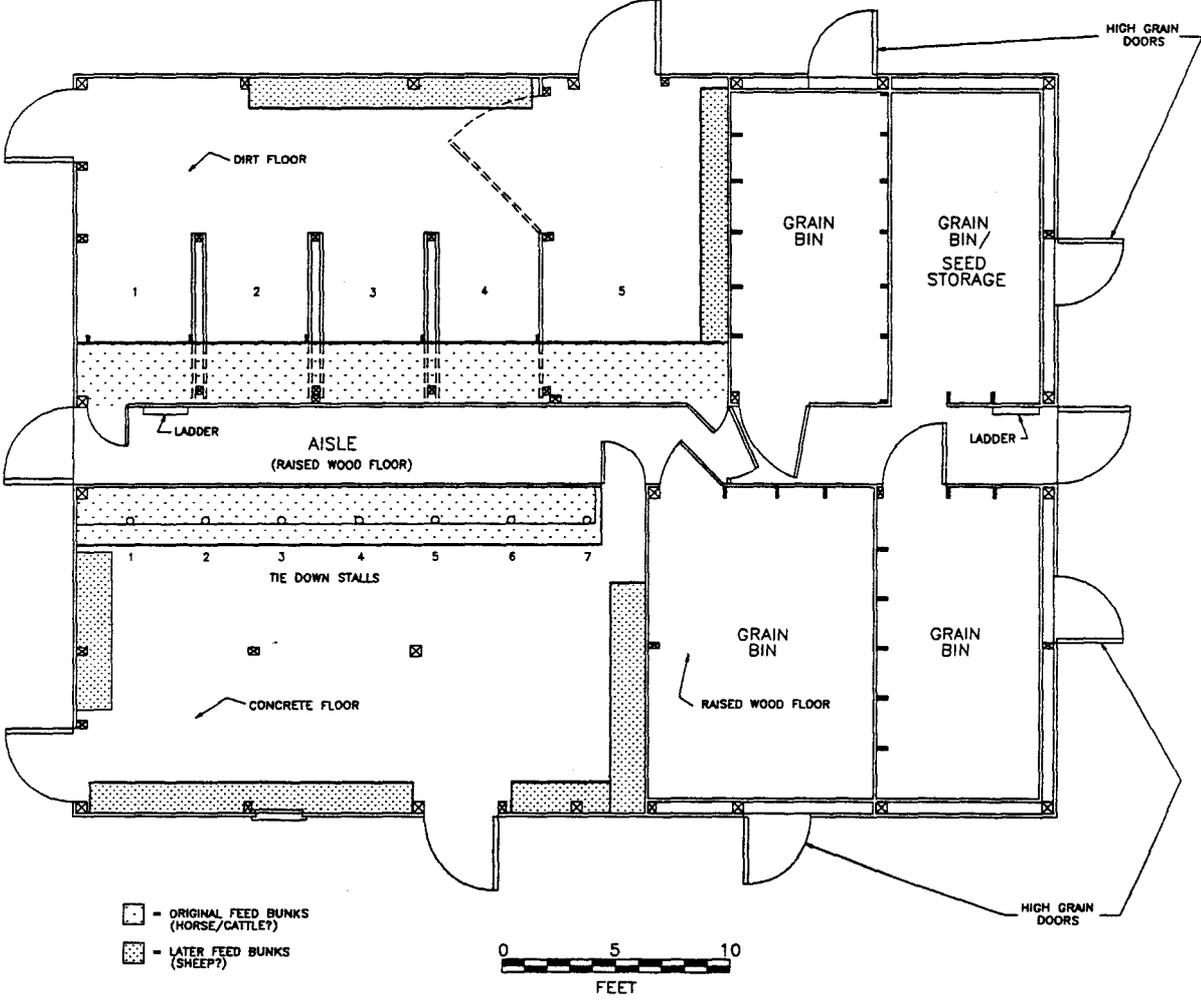


Figure 1. Sketch plan of the Merkel Barn.

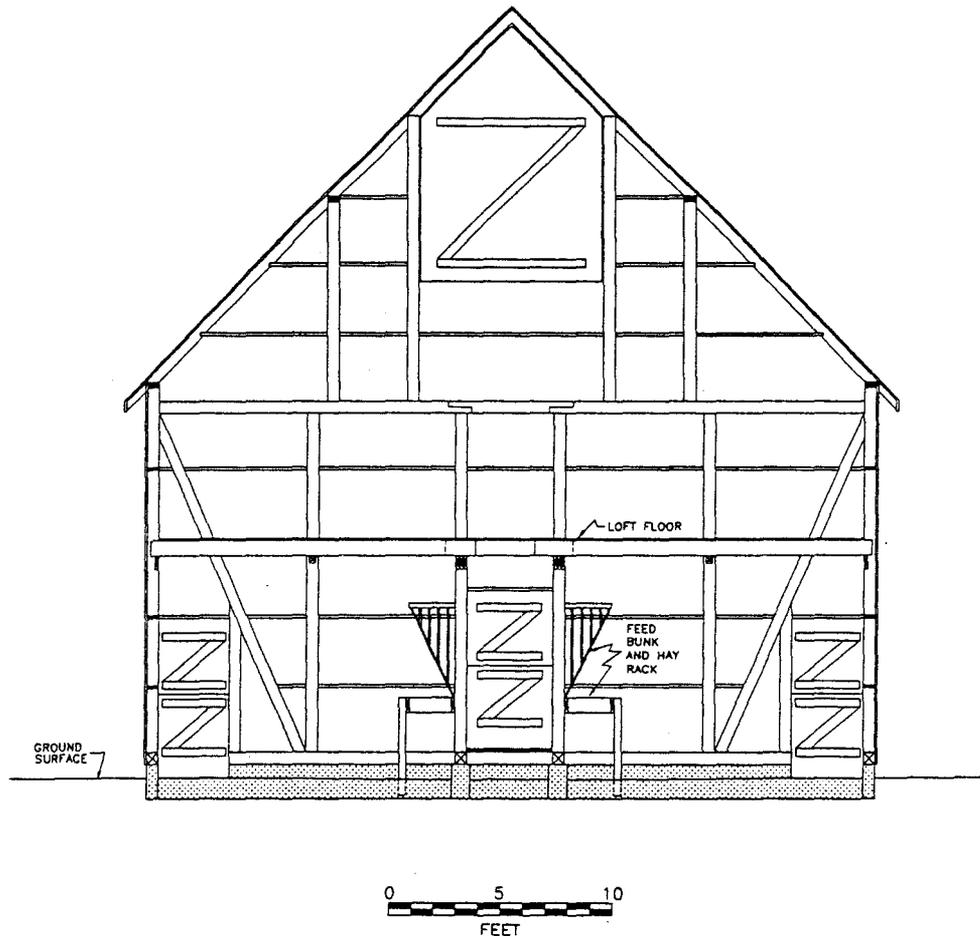


Figure 2. Sectional view of the Merkel Barn.