

**United States Department of Interior
National Park Service**



**National Register of Historic Places
Registration Form**

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in *How to Complete the National Register of Historic Places Registration Form* (National Register Bulletin 16A). Complete each item by marking "x" in the appropriate box or by entering the information requested. If an item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. Place additional entries and narrative items on continuation sheets (NPS Form 10-900A). Use a typewriter, word processor, or computer, to complete all items.

1. Name of Property

historic name Lueder, Rudolph, 13-Sided Barn
other names/site number

2. Location

street & number	W 4651 County Road J	N/A	not for publication
city or town	Town of Plymouth	N/A	vicinity
state Wisconsin	code WI	county Sheboygan	code 117
			zip code 53083

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended, I hereby certify that this nomination request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property meets _ does not meet the National Register criteria. I recommend that this property be considered significant _ nationally _ statewide locally. (See continuation sheet for additional comments.)

Dawn J. Leubner
Signature of certifying official/Title

9/21/2016
Date

Deputy State Historic Preservation Officer - Wisconsin

State or Federal agency and bureau

In my opinion, the property _ meets _ does not meet the National Register criteria.
(See continuation sheet for additional comments.)

Signature of commenting official/Title

Date

State or Federal agency and bureau

Name of Property

County and State

4. National Park Service Certification

- I hereby certify that the property is:
 - entered in the National Register.
 - See continuation sheet.
 - determined eligible for the National Register.
 - See continuation sheet.
 - determined not eligible for the National Register.
 - See continuation sheet.
 - removed from the National Register.
 - other, (explain:)

Edson H. Beall

11.7.16

Jan

Signature of the Keeper

Date of Action

5. Classification

Ownership of Property (check as many boxes as apply)

- private
- public-local
- public-State
- public-Federal

Category of Property (Check only one box)

- building(s)
- district
- structure
- site
- object

Number of Resources within Property (Do not include previously listed resources in the count)

contributing	noncontributing
1	0 buildings
0	0 sites
0	0 structures
0	0 objects
1	0 total

Name of related multiple property listing: (Enter "N/A" if property not part of a multiple property listing.) N/A

Number of contributing resources previously listed in the National Register 0

6. Function or Use

Historic Functions

(Enter categories from instructions) AGRICULTURE/SUBSISTENCE/animal facility

Current Functions

(Enter categories from instructions) AGRICULTURE/SUBSISTENCE/animal facility

7. Description

Architectural Classification

(Enter categories from instructions) OTHER: Centric Barn

Materials

(Enter categories from instructions)

Foundation Limestone/Concrete
Walls Brick/Wood
Roof Asphalt
Other n/a

Narrative Description

(Describe the historic and current condition of the property on one or more continuation sheets.)

8. Statement of Significance

Applicable National Register Criteria

(Mark "x" in one or more boxes for the criteria qualifying the property for the National Register listing.)

- A Property is associated with events that have made a significant contribution to the broad patterns of our history.
- B Property is associated with the lives of persons significant in our past.
- C Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- D Property has yielded, or is likely to yield, information important in prehistory or history.

Criteria Considerations

(Mark "x" in all the boxes that apply.)

Property is:

- A owned by a religious institution or used for religious purposes.
- B removed from its original location.
- C a birthplace or grave.
- D a cemetery.
- E a reconstructed building, object, or structure.
- F a commemorative property.
- G less than 50 years of age or achieved significance within the past 50 years.

Areas of Significance

(Enter categories from instructions)

Architecture

Period of Significance

1916

Significant Dates

1916

Significant Person

(Complete if Criterion B is marked)

N/A

Cultural Affiliation

N/A

Architect/Builder

Narrative Statement of Significance

(Explain the significance of the property on one or more continuation sheets.)

Lueder, Rudolph, 13-Sided Barn
Name of Property

Sheboygan
County and State

Wisconsin

9. Major Bibliographic References

(Cite the books, articles, and other sources used in preparing this form on one or more continuation sheets.)

Previous Documentation on File (National Park Service):

- preliminary determination of individual listing (36 CFR 67) has been requested
- previously listed in the National Register
- previously determined eligible by the National Register
- designated a National Historic landmark
- recorded by Historic American Buildings Survey #
- recorded by Historic American Engineering Record #

Primary location of additional data:

- State Historic Preservation Office
 - Other State Agency
 - Federal Agency
 - Local government
 - University
 - Other
- Name of repository: Wisconsin Historical Society,
Milwaukee Area Research Center, Sheboygan County
Historical Research Center

10. Geographical Data

Acreage of Property one acre

UTM References (Place additional UTM references on a continuation sheet.)

1	<u>16N</u>	<u>425222.7</u>	<u>4848861.2</u>	3	<u> </u>	<u> </u>	<u> </u>
	Zone	Easting	Northing		Zone	Easting	Northing
2	<u> </u>	<u> </u>	<u> </u>	4	<u> </u>	<u> </u>	<u> </u>
	Zone	Easting	Northing		Zone	Easting	Northing

See Continuation Sheet

Verbal Boundary Description (Describe the boundaries of the property on a continuation sheet)

Boundary Justification (Explain why the boundaries were selected on a continuation sheet)

11. Form Prepared By

name/title	Rowan Davidson, Associate AIA & Jennifer Lehrke, AIA, LEED AP, NCARB	date	July 18, 2014
organization	Legacy Architecture, Inc.	telephone	(920) 783-6303
street & number	605 Erie Avenue, Suite 101	zip code	53081
city or town	Sheboygan	state	WI

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Section 7 Page 1

Lueder, Rudolph, 13-Sided Barn
Town of Plymouth, Sheboygan County, WI

Narrative Description

This distinctive brick, concrete and wood frame 13-sided barn was built in 1916 for Rudolph Lueder's family dairy farm. The two-floor, odd-sided plan barn measures eighty-five feet in diameter, with a large central interior silo measuring sixteen feet in diameter, is an excellent example of an uncommon and technically advanced centric barn type in Sheboygan County, Wisconsin. The barn sits on a cast concrete and stone foundation with double-brick, lower-level walls and a large, self-supporting wood frame and roof upper level around the entire circumference of thirteen sides. The lower feeding floor has twenty-seven, equal sized, double-hung windows, two doors, and a large barn door. The upper hay mow floor has one large barn door, four equal dormer windows and a large cupola. The hay mow floor is constructed of sawn lumber in a radiating pattern from the central structural concrete and wood frame silo. The walls are of vertical wood siding and are capped with a large wood framed gambrel roof with thirteen sides sheathed in asphalt shingles. This roof is comprised of a series of long rafters terminating above the interior silo and braced against the silo. The wide diameter of the barn plan, the use of a double-brick wall and large cupola for air circulation, and the design of thirteen sides makes the Rudolph Lueder Barn distinctive compared to other centric barns. This is especially the case considering the rarity of centric barns in this part of the state.

The Rudolph Lueder 13-Sided Barn was constructed in 1916 on the Lueder family's 180-acre farm in the Town of Plymouth in rural Sheboygan County. The Lueder farm had been in operation since 1856, when it was settled by Herman Lueder and his family, who emigrated from northwest Germany.¹ When Herman Lueder died in 1913, the dairy farm along with a large inheritance was left to his son, Rudolph A. Lueder. Rudolph had the large 13-sided dairy barn constructed in 1916 with the help of his neighbor and local builder, Adolf Suhrke.

Rudolph Lueder's daughter, Elsie, married another local neighbor, Frank Laack, and the two took over the farm in the 1930s. In turn, the farm and the barn were passed on to their son, Howard Laack, and his wife, Marilyn, in the 1960s. Howard and Marilyn's daughter, Janelle, married Daniel Irwin, and their family took over operation of the dairy farm to the present.² The barn is still fully used for feed storage and milking of the Irwin family's fifty seven dairy cows.³ The barn has been maintained since its construction, has a high degree of integrity, and is in good physical condition. Consequently, the Lueder Barn is largely uncompromised and is one of the region's most recognizable buildings.

¹ "Round barn's rare example of architecture spans nearly a century." *Wisconsin State Farmer*, March 8, 2012.

² One of Howard Laack's other daughter's married Larry Jost, who wrote one of the major books and catalogues of centric barns in the state of Wisconsin, *The Round and Five-or-More Equal Sides Barns of Wisconsin*, in 1982. The Lueder Barn is prominently drawn on the cover.

³ Conversation with the property owner, Janelle Irwin, May 27, 2014; & Sheboygan County directories; & Sheboygan County plat maps and atlases.

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Lueder, Rudolph, 13-Sided Barn
Town of Plymouth, Sheboygan County, WI

The Rudolph Lueder 13-Sided Barn is located in the rural Town of Plymouth in Sheboygan County. Other buildings on the property include an extant brick modified gabled-ell farmhouse constructed in 1872, service barn, garage, machine shed, pump house, two sheds, four silos, milk house, and a modern metal milking building and previously included a non-extant dairy barn and other resources. With the exception of the barn, the other agricultural buildings are of more recent construction. Therefore, the barn is nominated individually rather than as part of a farmstead. The larger parcel is bounded by County Road J to the north and a small stream, Otter Creek, to the south. The property is surrounded by other farmland on a low and flat landscape near the edge of the Kettle Moraine. Most of the buildings are clumped together roughly in the center of the parcel set back from the county road. Despite being the building furthest from the road, the barn is clearly visible and easily recognizable due to its large scale.

Building Description

The Rudolph Lueder 13-Sided Barn is a free standing centric barn situated amongst a number of other farm buildings away from the road. It currently faces the farm yard to the north and grazing fields and pens on the other directions. The plan of the barn is 85 feet in diameter, quite large for a centric barn, and has a circumference on thirteen straight sides of 240 feet. From the low point of the foundation wall to the top of the roof and cupola is at least 68 feet. The barn completely encloses a large 16 foot diameter concrete silo, two floors, and a loft. The lowest floor serves as stalls and feeding and cleaning alleys for dairy cows. Above is the hay mow floor that extends up to the large roof structure. A large loft is supported by columns in the hay loft around the central silo. A later milk house is attached to the northeast exterior wall of the barn, is of similar materials, and is integrated into the lower level of the barn.

The barn sits on a cast in place concrete and fieldstone foundation and is built into a gentle slope rising to the north that expresses itself most clearly in the rise in grade for the main barn doors on the north façade. This configuration, often referred to as a 'bank barn,' is a common design element of dairy and other livestock barns allowing direct access to both floors from the exterior. The walls of the Lueder Barn are unique in their design. The first four feet of the lower wall is an extension of the foundation consisting of a combination of concrete and a large aggregate of fieldstone taken from the property. This wall is over two-feet-thick around the entire circumference of the barn. A double brick wall, twenty inches deep, rests on the concrete and fieldstone base. This cavity wall is unusual given its advanced design for the early twentieth century and for agricultural building practices of the period. The large airspace between the bricks serves as an insulating barrier. The yellow bricks are stacked in a common bond around the barn with frequent openings for windows, doors, and ventilation fans. Openings in the lower wall, combined with subsequently added fans and vents to the upper level are

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Lueder, Rudolph, 13-Sided Barn
Town of Plymouth, Sheboygan County, WI

intended to draw fresh air into the barn and circulate upwards, drawing cool air through the building. The concrete and fieldstone base steps up to follow the change in grade towards the north side of the building, making up the entirety of the lower wall functioning as a foundation retaining wall under the main barn doors facing north.

As a centric structure with thirteen sides the barn does not have clearly defined hierarchy of facades; however, each side will be discussed along the axis of cardinal directions. The east façade of the barn consists of the low wall of concrete and fieldstone aggregate extending up from the foundation roughly four feet. Set on the two feet thick concrete wall is a double brick masonry wall that continues up another four feet. At this level, except for at the banked area and the doors, each face has three equally spaced windows. Some of these windows have been altered with ventilation fans. Each six-over-six, double-hung window is approximately two-and-half-feet wide and four-feet-high. The windows and their frames are of wood, and a few have been replaced or repaired. At the north end of the eastern façade, a milk house was subsequently added to the exterior of the barn. The milk house has a doorway directly into the barn and where it is attached to the barn, obscures the barn's lower exterior wall and two window openings. The one-room milk house is constructed of concrete block and has a hipped roof terminating at the wall of the 13-sided barn. Though the milk house was constructed subsequent to the barn, likely in the 1940s, the addition represents the continued use of the barn for agricultural purposes as a dairy barn, and considering its small scale it does not detract from the integrity of the barn.

The east face of the barn has a large barn door. Two hinged doors, each eight foot square, swing out from the masonry wall into a fenced yard. Above the lower masonry wall is a wood frame vertical wall extended up roughly twenty feet to the underside of the roof eaves. This wood frame wall of the upper level is supported by heavy timber columns, beams, and plate and is sheathed in unfinished vertical wood boards. These uniform boards were once painted white and have approximately 2" x 8" dimensions. This vertical wood wall continues around the entire barn's circumference.

The pattern of three windows, equally spaced, along each face of the lower wall continues on the south façade of the Lueder 13-Sided Barn. The south side of the barn actually has the most window space of any of the facades. Towards the corner facing due south a wood door is located where one of the window openings would otherwise be and a fan is inserted in the window opening directly mirroring the door location. The concrete, fieldstone, and brick appear to be largely unchanged along this façade. The upper vertical wood siding continues along the southern faces of the 13-sided barn; however, there are three locations where obvious alterations have taken place. Near the center of the south facing façade and near the upper eastern corner are two openings sawn into the wood siding. These openings are rectangular in shape and appear to serve no obvious purpose. Neither of them appears to have a hinged door and they open directly into the hay mow interior space. The roof along

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Lueder, Rudolph, 13-Sided Barn
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the southern façade shows sign of damage. Wood shake shingles are clearly visible underneath deteriorated asphalt shingles.

The western façade of the Rudolph Lueder 13-Sided Barn is essentially similar to the southern and eastern sides of the barn. The western side of the barn mirrors the eastern side exactly with two exceptions, there is no large door opening facing the west, and there is no milk house addition obscuring the northern portion of the façade. Similar to the south façade, the lower level wall is largely unchanged, while the upper vertical wood siding has a few locations that look replaced or damaged. Grade rises sharply to the north on the western side of the barn.

A prominent barn door dominates the north façade of the Lueder Barn. The door takes up most of the northern face of the barn. This thirteenth side of the barn is the widest of all, measuring 26 feet as opposed to 21 feet on all the other sides. The pair of sliding doors are each approximately eight feet wide and 18 feet tall. The pair are hung along a track from above directly below the roof eaves and are constructed from the same vertical wood board siding as the rest of the upper level exterior walls. This large barn door leads directly to the hay mow at the top of an earthen ramp. None of the lower level masonry wall is visible at this point, acting as a foundation retaining wall. An eave trough and downspout hang from the narrow fascia of the roof edge. Along the western edge of the north side of the barn is a large opening into the upper level hay mow. Unlike some of the other such rectangular openings on other sides of the barn, this one has a hinged-door that matches the vertical board siding. At the eastern end of the north façade grade slopes steeply downward leading to a door, approximately 2 ½ feet wide and 7 feet tall, leading to the lower level. This door may have been added subsequent to the construction of the barn in 1916. The door is adjacent to the concrete block milk house addition and an additional window that matches those around the southern side of the barn's lower level.

The roof above sits on a lumber plate directly on the wood frame wall and extends around the entire circumference of the barn. Rafters are simply exposed at the end with a narrow fascia at the shallow exterior edge. The main timber columns of the walls below tie into the main rafters of the roof. Intermediate members do not angle, but are simply set perpendicular on the low plate. The roof initially slopes sharply, and then adjusts in a gambrel shape to a lower pitch towards the center of the roof. The point of inflection is approximately half way up the height of the roof and is supported from below by interior timber columns in the hay mow. Secondary members continue to follow the same pattern as they did on the lower portion of the roof. At the top the rafters rest on the central silo. Wood boards span the rafters in concentric rings and serve as the decking. The massive roof has a surface area of 2,700 square feet and is clad in asphalt shingles. There is a layer of wood shake shingles between the board decking and asphalt shingles. The extent of these wood shingles is unclear, though they are assumed to be original to the period of construction. Four hipped dormers extend from directly below the gambrel hip. Three of these dormers face north, east, and west while the fourth

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Lueder, Rudolph, 13-Sided Barn
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faces at a slight angle towards the southeast because each is placed in the center of a roof face. The dormers have matching fixed windows and are roughly six feet in height. A cupola with thirteen sides, corresponding to the thirteen faces of the roof, rests directly above the silo. On each side of the cupola is an opening, approximately a foot-and-a-half in width and three-feet high. These openings have, alternately, fixed windows with twelve glass panes or louvered panels for air circulation. The cupola, about six feet tall, is clad in vertical wood siding identical to that of the walls of the rest of the barn, and its roof is covered in asphalt shingles. The roof of the barn has been patched and repaired repeatedly since construction in efforts to maintain it.

The central circular silo, completely hidden from the exterior, is constructed from cast concrete in horizontal bands. The large silo, measuring 16 feet in diameter and 68 feet in height, was constructed in 1915, before the rest of the 13-sided barn was constructed around it. The silo descends half a dozen feet below grade with openings at the base to supply feed to the cows in the lower level of the barn. The rafter beams that support the hay mow floor and the interior loft in the hay mow, attach to the silo, which acts as a massive central column for the entire barn. The upper portion of the silo transitions to a wood frame structure and is tied into the roof structure above with bracing fastened to the rafters. The silo is open at the top and is ventilated through the circular cupola directly above it. Two sets of ladders rise up the silo inside the mow to allow access and filling and refilling the silage.

The lower level of the barn is used for the milking of dairy cattle. The barn was designed for this purpose and continues to be used as a dairy barn to the present day. The floor is bare concrete slab, cast to allow for various curbs and drains in centric rings around the central silo based on use and including feeding stanchions, a manure drain, feeding trough, and various other uses. The width of this working ring of space is approximately 33 feet at its greatest and varies slightly. Originally, there were forty two stanchions arranged facing inward. The current owners have added a few more to maximize the number cows being milked inside the barn. The original stanchions and equipment, which are still in place, were purchased from the Loudon Hay Tools Company of Fairfield, Iowa. The feed alley around the silo is more than 10 feet wide to accommodate machinery. The interior of the lower level is well lit from twenty seven windows facing the east, south, and west. Electric power was brought to the barn in 1920. Occasional openings were included in the barn design to allow air movement between the lower level and the upper hay mow. Fans have been inserted in some of the window openings to aid in ventilation. The ceiling is the exposed structure, mostly 2x dimensional lumber, of the hay mow floor above. This floor structure is arranged with members radiating out from the central silo. There is one circular row of columns, near the mid-point of the span, to support and transition the joists from silo to the exterior wall. These joists are roughly one foot on center bearing on the silo concrete wall, and two feet on center bearing on the exterior masonry wall. With much of the original machinery still incorporated and the function of the barn remaining unchanged, the lower level of the Lueder Barn appears very similar to when it was constructed.

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The hay mow second level is a large open space intended to hold and store hay and feed. The walls are the exposed back face of the structural wood frame and timber columns. The only openings are the large barn door, a set of four dormer windows and a central cupola high above the floor. The large concrete silo sits in the center of the nearly circular space and rises up to near the peak of the roof. There is an opening at the top of the silo to fill the silo and provide ventilation to the exterior. Two access ladders on the east and west sides rest against the silo. A granary, a wood structure creating a separate room within the larger one, is located at the northeast corner of the hay mow. Above the hay mow floor is a lofted space, presumably to utilize the enormous space under the large roof. This hay loft is constructed around the central silo in a similar fashion to the hay mow floor, with joists for the floor attached directly to the concrete portion of the silo in a radiating pattern. The floor of the loft sits approximately sixteen feet off the hay mow floor and does not extend to the exterior wall in any location. Timber columns at the corners and around the platforms circumference support the wooden loft. The roof is also supported by these timber columns directly underneath the hip all the way around the centric barn. A set of original pulleys and tracks hang from the roof rafters at the hip to assist in the moving of bales around the interior. Another distinct feature of such a large barn is the presence of four chutes through which hay and other feed can be dropped from above directly to cows in stanchions in the lower level. The upper level hay mow is still used to store hay and feed for the farm.

Integrity

Changes to this building are limited to the milk house addition and the addition of ventilators, inserted into existing window openings. These changes occurred some time ago, and were adaptations to facilitate its continued use. Despite these changes, the overall integrity of the Lueder 13-Sided Barn remains high. The historic form of the multiple-sided barn, its location, and the use of modern building materials are still clearly evident. The barn demonstrates the structural qualities and agricultural uses of the centric barn in Wisconsin and has excellent integrity. The Rudolph Lueder 13-Sided Barn has been fortunate in consistently receiving maintenance and care from its owners who have taken pride in their property. The barn was one of the first properties landmarked in 1977 by the Sheboygan County Landmarks Ltd., (non-extant) nonprofit dedicated to identifying and preserving historic properties. In listing this resource, the owners hope to obtain tax credits and/or other incentives to maintain and restore their property.

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Lueder, Rudolph, 13-Sided Barn
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Narrative Statement of Significance

The Rudolph Lueder 13-Sided Barn is nominated to the National Register of Historic Places for its local significance under Criterion C in the area of Architecture as an excellent intact example of a centric barn. The barn has a high degree of integrity retaining its distinctive form, structural composition, construction, and materials, and is currently still used as a dairy barn. Intact examples of this barn type are rare and therefore significant to the history of agricultural architecture in Wisconsin especially in the context of vernacular round barn traditions. The period of significance corresponds with the year of construction in 1916.

Historic Context

Of 112 extant centric barns in Wisconsin, the Rudolph Lueder 13-Sided Barn is an excellent example of a centric barn and illustrates the importance of such barns to the period at the turn of the twentieth century. The Lueder Barn was constructed during the period of the success and expansion of dairy farming in Wisconsin, as well as the large influx of German immigrants during the nineteenth century. The history of Sheboygan County where the Lueder Barn is located exemplifies these trends.⁴ The barn was constructed by a first generation son of German immigrants for use on his successful dairy farm. The farm is owned by his descendants and continues to be used as a dairy farm; the 13-sided barn houses cows as it did originally.

Agricultural literature promoted centric barn design around the turn of the nineteenth century and were built in some number from Vermont to California. Simultaneously, the Wisconsin dairy industry was growing rapidly during the late-nineteenth century. Improved herds of dairy cattle were encouraged by Hoard's Dairyman, published in Fort Atkinson, Wisconsin, by research conducted at the University of Wisconsin Agricultural Experiment Stations, and by development at the University of Wisconsin in 1890 of the Babcock test that determines the amount of butterfat in milk.

Built to utilize space efficiently, round barns allowed for new farming technologies, including the silo. In centric barns, the silo was typically located in the center with cow stanchions and other equipment radiating outward. The inclusion of as many functions possible under one roof, such as mow, stable, milking stanchions, silo and granary added many conveniences to the farmer's chores.

The newest agricultural developments, often a round silo in the center, a ventilation system, including louvers or a cupola, and other conveniences such as hay track with pulley in the mow and a manure

⁴ Wisconsin Centric Barns Multiple Property Documentation, 2013.
On file at the Wisconsin Historical Society & the National Park Service.

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track were incorporated into centric barn design. Cows face the center of the circular aisle, another design efficiency that makes chores easier for the dairy farmer.

The motivation behind the development of octagonal and other polygonal shaped barns is increased efficiency; this encouraged the design of increasingly circular forms. The interior concentric formation of cow stanchions or horse stables meant a purely round form, and the extra, and sometimes awkward, spaces created at the obtuse interior angles were not necessarily used.⁵ Multi-sided variations of the octagonal model began to appear at the turn of the century with 10-, 12-, 14-sided barns appearing in Wisconsin.⁶ There are 15 identified multi-sided barns in Wisconsin and most of them do not follow prescribed models. The Lueder barn, for instance, is the only known extant 13-sided barn in the state. The multi-sided polygonal plans are not standardized in any way, each one being unique. The materials used in their construction also typically indicate early dates in their use of pre-industrial techniques like the use of vertical board siding, timber framing, and stone foundations instead of the cut lumber, stick-built and arched frames, concrete, brick, and tile materials of the true round barns of the twentieth century.⁷ This is clearly not the case regarding the Lueder 13-sided barn, which contradicts the typical multi-sided barn in its date of construction, size, complexity, and modern building materials and methods.

Architecture

Adolph Suhrke, along with a fourteen-man crew of carpenters and laborers, constructed the Lueder Barn over the course of two years, from 1915 to 1916. Most of the wood used in construction was obtained from oak, elm, and tamarack trees on the property. Boards and flooring were recycled from an existing dairy barn on the Lueder farm that was torn down simultaneous to the construction of the new 13-sided barn.⁸ A set of drawings and details was created for the large and complicated project, some which still survive and are in the care of the present owners, Dan and Janelle Irwin. In 1916, when the barn was completed, it incorporated a number of advanced twentieth-century building techniques including the incorporation of a conscious air circulation system that would naturally pull cool air in from the base and draw it up to ventilate out the large cupola at the top. Another environmental component of the design is the thick, double-brick wall with an integrated airspace. This detail serves to insulate the lower level of the barn, making it warmer in the winter and cooler in

⁵ Triumpho, Richard. *Round Barns of New York*. Syracuse, NY: Syracuse University Press, 2004, Page 48.

⁶ Perrin, Richard W.E. "Circle and Polygon in Wisconsin Architecture: Early Structures of Unconventional Design." *Wisconsin Magazine of History*, Vol. 47. Madison, WI: Wisconsin Historical Society, 1963.

⁷ Auer, Michael J. *The Preservation of Historic Barns*. National Park Service Preservation Briefs website. <www.nps.gov/history/hps/tps/briefs/brief20.htm> Accessed May 22, 2014.

⁸ "Round barn's rare example of architecture spans nearly a century."

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the summer. The geometry of the building is also unique, with twelve equal sides, all roughly matching one another, and a thirteenth side, longer than the others, for use as the main upper level barn door. The scale itself is notable, with a roof spanning 85 feet and towering over 68 feet high with a large silo enclosed. The barn could hold 48 cows in stanchions in the lower level and enough hay and feed for all of them simultaneously.⁹ Perhaps one of the most distinguishing features of the Lueder Barn is that it is one of the last centric barns in the state of Wisconsin that is still used for its original purpose as a dairy barn.¹⁰

The Rudolph Lueder 13-Sided Barn demonstrates local architectural significance. It is a fine and unique example of the polygonal barn type, maintains a high level of integrity, and incorporates rare attributes such as its scale, utilization of advanced building technologies, and odd-numbered sides that make it remarkable compared to other local round barns in Wisconsin. Its milk house addition does not detract from the design or appearance of the barn and reflects the barn's continued, and still active, use as a dairy barn.

Conclusion

The Rudolph Lueder 13-Sided Barn is nominated at the local level under National Register Criteria C in the area of architecture as a fine example of the centric barn form. Furthermore, the barn maintains exceptional historic integrity in the preservation of its site, context, high level of craft, original materials and form, high quality design, and its continued use as a dairy barn is rare.

Acknowledgements

The Fuldner Heritage Fund paid for the preparation of this nomination. This endowed fund, created through a generous donation by the Jeffris Family Foundation and administered by the Wisconsin Historical Society, supports the nomination of historically and architecturally significant rural and small town properties.

⁹ "Round barn's rare example of architecture spans nearly a century."

¹⁰ Conversation with the property owner, Janelle Irwin; May 27, 2014.

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Section 9 Page 1

Lueder, Rudolph, 13-Sided Barn
Town of Plymouth, Sheboygan County, WI

Major Bibliographical References

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Jost, Larry T. *The Round and Five-or-More Equal Sided Barns of Wisconsin*. Franklin, WI: L.T. Jost, 1982.

Perrin, Richard W.E. "Circle and Polygon in Wisconsin Architecture: Early Structures of Unconventional Design." *Wisconsin Magazine of History*, Vol. 47. Madison, WI: Wisconsin Historical Society, 1963.

"Round barn's rare example of architecture spans nearly a century." *Wisconsin State Farmer*, March 8, 2012.

Sheboygan County directories; 1878, 1887, 1891, 1901, 1914, 1920, 1930, 1936, 1951, and 1970.

Sheboygan County plat maps; 1872, 1887, 1899, 1913, 1919, 1925, 1931, 1940, 1945, and 1950.

Triumpho, Richard. *Round Barns of New York*. Syracuse, NY: Syracuse University Press, 2004.

Wyatt, Barbara, Ed. *Cultural Resource Management in Wisconsin, Vols. I, II and III*. Madison, WI: Historic Preservation Division, State Historical Society of Wisconsin, 1986.

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Section 10 Page 1

Lueder, Rudolph, 13-Sided Barn
Town of Plymouth, Sheboygan County, WI

Verbal Boundary Description

The property that is the subject of this nomination consists of 1 contributing resource sited on parcel 590-16214-500 located in Section 12, Town 15 North, Range 15 East, in the Town of Plymouth in Sheboygan County, Wisconsin. The specific boundary of the contributing resource within the property is defined by a boundary line beginning 28 feet directly centered from the north edge of the centric barn. From this point the boundary follows a path that travels 100 feet to the east, then 40 feet to the south, then 80 feet to the east again, then 140 feet to the south, then 300 feet to the west, then 60 feet to the north, from this point the line returns to the original location north of the centric barn.

The boundary of the Rudolph Lueder 13-Sided Barn as described above is clearly delineated on the accompanying sketch map. This boundary enclosed an area of approximately 1.00 acre.

Boundary Justification

The boundary encloses approximately 1.00 acre that immediately surround the nominated resource and was drawn to exclude other buildings on the property. The boundary is located within a 40-acre parcel that has existed intact as a part of a 180 acre farm since the construction of the nominated resource; however, the other resources on the property are of recent construction. The complete farmstead is not eligible for the National Register of Historic Places due to age and integrity issues related to the other buildings.

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Section photos Page 1

Lueder, Rudolph, 13-Sided Barn
Town of Plymouth, Sheboygan County, WI

Name of Property:	Rudolph Lueder 13-Sided Barn
City or Vicinity:	Town of Plymouth
County:	Sheboygan County
State:	Wisconsin
Name of Photographer:	Rowan Davidson
Date of Photographs:	May 27, 2014
Location of Original Digital Files:	Legacy Architecture, Inc., 605 Erie Avenue Sheboygan, Wisconsin 53081

Photo #1 (WI_SheboyganCounty_RudolphLueder13SidedBarn_0001)
Exterior, north façade

Photo #2 (WI_SheboyganCounty_RudolphLueder13SidedBarn_0002)
Exterior, barn door, north facade

Photo #3 (WI_SheboyganCounty_RudolphLueder13SidedBarn_0003)
Exterior, milk house, north facade

Photo #4 (WI_SheboyganCounty_RudolphLueder13SidedBarn_0004)
Exterior, windows and brick detail, northeast facade

Photo #5 (WI_SheboyganCounty_RudolphLueder13SidedBarn_0005)
Exterior, east facade

Photo #6 (WI_SheboyganCounty_RudolphLueder13SidedBarn_0006)
Exterior, southeast facade

Photo #7 (WI_SheboyganCounty_RudolphLueder13SidedBarn_0007)
Exterior, monitor and window detail, east facade

Photo #8 (WI_SheboyganCounty_RudolphLueder13SidedBarn_0008)
Exterior, wall detail, northwest facade

Photo #9 (WI_SheboyganCounty_RudolphLueder13SidedBarn_0009)
Interior, hay mow roof and silo, facing southeast

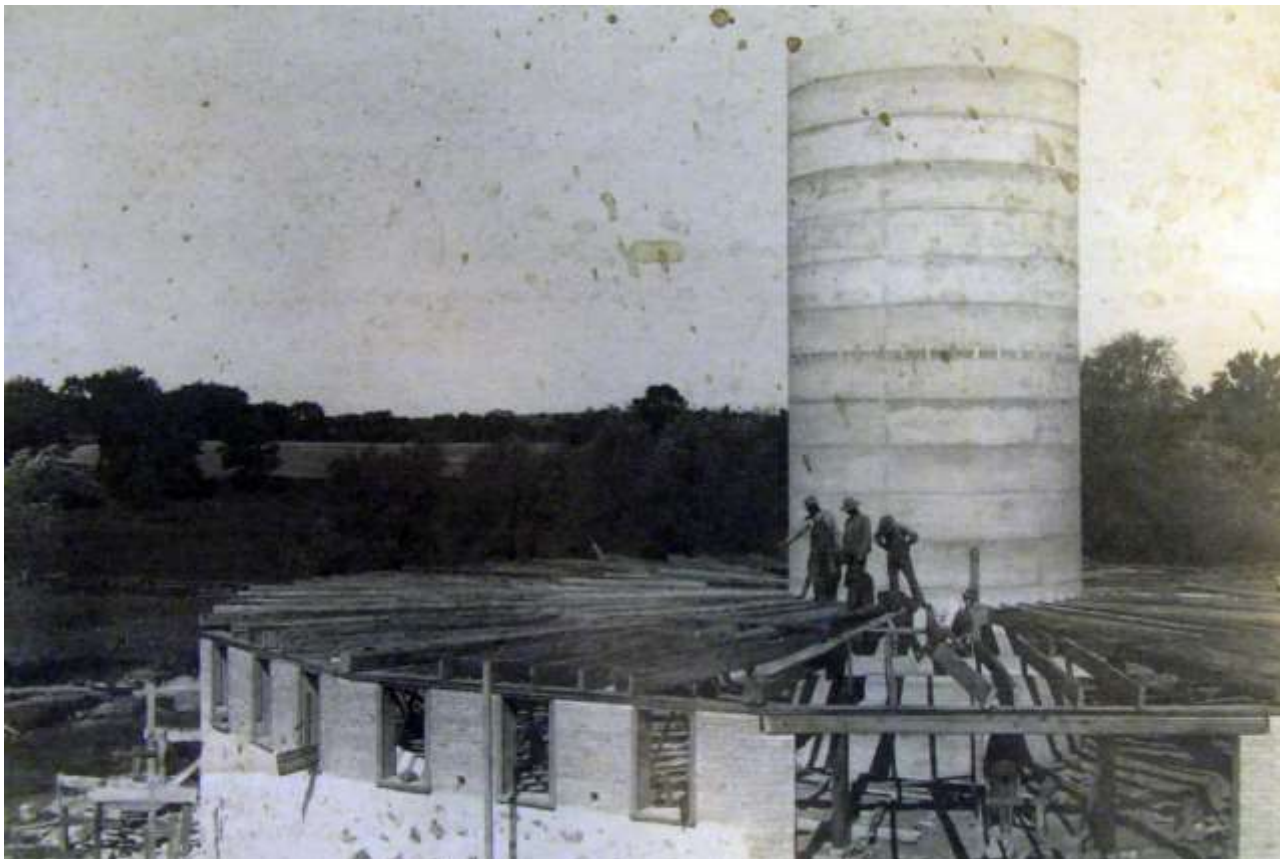
Photo #10 (WI_SheboyganCounty_RudolphLueder13SidedBarn_0010)
Interior, lower level cow stanchions, facing southwest

United States Department of the Interior
National Park Service

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Continuation Sheet

Section figures Page 1

Lueder, Rudolph, 13-Sided Barn
Town of Plymouth, Sheboygan County, WI



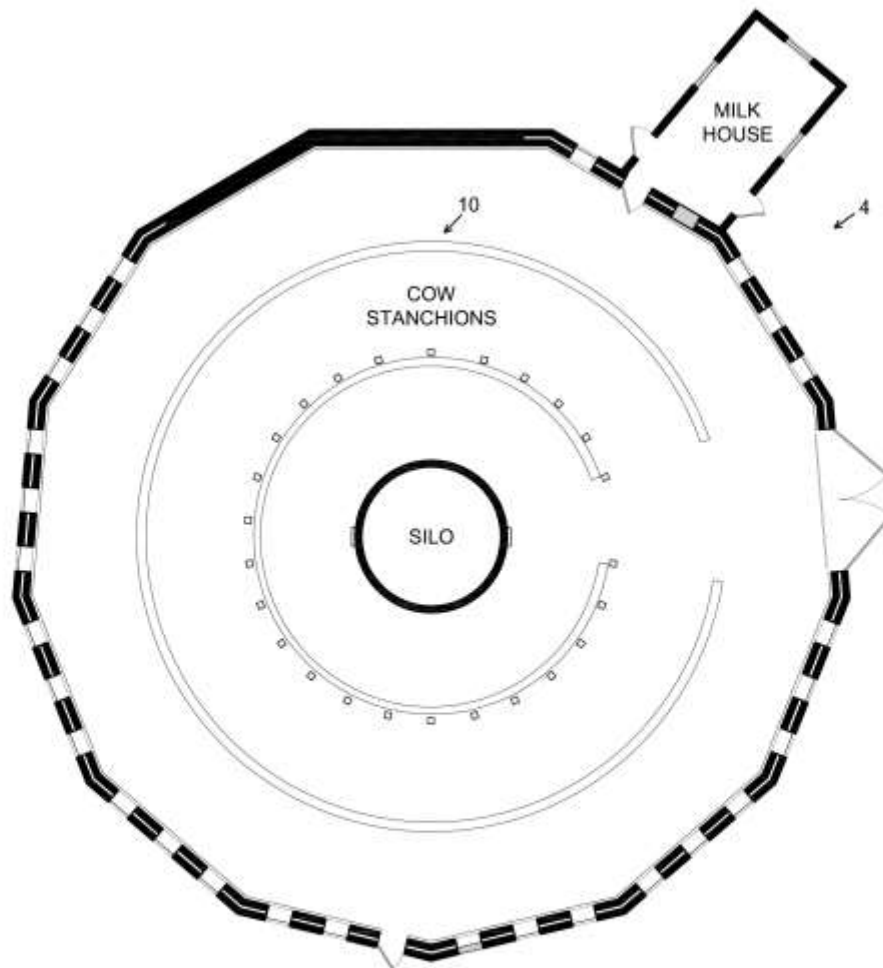
Photograph of the Rudolph Lueder 13-Sided Barn under construction from the east; circa 1915-1916.
Image courtesy of Daniel and Janelle Irwin.

United States Department of the Interior
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Continuation Sheet

Section sketch plan & photo key Page 1

Lueder, Rudolph, 13-Sided Barn
Town of Plymouth, Sheboygan County, WI



FIRST LEVEL PLAN

LEGEND

1 → PHOTO NUMBER & VANTAGE POINT

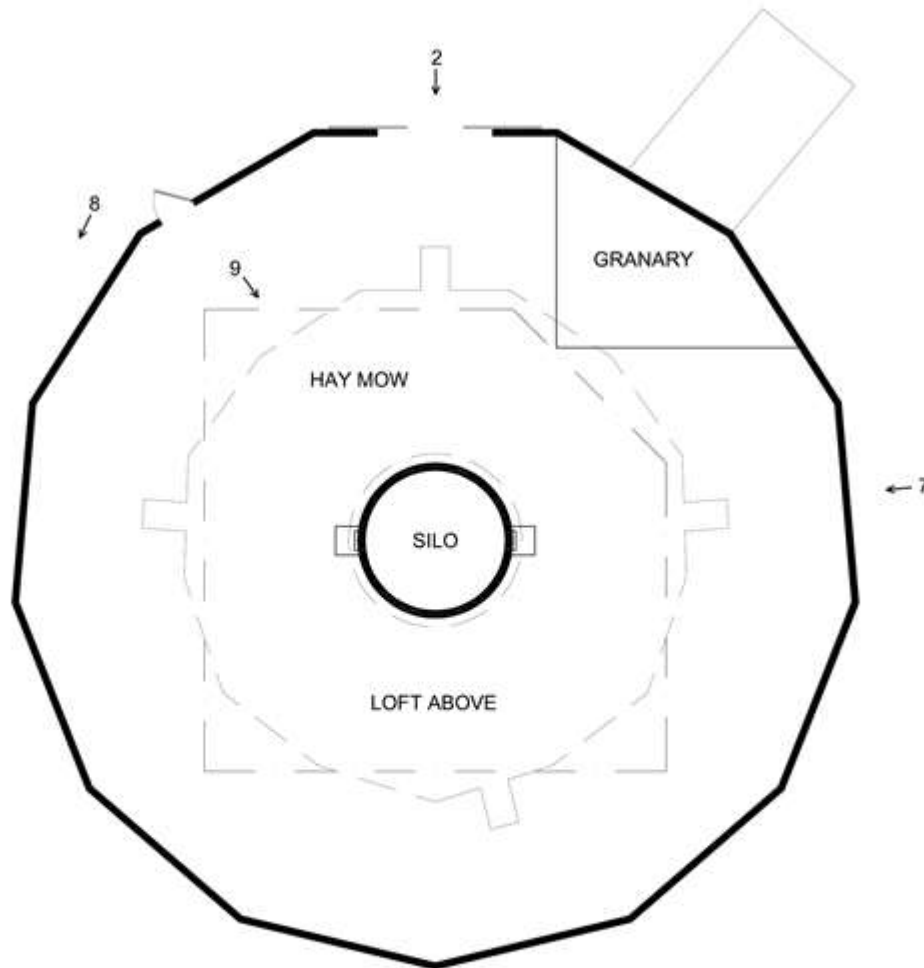


United States Department of the Interior
National Park Service

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Continuation Sheet

Section sketch plan & photo key Page 2

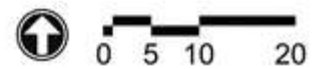
Lueder, Rudolph, 13-Sided Barn
Town of Plymouth, Sheboygan County, WI



SECOND LEVEL PLAN

LEGEND

1 → PHOTO NUMBER & VANTAGE POINT

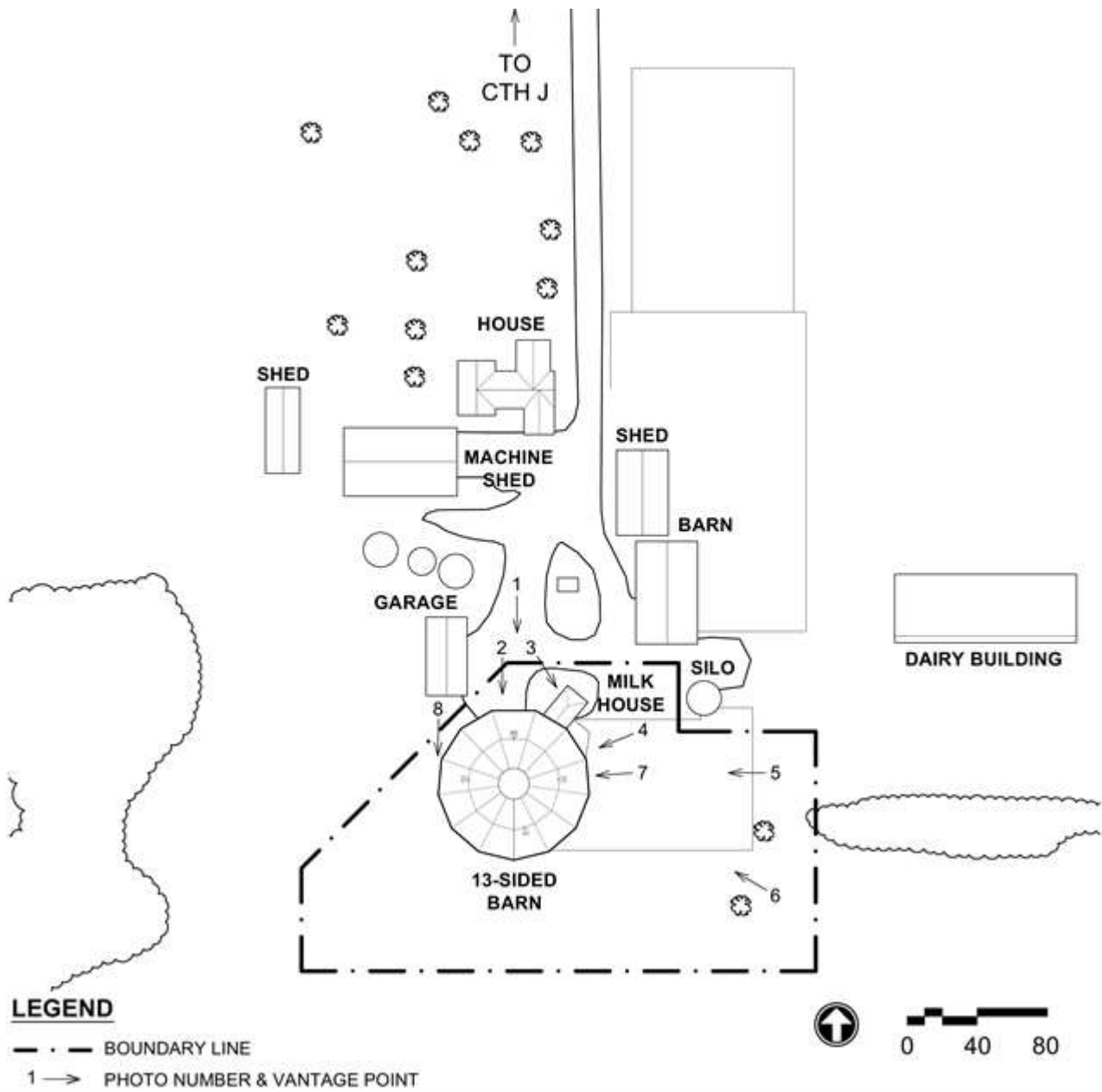


United States Department of the Interior
National Park Service

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Continuation Sheet

Section sketch map & photo key Page 1

Lueder, Rudolph, 13-Sided Barn
Town of Plymouth, Sheboygan County, WI

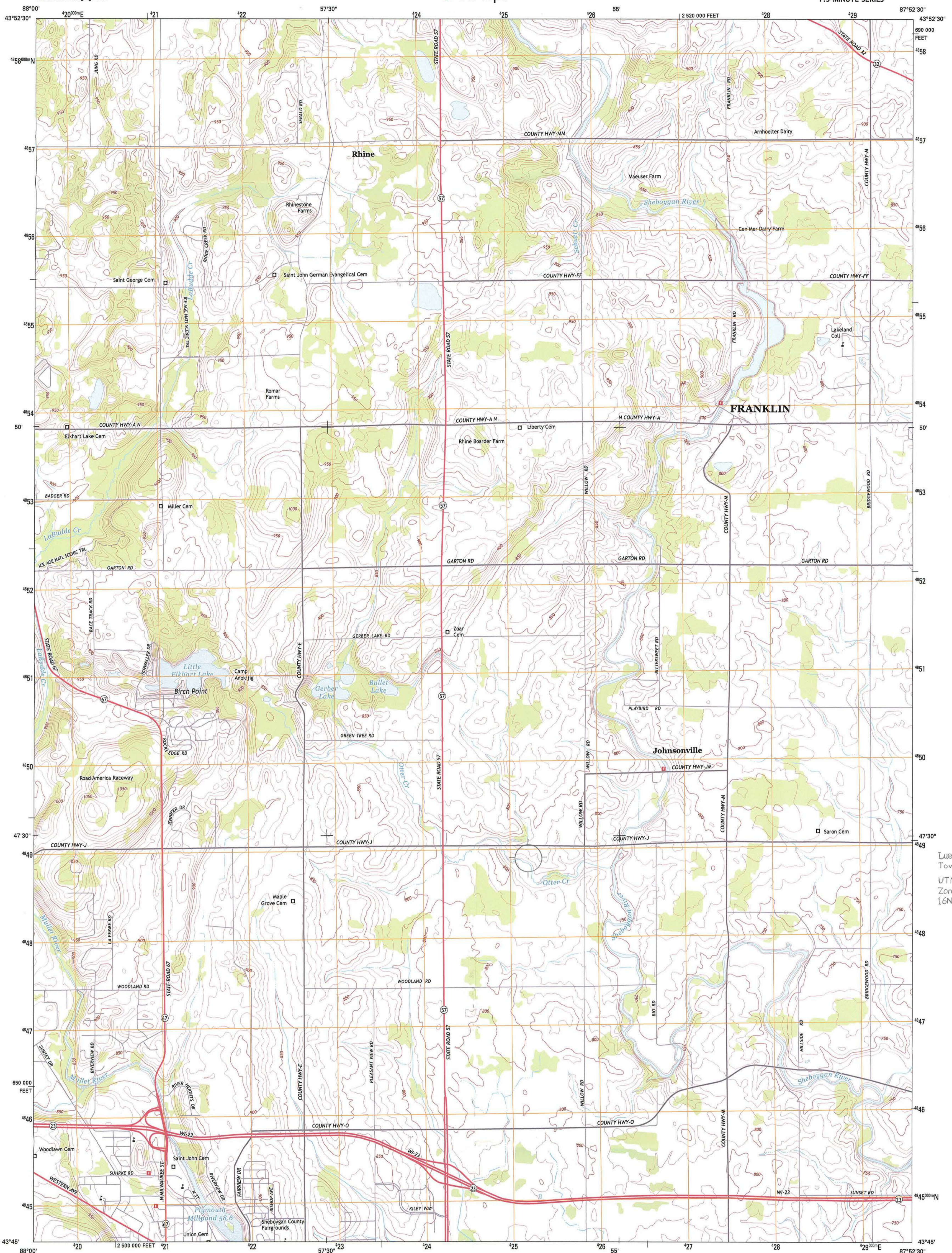




U.S. DEPARTMENT OF THE INTERIOR
U. S. GEOLOGICAL SURVEY



FRANKLIN QUADRANGLE
WISCONSIN-SHEBOYGAN CO.
7.5-MINUTE SERIES



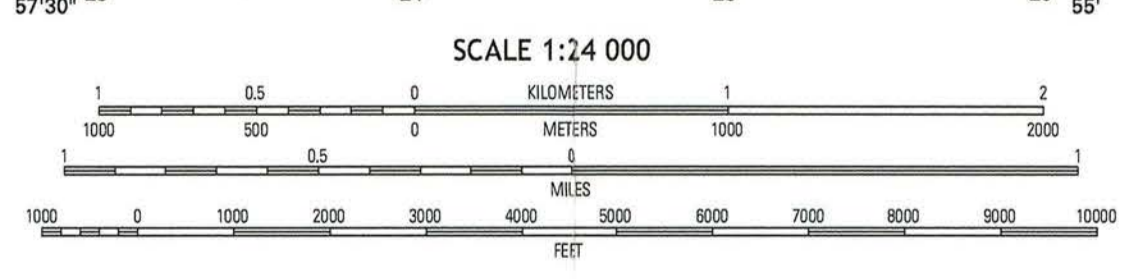
Lueder, Rudolph, 13-Sided Barn
Town of Plymouth, Sheboygan County, WI
UTM Reference:
Zone Easting Northing
16N 425222.7 4848861.2

Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84). Projection and
1:100,000-meter grid: Universal Transverse Mercator, Zone 16N
10 000-foot ticks: Wisconsin Coordinate System of 1983 (south
zone)

UTM GRID AND 2011 MAGNETIC NORTH
DECLINATION AT CENTER OF SHEET

37° 49' 41" N
68 MILES
0° 18' 12" W
12 MILES

U.S. National Grid
100,000-meters Square ID
DP
Grid Zone Designation
16N



ROAD CLASSIFICATION

Expressway Local Connector

Secondary Hwy Local Road

Ramp 4WD

Interstate Route US Route State Route

QUADRANGLE LOCATION

Kiel	School Hill	Cleveland West
Elkhart Lake	Pewaukee	Howards Grove
Cascade	Plymouth South	Sheboygan Falls

ADJOINING 7.5 QUADRANGLES

CONTOUR INTERVAL 10 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

This map was produced to conform with the
National Geospatial Program US Topo Product Standard, 2011.
A metadata file associated with this product is draft version 0.6.12

FRANKLIN, WI
2013





















UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES
EVALUATION/RETURN SHEET

REQUESTED ACTION: NOMINATION

PROPERTY Lueder, Rudolph, 13 Sided Barn
NAME:

MULTIPLE
NAME:

STATE & COUNTY: WISCONSIN, Sheboygan

DATE RECEIVED: 9/23/16 DATE OF PENDING LIST: 10/21/16
DATE OF 16TH DAY: 11/07/16 DATE OF 45TH DAY: 11/08/16
DATE OF WEEKLY LIST:

REFERENCE NUMBER: 16000768

REASONS FOR REVIEW:

APPEAL: N DATA PROBLEM: N LANDSCAPE: N LESS THAN 50 YEARS: N
OTHER: N PDIL: N PERIOD: N PROGRAM UNAPPROVED: N
REQUEST: N SAMPLE: N SLR DRAFT: N NATIONAL: N

COMMENT WAIVER: N

ACCEPT RETURN REJECT 11.7.16 DATE

ABSTRACT/SUMMARY COMMENTS:

Entered in
The National Register
of
Historic Places

RECOM./CRITERIA _____

REVIEWER _____ DISCIPLINE _____

TELEPHONE _____ DATE _____

DOCUMENTATION see attached comments Y/N see attached SLR Y/N

If a nomination is returned to the nominating authority, the nomination is no longer under consideration by the NPS.

GLENN GROTHMAN
6TH DISTRICT, WISCONSIN

COMMITTEE ON EDUCATION AND THE WORKFORCE

COMMITTEE ON THE BUDGET

COMMITTEE ON
OVERSIGHT AND GOVERNMENT REFORM

JOINT ECONOMIC COMMITTEE



UNITED STATES
HOUSE OF REPRESENTATIVES

501 CANNON BUILDING
WASHINGTON, DC 20515
(202) 225-2476

1020 SOUTH MAIN STREET
SUITE B
FOND DU LAC, WI 54935

GROTHMAN.HOUSE.GOV

August 17, 2015

Wisconsin Historic Preservation Review Board
c/o Peggy Veregin
Wisconsin Historical Society
816 State Street
Madison, WI 53706

Wisconsin Historic Preservation Review Board:

I am writing in support of the Lueder 13-sided barn nomination to the Wisconsin State Register of Historic Places and the National Register of Historic Places. The barn, located in Plymouth, is part of the Sixth Congressional District which I represent.

The Lueder 13-sided barn is a rare example of modern farming architecture from 1916. The barn was constructed using then modern techniques to improve farming efficiency and is still in use today as originally intended: housing dairy cattle. This structure provides visitors a unique look back to farming techniques and technology at the turn of the twentieth century. This barn bridges a small gap of Wisconsin's long history of agriculture and dairy farming.

Please give all due and fair consideration consistent with current federal law and agency regulations, keeping me apprised of your efforts and findings by contacting Jackie Trudell, District Director, at 1020 S. Main Street, Suite B, Fond du Lac, WI 54935 or by calling (920) 907-0624. Thank you for your consideration.

Sincerely,

A handwritten signature in cursive script that reads "Glenn Grothman".

Glenn Grothman
Member of Congress



WISCONSIN
HISTORICAL
SOCIETY



TO: Keeper
National Register of Historic Places

FROM: Peggy Veregin
National Register Coordinator

SUBJECT: National Register Nomination

The following materials are submitted on this Twenty-first day of September 2016, for the nomination of the Rudolph Lueder 13-Sided Barn to the National Register of Historic Places:

<u>1</u>	Original National Register of Historic Places Nomination Form
<u>1</u>	CD with NRHP Nomination form PDF
<u> </u>	Multiple Property Nomination form
<u>10</u>	Photograph(s)
<u>1</u>	CD with image files
<u>1</u>	Map(s)
<u>4</u>	Sketch map(s)/figures(s)/exhibit(s)
<u>1</u>	Piece(s) of correspondence
<u> </u>	Other:

COMMENTS:

<u> </u>	Please ensure that this nomination is reviewed
<u> </u>	This property has been certified under 36 CFR 67
<u> </u>	The enclosed owner objection(s) do or do not constitute a majority of property owners
<u> </u>	Other: