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# **THE AGRICULTURAL LANDSCAPE OF MICHIGAN**

An Historic Context for the Theme of Agriculture

*September 15, 2004*

*Submitted by:*

**MICHIGAN AGRICULTURAL HERITAGE PROJECT**

Michigan State University  
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## SUMMARY

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Ever since Michigan was settled by American and European families over the last two hundred years, it has ranked high among the states in the United States in agricultural production. Even today, the rural Michigan landscape is dominated by two of the most distinctive features associated with agriculture: farmsteads and open fields. Given the consequences associated with urban sprawl as well as the improved efficiency and changing technology impacting farming methods, many of the historic farmsteads in Michigan are in danger of being lost.<sup>1</sup> The purpose of this report is to provide the reader with enough information on Michigan's agricultural history and the evolution of the farmstead in order to enable the reader to begin evaluating individual farms for historic significance.

The history of the evolution of Michigan agriculture can be broken up into several periods, marked by beginning and end times (Chapter II). These are the Period of American Settlement of Michigan's Frontier (1815-1840s); the Period of Development of Commercial Agriculture (1840s-1865); the Period of Maturation of Michigan's Agricultural Economy (1865-1900); and the Emergence of a Modern Agricultural Economy (1900-1950). With each period, the relationship between the State's agricultural economy and that of the rest of the country becomes more interdependent.

The understanding of Michigan's agricultural history and an analysis of the literature has revealed that Michigan's farms—both today and in the past—can be categorized by the kind of operations and products a farm produces (Chapter III). The resulting categories are called farming systems. The systems identified as being present in Michigan include: dairy farming, grain (cash crop) farming, fruit farming, poultry farming, general livestock farming, specialty (truck) farming, forage farming, and mixed (general) farming. Each of these systems has a separate history, evolving from a set of unique economic, technologic and other forces, and requiring its own set of strategies and circumstances to succeed.

The farm systems are also associated with specific historic resources and/or a combination of resources, termed resource assemblages (Chapters IV and V). Examples of historic resources typically present on a farm include: farmhouse, barns, outbuildings, and landscape features (*e. g.*, fields, lanes, hedgerows, landmark trees, wood lots, and gardens). The barns and outbuildings serve one or more of three purposes: to provide shelter for animals (*e. g.*, horse barns, chicken coops, and pig houses), to provide a place for the processing and storage of food (*e. g.*, hay barn, milk house, silo, ice house, sugar house, and smoke house), and to provide storage space for equipment (*e. g.*, garage, pump house, wagon shed, machine shop, and pole barn). Some of the resources and resource assemblages are unique and diagnostic of a specific farm system. The historic resources present on the landscape today provide a direct link to the farming activities and events of the past. It is through their preservation that we maintain that connection,

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<sup>1</sup>“The number of farms in Michigan fell from over 203,261 in 1900 to just 52,000 in 1997, a 74.4% drop” (from *Michigan Agricultural Statistics, 1996-1997*, no page number given).

and through their presence that we are able to evaluate whether or not a farm property has historic significance.

Finally, thirty-two farmsteads located around the state were surveyed to document the farm systems employed and to identify the accompanying historic resources and possible resource assemblages (Chapter VI). In addition, other variables used to classify farms, and presented in the literature, were evaluated. The results of the survey indicate that some variables have a greater impact on the landscape today than do others. The variables are, in order of increasing influence: date of the farm establishment, ethnic heritage of the original owner, geographic location of the farm, architecture of the buildings, period of significance represented by the buildings, and farm system(s) employed on the farm. The latter has the largest impact on the appearance of a farm.

The combination of the more significant variables enables the creation of classification categories (Chapter VII). A total of seven categories of farm types identified are: early 20<sup>th</sup> century farms, mid-20<sup>th</sup> century farms, farms representing a century of time, farms that exhibit two or more farming systems; farms that have architectural significance, “Modern” farms, and “Remnant” farms. In conjunction with the farm systems, period of significance, and historic integrity, these categories enable the reader to make the link between what is seen on the landscape today with what has occurred in the past, and also to make an evaluation as to whether or not a property possesses historic significance.

Although the ethnic heritage of the original owner seems to have played a more minor role in the appearance of the farmstead, this may in part be due to the fact that relatively little about ethnic-related features found on Michigan farms has been documented in the literature and is therefore known. To assist with the identification of any features potentially associated with a specific ethnic heritage, this chapter seeks to document some of that information. It describes the larger ethnic settlements known to have existed in Michigan during the time that agriculture was the predominant way of life: the Germans, the Canadians, the Poles, the Dutch, the Finns, and the Scandinavians (Swedes, Norwegians, and Danes). For each ethnic group, the chapter has a discussion of architectural and other features associated with that group that have been identified in the states surrounding Michigan and Ontario, as well as in the source area from where many Michigan settlers originated: New York, New England, and Europe. It is hoped that this information will assist those researching farm property histories to identify significant ethnic features in the field.

The Appendices of this report are filled with reference material. Survey data are included in Appendix A. Appendix B contains information helpful when evaluating agriculture properties for historic significance using National Register criteria. Appendix C discusses the less common architectural features and construction techniques that can be found on buildings in rural Michigan. These features are not necessarily associated with agriculture, but because they can be found on an older farmstead, the information will be helpful when documenting and interpreting a farmstead’s history and potential significance. Finally, two bibliographies are included in Appendix D. The first

bibliography cites the references listed in this report. The second bibliography is more general in nature, and includes reference material organized by subject.

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## CHAPTER I.

### INTRODUCTION

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Agriculture has played a dominant role in the evolution and development of today's cultural landscape in Michigan. This is particularly true for the period of the last two hundred years, when pioneering settlers from the East and Europe emigrated in large numbers, and technology evolved to make it possible for almost everyone to own and/or operate a farm. As a result, Michigan has historically ranked high in production of numerous crops and livestock when compared to that of the other states.

Collectively, farms have contributed significantly to the “broad patterns of our history” (National Register Bulletin #15 1990, revised 1995) simply because 1) farming is an activity developed by humans in response to a basic need; 2) farming was pursued by a high percentage of Michigan residents during the time that Michigan evolved into its current, modern form; and 3) farming has had a major influence on the appearance of the Michigan landscape today. As stated by Wayne E. Kiefer, “The past and the present coexist in the farmsteads, and nearly a century of human activities can be interpreted from many of them” (1972: 490). The number of farms and accompanying agricultural landscape in Michigan is now shrinking due to urban sprawl and improved operational efficiencies. Given the extensive nature of agriculture in the state, one should begin with the premise that all farms have potential historic significance. Only those farms that have clearly lost too much integrity to depict their contribution to the greater story of agriculture should be eliminated from consideration.

How does one evaluate a farmstead for historical significance? This report seeks to place the story of Michigan’s agricultural heritage into context—discussing and comparing sub-themes (farming systems), periods of significance, and geographic regions. The report is designed to serve as a guide and provide background information on Michigan agriculture for planners, historic preservationists, historians, and others evaluating a farmstead’s potential historical significance.

The scope of this topic is very large. In order to organize it in a useful manner, members of the Michigan Agricultural Heritage Project (MAHP) at Michigan State University have held numerous discussions to determine how best to categorize farms and their history. Others have also described classification schemes, based on variables such as technology, distance to market, building construction methods, and geographic area (which in turn is influenced by climate and soil types; Stadtfeld 1972; Noble 1984ab; Dandekar and Schoof 1988; Dandekar *et al.* 1992; Noble and Wilhelm 1995; and Hanel-Gerdenich 1997). Examination of the literature on agriculture, Michigan history, and Federal and State agriculture census data, all suggest that a useful way to categorize Michigan’s farmsteads is to understand the types of farming conducted and the associated historic resources located on those farms, both today and in the past. Therefore, this report is organized in a similar manner: a brief history of Michigan agriculture is presented in Chapter II; the types of farming are called farm systems, and these are outlined in Chapter III; and Chapters IV and V cover the kinds of historic resources that



are found on Michigan's agricultural landscape today, and that may be specifically associated with a particular farm system.

In addition to a review of the literature, research for this project was also conducted in the field (Chapter VI). Other, minor variables that contribute to the appearance of the agricultural landscape as seen today are also discussed. The combination of identified farm systems, field observations of historic resources, and archival information obtained for each surveyed farm has resulted in a classification scheme for Michigan farms that relies heavily on the relationship between what is being produced on a farm and the resulting historic resources present. This is summarized in Chapter VII.

Although the ethnic heritage of the original owner seems to have played a more minor role in the appearance of the farmstead, relatively little about ethnic-related features found on Michigan farms has been documented in the literature. Additional research and discoveries in the field may suggest unique characteristics that are currently unidentified. A review of the literature on characteristics associated with ethnic groups in the surrounding states suggests ethnic "types" of houses, barns, and other outbuildings for which to look when conducting a survey. A discussion of these can be found in Chapter VIII. Identifying the combination of ethnic building "types" along with the area's history could readily add to an area's historic significance.

Included at the end of this report is field data from surveyed farms to provide examples of surveys and the types of farms found on the Michigan landscape; criteria for determining the agricultural historic significance of an individual farm; a discussion on the construction technology that can be found in the state's rural regions; and an extensive bibliography providing additional resources for reading and reference.

## CHAPTER II.

### THE HISTORY OF AGRICULTURE IN MICHIGAN

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#### **Introduction**

Agriculture has played a dominant role in the evolution and development of today's cultural landscape in Michigan. The diversity one observes in the types of farming and the composition of farms is the result of the settlement of the state by agriculturists in the nineteenth century and their adaptations to the conditions they encountered in the region. These adaptations reflected the need to establish and sustain themselves in the new country, as well as the response to changes associated with the development of a frontier economy and its expansion to the growth of commercial agricultural markets and the state's incorporation into the growing national economy. Michigan's farmers also responded to changes in markets and technology and continually altered their strategies to meet new conditions. The agricultural landscape of Michigan emerged as farmers carried out various agricultural strategies over time across the state. Because of geographic and climatic constraints, nearly all of the state's agricultural production has been confined largely to southern half of the Lower Peninsula and the western shore of Lake Michigan. Our examination of its history will focus on the development of these areas from 1815, when American settlement began to penetrate the interior of Michigan, to the mid-twentieth century, by which time Michigan's farms were rapidly becoming the mechanized operations that characterize modern agriculture.

#### **American Settlement and Frontier Agriculture - 1815-1840s**

Michigan's agricultural landscape came into being as the result of pioneer colonization in the first half of the nineteenth century. This was the final stage in a process that began in the seventeenth century with the establishment of a European presence in eastern North America and its extension into the region of the Great Lakes. A growing rivalry between Great Britain and France, each seeking to exploit the region's furs and other resources, led to an extended political contest that transformed and displaced Michigan's native peoples and established European claims to their lands (Tanner 1987; White 1991). When Michigan passed into the political domain of the United States following the American Revolution, agriculture was limited to that practiced by Indian societies as part of their mixed economies, and to the French farms along the eastern lake shore established to supply posts on the Great Lakes. In both cases, agriculture was carried out for subsistence and limited regional distribution. An absence of larger markets restricted both the size of farms and the variety of produced raised. In fact, agriculture prior to the onset of American settlement in 1815 was driven by motives that contrast markedly with the commercial designs that drove subsequent American settlement. During this time, agriculture contributed very little to the development of the state's economy (Lewis 2002: 14-17).

American settlement began in earnest following the War of 1812 and over the next five decades advanced systematically over the arable portion of the Lower Peninsula. Unlike the earlier European presence, American colonization involved occupation of lands for the purpose of conducting agriculture. Residents of the Eastern Seaboard states, faced with diminishing opportunities for farming, and Europeans seeking wider opportunities in the new World, emigrated to Michigan and other newly-opened western territories to create farms on large tracts of land offered by the federal government. The order in which they occupied Lower Michigan was determined largely by the order in which the government acquired land by treaty, carried out surveys, and offered it for sale. Other variables, such as perceptions of environment, access, the response of native peoples, and economic factors affecting land costs and availability, also directed the course of settlement. As a result, settlement spread rapidly, advancing sequentially first westward across the southern portion of the state into the St. Joseph and Kalamazoo valleys, then north into the lower Grand Valley, through Oakland County into the upper Saginaw drainage, later into the central timberlands of the upper Grand, and finally northward into the lower Saginaw valley, the Thumb, and the lands north of Grand River. By the 1850s, American farmers had occupied much of Michigan's Lower Peninsula (Lewis 2002: 185-193).

The nature of agriculture in frontier Michigan was shaped by restraints imposed by the colonial economy. Chief among these was an absence of markets and the accompanying lack of incentive to enlarge production and concentrate it around commercial crops. As occupants of a new country characterized by dispersed settlement of low density and an inadequate transportation system, Michigan's initial settlers faced the task of creating a production base amidst isolation and a dearth of outlets for their crops. Following the precedent of immigrants to other frontier regions, they were first concerned with subsistence. They gathered wild foods, such as honey, maple syrup, and berries, traded with aboriginal residents for meat and maple sugar, planted crops for home consumption, and traded products of land-clearing, such as shingles and potash, for food and finished products. Indeed, the market created by new immigrants became a major outlet for crops and other goods produced by earlier settlers. Poor transportation limited the distance over which produce could travel and restricted the range of trade. Only compact items, such as distilled alcohol, or livestock, that could be driven to market, became items of export in frontier Michigan. Most of what immigrant farmers produced was consumed within the region (Lewis 2002: 239).

The regional economy of frontier Michigan offered an effective strategy of diversified production and regional trade that established a diversified production base that allowed immigrant households to achieve a communal self-sufficiency. This economic arrangement did not attempt to maximize return on investment, but rather gave farmers security by ensuring them a reliable supply of food at fixed production costs (Kulikoff 1992: 18-24). It permitted immigrants to persist and establish farms while awaiting the development of conditions providing access to commercial markets. This regional economy involved the exchange of a wide variety of farm products, including corn, wheat, potatoes, turnips, squash, gourds, pumpkins, and melons, as well as livestock and farm-made finished items such as cloth, hides, implements, tools, and even furniture.

Consequently, farming was general and restricted in scale. Because their owners had little to invest and possessed limited credit, Michigan's frontier farms remained small and unspecialized. Only when conditions changed did they abandon this generalized strategy for one directed toward increasing returns.

### **The Development of Commercial Agriculture - 1840s-1865**

An increased national demand for western produce in the 1840s provided the impetus for a transformation of Michigan's agricultural economy. Expanding market demand encouraged a series of changes in transportation, the organization of marketing, and the nature of agricultural technology that increased the scale and organization of production, processing, and shipping that forever altered the nature of the frontier landscape. Improvements in overland transportation spearheaded this process. Although the completion of the Erie Canal opened a trading link between the port of New York and the Great Lakes, it did not provide access to Michigan's interior and allowed only seasonal passage. The construction of railroads finally permitted producers in Michigan's interior to ship crops to the outside world. Railroads could be built over uneven terrain, connecting points directly, and could be operated year round. They permitted reliable scheduling and efficient operation that promoted economic integration on a large scale (Stover 1961: 10). Begun in the late 1830s, Michigan's rail network expanded in the following decade and by 1852 linked interior settlements with eastern markets as well as the western entrepôt of Chicago (Dunbar 1969: 1-6; Meints 1992: 64-65).

Technological advances in transportation precipitated structural changes in the organization of production and trade. Railroads altered the frontier economy by lowering the costs of transportation and reducing the time it took to reach eastern markets. The potential for increasing grain traffic encouraged the erection of elevators in the 1840s. Erected at major western ports, such as Detroit, elevators facilitated the storage and shipment of produce and provided a reserve on which western farmers, merchants, and businessmen could draw credit (Clark 1966: 122; Cronon 1991: 111). Expanded credit resulted in the rapid growth of retail business in Michigan and provided farmers with the capital to enlarge and diversify their operations to provide produce for eastern and growing urban markets in the west. With the promise of greater profits from increased sales and a reliable market, farmers enlarged their production by expanding their croplands. They also adopted new machinery, such as the steel plow, mowers, reapers, and threshers, that helped overcome the chronic labor shortage on the frontier (Quaintance 1904: 29). Employment of new techniques further enhanced the efficiency of farming. These included draining excessively wet lands to make them arable, using of fertilizer to improve productivity, and the introducing improved varieties of plants and livestock to increase the volume and quality of produce. By the 1850s, commercial agriculture began to expand rapidly in southern Michigan, and the physical infrastructure it created forever altered the frontier landscape (Lewis 2002: 301).

The growth of commercial production in Michigan occurred at a time of great change in American agriculture. The agricultural improvement movement, begun in Great Britain during the previous century, introduced new varieties of plants and animals and

developed innovative techniques of farming. Promoted by government-sponsored research and private organizations, improvements were disseminated via published literature, fairs, and formal training. In Michigan, the state agricultural society and its counterparts at the county level promoted improvement and the opening of Michigan Agricultural College in 1857 emphasized the state's central role in promoting scientific agricultural research and disseminating its results through education (Kuhn 1955: 71-73; Gates 1960: 338-344; Lewis 2002: 254-257). Demands for produce arising from the Civil War promoted the further growth of agriculture in Michigan, and provided the capital to increase its rapid mechanization and overcome the wartime loss of farm labor (Marks 1965). In addition, the capital amassed by wartime entrepreneurs helped finance the completion of the state's rail network and other internal improvements in the postwar period. All of these changes revolutionized agriculture in Michigan and gave rise to specialized production that took advantage of the state's emerging role in the national economy (Dunbar 1969: 96-97).

Several crops rose to prominence in the middle part of the century. Corn, raised for internal consumption or distillation for alcohol during the frontier period, found a growing market as a feed grain. Wheat, always the most valuable grain, continued to dominate farm production; however, other cash crops found markets as well. These included hay, which was raised increasingly as a cash crop for sale to dairy and sheep farmers as well as to urban users. Potatoes also rose in popularity as an export crop and came to dominate production in some areas, such as St. Joseph County. Apples had also become an export crop by 1850. The ameliorating effect of Lake Michigan on the climate of the state's western shore encouraged farmers to specialize in orchard crops in western Michigan. Largely limited to peaches before the Civil War, fruit growing expanded in the second half of the nineteenth century as farmers followed the favorable climate northward to create a fruit belt along the lakeshore. Dairying emerged as an important facet of agriculture with the rise of urban markets and the introduction of improved breeds of cattle. Wool production in Michigan began with the introduction of new breeds of sheep during the 1830s and provided an alternative staple to grain as the state's farmers entered commercial markets (U. S. Agriculture Census 1860: lxxxv; Bidwell and Falconer 1941: 221, 406-407; Sewell 1960: 369; Lewis 2002: 250-252).

### **Michigan's Agricultural Economy Matures - 1865-1900**

Agriculture in the United States expanded dramatically after the Civil War, as witnessed by a growing number of farms, more land in crop production, higher yields per acre, a greater number of agricultural workers, and an increasing reliance on machines and equipment. As a result, the production of commercial crops such as wheat, corn, cotton, and barley increased dramatically, as did the number of livestock raised on farms. Despite the uncertainties created by limited markets, an unregulated economy, and abuse by powerful transportation monopolies, farmers increased the efficiency of production and the size of their salable surplus through regional specialization (Cochrane 1979: 94-96). All these factors affected the direction of postwar agriculture in Michigan.

The last quarter of the nineteenth century witnessed dramatic growth in the development of commercial agriculture in Michigan. The state's farmers introduced new crops and technologies, including the introduction of steam power, to expand production for national markets. Aided by the research of agricultural specialists at Michigan Agricultural College, they applied scientific research to improve cropping systems, farm placement, animal care and feeding, and crop specialization to remain competitive with other emerging farming areas in the United States. By continuing to grow and adapt to changing conditions, commercial agriculture prospered alongside lumbering, mining, manufacturing and other expanding industries. Michigan matured as a farming region during this period and the volume and variety of its produce made it a major supplier of agricultural commodities in the United States.

Technological innovations further increased the productivity of farming in Michigan and other states in the Midwest. New devices and machines continued to substitute animal power for human labor. Later steam-powered tractors applied another source of energy to agricultural production. The last half of the nineteenth century saw the introduction of the riding plow, spring tooth harrow, seed drill, row crop cultivators, forage mowers, twine binders, threshers, and large grain combines, the greater efficiency of which permitted expanded production (Cochrane 1979: 89-91).

The development of extensive farming in the newly-opened western states precipitated competition and changes in Michigan's agriculture. Faced with declining profits from wheat, farmers explored other options for commercial crops. Some of these were new crops, introduced with the help of the Michigan Agricultural Experiment Station that was created by the Hatch Act in 1887. One of the most successful new crops was sugar beets, intended as a domestic source of sugar. Robert Kedzie of Michigan Agricultural College successfully produced beet seeds that were avidly adopted by farmers in the Saginaw Valley and Thumb regions of the state (Fuller 1939: 480). These areas were heavily populated by German immigrants, who were probably familiar with beet-growing, and the state successfully attracted additional settlers to this region. State bounties also helped establish the factories necessary to process this crop.

The postwar period also witnessed the growth of dried bean production. The value of dried beans as a commercial crop derived from their expanded use as a staple during the Civil War. Capable of being stored and transported easily, beans found a wider market in the late nineteenth century and Michigan bean production, concentrated in the southeastern corner of the state, allowed it to become the leading producer in the United States in 1899.

Fruit production in Michigan continued to increase as orchards expanded northward along the temperate climatic zone of the western shore. In addition to apples, growers harvested peaches, pears, apricots, and cherries. They also relied more and more on pesticides after 1900. Increasing demand from state and regional urban markets led to the rise of blueberry, raspberry, blackberry, strawberry, and cranberry production and encouraged experimentation with grapes (Haswell and Alanen 1994).

Finally, dairying emerged as an important commercial farm activity following the development of innovations that permitted the rapid separation of cream for making cheese and butter. The Babcock tester, which measured butterfat content, allowed milk quality to be determined consistently. More efficient production and accurate grading of dairy products, together with the availability of refrigerated transportation, provided the impetus for Michigan's dairy industry in the late nineteenth century and its growth gave rise to several distinctive architectural additions to the rural landscape. In order to accommodate dairy herds and activities, barns increased in size and took on new forms. In addition, dairy farmers adopted the silo to store the green crops necessary to keep milk cows producing longer. The demand for both fruit and dairy products was driven by the growth of urban markets in cities in Michigan and adjacent states (Shannon 1945).

With the growth of logging and mining in northern Lower Michigan and the Upper Peninsula after 1870, farming also spread northward to provide foodstuffs and supplies to those engaged in this industry. Intimately tied to the logging camps and settlements it served, agriculture in the north was always commercial in nature, but directed toward a geographically-limited market. Farmers specialized in cold resistant crops suited to the region's poor, sandy soils. Hay and potatoes became the staples, although after 1900 alfalfa, rye, oats, and peas were also produced from seed developed at Michigan Agricultural College for this climate. Northern farmers also raised livestock to provide milk, cheese, and meat to area residents. Agriculture grew with the expansion of logging in northern Michigan, but with its decline after 1910, the market for produce collapsed. Without the stable demand provided by this industry, farmers could no longer risk producing crops in a marginal environment and most abandoned the region. Agriculture in northern Michigan survived only in enclaves largely producing specialized crops such as hay, oats, and potatoes (Hill 1930; Chase 1936; Dunbar 1969; Langhorne 1988: 31-34).

### **The Emergence of a Modern Agricultural Economy - 1900-1950**

In the first half of the twentieth century, Michigan's agriculture underwent changes that reflected larger economic trends in the United States. Rising farm prices in the period before 1920, coupled with an increasingly larger government role in the form of promoting advances in agricultural technology and regulating prices, markets, and credit, insured the continued success of agriculture, but also shaped its course. Increasingly competitive markets for agricultural commodities encouraged a trend toward larger farming operations and a greater reliance on mechanization. This process centered on the adoption of equipment powered by the internal combustion engine. The tractor, the motor truck, and other powered equipment replaced animal power, introduced efficiencies that eliminated many difficult tasks and reduced farm labor needs, and increased farm productivity. Later, the availability of electricity to power processing machinery further expanded the role of mechanization of farming. The costs associated with these trends made it increasingly more difficult for smaller farms to compete and precipitated a decline in the number of farms in Michigan. As farms increased in size, they incorporated smaller, less-successful ones whose operation was becoming less profitable. More efficient farm production also required fewer laborers and further

reduced the size of the farm population (Cochrane 1979: 185-186). Increasing industrialization in Michigan's cities, and particularly the rise of automobile-making and related industries, created jobs that absorbed many released from farming.

The course of agriculture during this period involved the increasing participation of government in two crucial areas. First, improvement in agricultural technology, long focused on tools and machines, now shifted in the direction of biology. Scientists at the U. S. Department of Agriculture and state agricultural colleges studied soils, plant genetics, and plant diseases, in order to develop new fertilizers, more resistant crop varieties capable of yielding greater returns, and cures to ensure greater survival rates and enhanced yields. Michigan Agricultural College played a major role in developing the disciplinary research base necessary for the technological advances that revolutionized agriculture after 1920. The second influence involved government intervention to insure farmers' financial stability. Federal legislation to support prices for farm products appeared during the depression of the 1930s. Long sought by farmers, this assistance kept prices high by controlling production and managing the supply of farm products. Acquiring credit became increasingly important to farm operations in the twentieth century and federal legislation, such as the Farm Credit Act established programs and lending agencies to meet the needs of commercial producers (Cochrane 1979: 202, 289-291).

Michigan's agriculture during this time focused around several major cash crops, the most valuable of which were hay, oats, corn, wheat, beans, fruit, and dairy products, as well as many minor crops such as sugar beets, truck crops, and cereal grains (Hill, Riddell and Elliott 1930). In order to maximize yields, farmers concentrated their efforts on the production of crops best suited for the geographical locations in which they resided. As a result, a number of identifiable agricultural regions had emerged by 1930. In general, the most intensive agriculture remained concentrated in southern Lower Michigan. Farmers raising corn, small grains and livestock occupied the southernmost area, with dairying and truck crops dominating the region around Detroit. Dairy farming and mixed crops continued across the central portion of the state, adjacent to its largest urban centers, with sugar beets and beans becoming dominant in the Saginaw Valley. Fruit-growing occupied the western shore adjacent to Lake Michigan. Agriculture in northern Lower Michigan, the Thumb region, and the Upper Peninsula was devoted largely to more cold-tolerant crops such as potatoes, and to less intensive agricultural activities such as raising hay and forage, cattle, and forestry (Hill 1930). Although the number of farms declined significantly in subsequent years, environmental constraints and market demand had by the 1930s established a distribution of farming types that came to characterize the spatial arrangement of agriculture in twentieth century Michigan. This patterning has become the basis for the state's present agricultural landscape.



## CHAPTER III.

# FARMING SYSTEMS IN MICHIGAN: CONCEPTUALIZING HISTORICAL AGRICULTURAL LANDSCAPES

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### Introduction

The purpose of this chapter is to familiarize readers with the concept of “farming systems,” which is used here as the primary unit of historical analysis when assessing rural properties for historic significance. The emphasis is on a practical rather than theoretical understanding of farm systems. Identifying what “farming systems” have been employed over time helps map the evolution of working farms and thus provides a measure of the significance and integrity of buildings and landscape features that may have been converted or altered to meet new imperatives.

The geographical distribution of commercial agricultural production in Michigan provides a starting point from which to investigate the diversity of the state’s farms and significance. Recognizing agricultural regions has allowed researchers to identify spatial variation in the occurrence of general farming strategies. Although such regions are useful for describing and analyzing agriculture at the State level, their scale is too broad to address the variation found among individual farms. Within each region farmers might choose from several strategies to carry out particular agricultural operations on their farms. The significance of each farm, and its material contents, derives from the manner in which it reflects the historically important strategies of agriculture. The combinations of strategies that farmers employed on individual farms are the key to evaluating the farm’s significance. These combinations are expressed as farming systems. The systems serve as the foundation for delineating agricultural sub-contexts that identify the material manifestations of farming strategies, such as of buildings, yards, and other landscape features. These sub-contexts, in turn, provide a basis for evaluating a farm’s significance.

### The Concept of Farming Systems

Agricultural landscapes defy simple classification because, by definition, farming is an activity that changes over time in response to economic, environmental, and human factors. Farmers rotate crops, alter crop specialization to take advantage of markets, reapportion building usage or layout to fit new strategies, or rent, purchase or sell farm land. It would be highly unusual to find a dairy, fruit, sugar beet, or wheat farm from 1935 in pristine condition; indeed, such a farm would be unrepresentative of farming in Michigan because of its static nature. More likely there would be a farm that began as a wheat farm in the 1870s, switched to dairying in the 1920s, expanded in the 1950s, and then changed over to soy bean growing in the 1970s. Each of these stages of development represents a system, which has left some physical signature on the farmstead. The significance and integrity of the farmstead would be derived by linking

the extant buildings and their distinctive features (the “physical signature” referenced above) to the historical evolution of the working farm.

Identifying the farming systems historically employed on rural properties therefore constitutes the first stage of assessment. Academics who employ systems theory state that farms “are clearly systems because several activities are closely related to each other by the common use of the farm’s labor, land, and capital, by risk distribution, and by the joint use of the farmer’s management capacity” (Ruthenberg 1980: 2). Individual farms themselves interact with other systems employed in each farming region that help determine individual strategies. Some farms in a region thus are likely to specialize in secondary systems that compliment the primary system (such as producing foodstuffs for local farmers or fodder for livestock; Morgan and Munton 1972: 20-21).

Both environmental and broader economic systems also impact the selection of local farming systems. For example, the unique climatic conditions on Michigan’s western shore and ready access to regional urban markets (*e. g.*, Chicago, Milwaukee, Grand Rapids, and Detroit) influenced the specialization in fruit along the Lake Michigan coast. These stimuli, of course, change over time, and farmers adapt accordingly, giving the farm more of the character of an organism than an artifact of a specific historical moment. Individuals therefore must be sensitive to the “career” of the farm in its broad historical context.

The use of the term “farming systems” has a long history of its own. Agricultural literature in the early 20<sup>th</sup> century began using the term “systems” to describe the relationship of distinct activities on farms (Spillman 1908: 351). Agricultural economists in particular hoped to rationalize farm strategies—much like industrial production—to keep American farms profitable. Many agricultural colleges, like Michigan State University, used farming systems literature to encourage specialization in specific parts of the State suited to particular crops or enjoying competitive advantages in the market (Hill, Riddell and Elliott 1930: 3-4). By the mid-1930s, this drive toward specialization (originating at the federal, state, and county levels) began to take root at the farm level and one can expect to see much more uniform systems across the state by the 1950s.

Farming systems in Michigan have been studied in detail for the past century, with the definitive research being that of E. B. Hill, F. T. Riddell, and F. F. Elliott (hereafter referred to as Hill *et al.*), who produce a series of studies on types of farming in the state in the 1930s. These studies are particularly useful because the authors break the state into fourteen farming areas or regions based on combinations of crop specializations unique to each. Hill *et al.* include a map of Michigan with the farming region boundaries superimposed, thereby graphically showing where certain types of farming dominated in the state (Figure 3.01). However, as Hill *et al.* note, “A wide variation in soil type, topography, climate, and economic conditions is found within the state. Because of these factors, Michigan farmers have found it advantageous to follow types of farming which may vary widely within rather short distances.” Hill *et al.* seek to provide “an understanding of the nature and extent of these” variations (Hill *et al.* 1930: 3).

Hill *et al.* define a farming system as the mixture of crops, livestock, and other interdependent economic activities that take place on individual farms. They present statistical profiles of typical farm systems in different parts of the state using agricultural census data. (They also map “types of farming”, which refers to particular regional farming system specializations, and not to the strategies of individual farmers.<sup>3</sup> These maps provide excellent guides for measuring how representative a given farm might be.) But Hill *et al.* also caution that farm size, location, and individual preference had an impact on the farming system adopted by each farmer; hence, wide variations in enterprise allocation (that is, the mix of crops and livestock on a particular farm) might occur within the same type-of-farming area.

A sense of the importance of viewing farming activities individually and systemically can be gleaned from Hill *et al.*'s table showing typical farming systems in Leelanau County in the northwestern quadrant of the Lower Peninsula, which is part of Hill *et al.*'s Area 12A (Table 3.1). The area specialized in fruit, potato, and dairy farming in the 1920s. These figures underscore the necessity for careful research into the history of the farm in order to determine the farming system employed at various stages of its evolution. Inferences can then be made as to the link between extant buildings and former or current agricultural activities.

Elliott refined the definition of “farming systems” in 1933, arguing that systems could be established by identifying the primary source of farm income for a given farm, then determining what other crop or livestock combinations tended to appear together. He noted that farming systems “exhibit a strong central tendency with respect to the enterprises handled” and thus could be categorized with reasonable assurance once that source was identified. He chose a threshold of 40% of a farm’s income as the determinant of what system the farm employed (Elliott 1933: 162).

Elliott’s independent statistical analysis of Michigan farming types, using 1930 federal census income statistics rather than crop production (as the Hill, Riddell, Elliott study was) varies somewhat in its findings from the latter and is thus significant here. For example, Hill *et al.*'s Area 8 (see Figure 3.1)—the Saginaw Valley—was categorized as a “beans and beets” region, yet Elliott found that the area (306 on his national map) was dominated by general farms (37%), with “crop specialty”—beans and beets—comprising 24% of the farms and dairying constituting a robust 19%. Indeed, in 12 of the 16 type of farming areas he identified in Michigan, general farms made up the highest percentage of farm types (these were farms which had two activities that netted at least 40% of the farm income). Such farms would be highly flexible in terms of crop mix and innovation, as well as employing existing buildings for multiple purposes. In short, one should not expect historic farms to conform in all aspects to ideal buildings, landscapes, or layouts.

Because one generally will not have access to the raw data employed by Hill *et al.* or Elliott, this document recommends that one uses a practical or functional definition of

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<sup>3</sup>Elliott later defined types of farming as “a term descriptive of the kind of farming followed on a group of farms having a high degree of uniformity in the kind, relative amount, and proportion of crops and livestock handled, and in the methods and practices followed in production” (Elliott 1933: 1).

farming systems; that is, see it as a conceptual tool for interpreting historical properties. Using Hill *et al.*'s definition of farming systems (the mixture of crops, livestock, and other economic activities that took place on individual farms), researchers should gather and examine historical data (oral histories, rural property inventories, manuscript census data, aerial photographs, county history illustrations) to establish a "farming system profile" for key periods in Michigan's agricultural history. Then they should establish whether the farm and its buildings have significance and integrity based on comparisons to Hill *et al.*, Elliott, and the farming systems profile. The objective is to discover "shadows" of farm systems past in the current landscape and building configurations.

### **Specific Farming Systems in Michigan's History**

Michigan's agricultural history, as noted earlier, can be broken down into several phases, each of which exhibited substantially different crop specializations. Pioneer Michigan farmers, for example, grew wheat on newly cleared lands along the Lower Peninsula's rivers. Wheat traveled well and fetched good market prices and thus made a natural choice for cultivating (Gray 1996: 48-56). By the turn of the 20<sup>th</sup> century, dairying had grown to prominence in the state because of the emergence of urban markets for butter and fresh milk in the Great Lakes region. This continued past World War II, and only in the 1970s did dairying begin to decline. Meantime, wheat continued to be grown in the lower tier of the state, and fruit production came to dominate the western lake shore counties. As noted above, however, general farming predominated throughout the state before 1945; thus these phases can only be seen as general outlines of the state's agricultural activities. Indeed, several scholars have shown that the diversification of agricultural enterprises on individual farms was a rational response to risk in uncertain economic and environmental conditions present for much of the century between 1840 and 1940 (Gray 1996: 56-65). The aggregate impact of improved scientific methods, transportation, and marketing mechanisms over time lowered the need for conservative strategies, and farms became progressively more specialized after 1900.

Using Hill *et al.* and Elliott's statistics and additional research, the MAHP (Michigan Agricultural Heritage Project) team has identified the following systems as the most common ones to have been adopted on Michigan's farms: dairy, grain, fruit, poultry, livestock, specialty (sugar beets, potatoes, mint, vegetables, and beans), forage, and mixed or general farming. These are discussed in further detail below. Determining historical farming systems and linking them to associated building assemblages provides the best way to "read" the present landscape of Michigan farms in that broader context. A discussion of the associated building assemblages follows in the next chapter.

### **Dairying**

Dairy production as a specialty on American farms appeared in the 1830s along the eastern seaboard in response to the growth of urban populations and the consequent demand for butter, cheese, and milk. Women performed the skilled labor needed for butter and cheese production up until the Civil War, when factories began to appear. Until that period, a farm family's output was limited by the skill and availability of labor

on the farm; hence, dairying tended to be but one of several enterprises conducted on the early to mid-19<sup>th</sup> century farms.

The emergence of commercial dairying in Michigan coincided with the transition to factory production during the Civil War years. Wartime demand, high prices for butter, labor shortages, and technological innovation spurred this transformation. Thus Michigan dairy farms had their origins in a more industrialized system of production than those located in eastern states that had been settled earlier. Yet dairy operations remained small by modern standards (prior to 1940, milking herds greater than 16 cows were unusual) as a function of the relative risk involved—even though dairying produced one of the steadiest returns in agriculture. Three primary technological developments began the “industrialization” of dairying in the late-19<sup>th</sup> century: the silo (which stored ensilage, allowing “milch cows” to produce during the winter), the Babcock test (which showed the fat content of milk and thus helped farmers predict and control butter fat content) and the refrigerated railroad car (which allowed farmers to ship fresh milk over long distances). Each lowered risk, encouraged the adoption of bred stock, and improved the quality of product shipped to market, thereby stabilizing prices.

By 1925, as Hill *et al.*'s data indicates, farmers who had adapted the dairying system tended to be located near urban centers in Michigan—or at least to transportation facilities. In the area surrounding metro Detroit, the most specialized dairy section of the state, farmers evinced a fairly uniform crop mix, as suggested by Hill *et al.* (Table 3.2).

Dairy herds were relatively small (7-10 cows appearing to be the average; Hill *et al.* 1930: 52), suggesting that other enterprises were needed to sustain the farm. And, in fact, the combination of field crops—corn, wheat, oats, barley, and hay—can only be partly explained by the feed requirements for dairy cattle, especially when combined with the other enterprises present in the mix, such as potatoes, beans, and poultry.

The dairy farming system in this period, therefore, would require a particular composition of buildings to accommodate livestock and crop storage, as well as field patterns that reflected the production of multiple crops. One would expect to find a large barn with a gambrel roof to maximize hay storage, a milk house, silo(s), hen house, horse barn, corn crib, a granary, potato cellar, and other storage buildings. Field and pasture patterns would be smaller and more diversified than today.

With the extension of the rural electrical system beginning with the New Deal in the 1930s, farmers could use milking machines and thus could expand the size of their herds and lower their production of secondary crops. Barns in the post-WWII era, therefore, were likely to be larger (either new or extended), and many of the attendant outbuildings would be either converted to other uses or left to decay. Fields would be more uniform and devoted to fewer crops. The challenge for those researching a farm's history is to trace these transitions, if possible, to demonstrate the historical evolution of the farm and its features.

## Grain

Michigan has been an important grain producer since its founding in 1837, with wheat playing an important role in the state's agricultural economy throughout its history. Other grains—corn, oats, rye, barley, buckwheat—have also been grown in significant quantities. Because of its relatively high value, wheat was considered the premier cash crop in the Midwest for much of the 19<sup>th</sup> century and farmers in Michigan's southern tier of counties still produce it. Grain-producing farms (and their attendant processing facilities) have left an important mark on the state's landscape.

Pioneer farmers put in wheat crops as soon as they had cleared their fields of stumps to take advantage of Michigan's rich soil. Farmers enjoyed good yields for a generation across much of the state, sending much of it as flour bound for the eastern seaboard and Europe on the Great Lakes and Erie Canal. By 1860, however, insects and soil depletion had begun to erode per acre yields and many farmers in economically mature sections of the state began switching to crops that could be marketed locally at lower risk (already by that date, agricultural reformers encouraged farmers to diversify into dairying and other less risky enterprises). Adoption of winter wheat in the 1850s helped combat pests and high demand caused by the Civil War encouraged a renaissance in Michigan's wheat production. After the war, the continued clearing of new land kept wheat production expanding, despite declining yields. Between 1850 and 1880, the state's output nearly doubled each decade, with only Illinois, Indiana, and Ohio producing more (Howard 1862: 70; Sewell 1960: 361-363; Morley 1881: 35).

By the turn of the 20<sup>th</sup> century, the process of settlement had drawn to a close, per acre yields had fallen, and farmers began specializing in crops better suited to the soil, climate, and marketing structures of given sections of the state. Those in the southernmost counties adopted sheep to compliment raising wheat. This is because sheep graze close to the ground and thus keep down weeds on fallow fields while at the same time fertilizing depleted soils. Thus, the wheat-livestock system identified by Hill in 1930 began to emerge. Both wheat and livestock farms also tended to be larger than those statewide with greater percentages of land devoted to field crops (compare to the dairy farming system of Macomb County above to the profile of St. Joseph County below).

Wheat, though it fell to third behind corn and oats in both acres planted and value sold, remained an important commodity in the state's agricultural output. Wheat production remained steady between 1910 and 1940, with the state producing between 15 and 16 million bushels per year. But during World War II, again spurred by wartime demand, that figure jumped to 35 million bushels (Shaw, 1914: 12; Dunbar, 1955: 2), with production centered in St. Joseph, Cass, Kalamazoo, Calhoun, and Barry counties (Table 3.3). One can therefore expect to find buildings from the post-war period that reflect the continued production of wheat and grains.

Similar to wheat, corn has been a staple crop in Michigan agriculture since settlement; though it has generally been grown across the entire state and is frequently subordinated

within other systems (feed for dairy cattle or hogs, for example). As both a food and feed crop, therefore, corn has left its mark on most farms in the state.

A native grain to the Americas, corn was often the first crop planted by pioneers. Unlike wheat, corn did not need deep plowing and could be grown in fields not yet cleared of stumps and thus was an important subsistence crop for newcomers. And, the nutrients left from burning forests during the clearing process helped early farmers reap impressive per acre yields. However, corn is a very nutrient-intensive crop and quickly depletes soils. This, in addition to the fact that corn was grown across the nation and thus had low market value led farmers to turn to wheat as soon as possible. Corn was considered primarily as a home food crop and a feed crop for livestock through the Civil War.

Beginning with the Civil War and receiving boosts from the invention of the silo and the emergence of the cereal industry in Michigan, specialization in corn production increased in the late 19<sup>th</sup> and early 20<sup>th</sup> century. By 1910, corn ranked first in the state in acreage, bushels of grain harvested, and value of products sold. Whereas specialized corn farming had been confined to the southern section of the Lower Peninsula, by that date, corn was grown as a cash crop across the entire state (Sewell 1960: 362; Shaw 1914: 12).

Hill's Area 2—Branch, Hillsdale, and Lenawee counties in the southeastern section of the state bordering Indiana (Figure 3.1)—has stood out historically as the center of corn production in the state (in conjunction with wheat and livestock; Table 3.4). Hill noted that Area 2 was closely related to the wheat-producing counties to its west, yet has more fertile, open land. As a result, almost no sheep were raised there, while corn and hogs each were significantly more prominent. Farmers also tended larger flocks of poultry and herds of dairy cattle to serve the Detroit and Toledo markets (Hill *et al.* 1930: 53-54).

This area, with its corn-hog mix, is thus similar to the Cornbelt farm operations of Ohio, Indiana, and Illinois. Corn production in Michigan in general continued to increase into the 1950s, rising from nearly 53 million bushels in 1910 to 86 million by 1950 (as with wheat receiving a big boost during World War II), a reflection of the greater scale and efficiency of Michigan farms in the postwar years (Shaw 1914: 12; Dunbar 1955: 2).

### **Fruit**

The peculiar climatic conditions created by Lake Michigan along the western shore of the Lower Peninsula provided Michigan farmers with a unique opportunity to grow fruit crops—apples, pears, peaches, cherries, grapes, and berries—that could not be grown in the rest of the Midwest because of the colder climate. This was recognized before the Civil War, and soon after the fruit industry began to expand rapidly to meet regional demand (Howard 1862: 7-8; Chase 1922: 17). By the 1880s, improved railroad transportation allowed for rapid shipment of fresh fruit to Chicago and beyond (State of Michigan [Morley, ed.] 1881: 50, 56; State of Michigan [Jochim, ed.] 1893: 39-43).

Hill identified the entire western shoreline of the lower peninsula as a fruit growing area (Areas 12a and 12b; Table 3.5), with the latter differing slightly because of its high

production of grapes. A cursory comparison of his farming system analysis indicates that field crops and livestock are significantly less prevalent, though it is worth noting that most farmers still maintained some diversity of production, particularly dairy and poultry--a result of proximity to Grand Rapids and other urban areas (Hill 1930: 70-73).

By 1955, this pattern had shifted somewhat, with Muskegon, Ottawa, Kent, and Allegan counties intensifying dairy and poultry farming at the expense of fruit farming, a direct result of the continued growth of Grand Rapids. Nonetheless, the entire shoreline remained important for fruit production (Dunbar 1955: 6-7, 9).

### **Poultry**

The poultry farming system, as the foregoing section indicates, is often a complimentary operation to other specialized systems. Poultry emerged as a farming system primarily in response to the growth of cities and the consequent demand for fresh eggs and chicken for the table. Thus in Michigan, farmers living close to urban areas such as Detroit, Grand Rapids, Ann Arbor, and Lansing, frequently kept poultry in addition to raising wheat, livestock, fruit, or dairy cattle.

The relatively wide distribution of poultry operations across the state as a secondary system was noted by Hill, yet he still found that the area immediately surrounding Grand Rapids to be distinguished by a dairy-poultry mix (Area 4). His analysis of the poultry system there yields important insights into the character of these operations when in close proximity to cities. As Table 3.6 demonstrates, poultry farmers in Area 4 could specialize intensively in poultry at the expense of nearly all other operations and still survive—highly unusual on Michigan farms. These tended to be small in scale. Larger farms in the area emphasized dairying and thus put in other feed and forage crops or mixes of other cash crops like wheat (Hill 1930: 57-58).

Thus, one can expect to find historic poultry farms in this section of the state that would be relatively small and have few of the other types of buildings associated with the more mixed farming operations that generally dominated the state. One can infer that such farms could be found near other large metropolitan centers. This pattern held up remarkably through World War II (Dunbar 1955: 3).

### **Livestock**

Much like poultry, the livestock farming system in Michigan has generally been a secondary farm system that compliments the primary system in any given section of the state. Indeed, raising livestock has been covered in several categories above and need not be duplicated here. Nonetheless, certain sections of the state have specialized in livestock because of a variety of environmental and marketing factors that should be noted here.

Domestic animals have been critical elements of Michigan farming since settlement. During the pioneer days before the Civil War, many farmers grazed cattle, hogs, and



sheep on the open range and rounded them up periodically to brand, slaughter, or shear them. Breeding generally was not practiced by common farmers and the animals themselves were thus not specialized for certain purposes. “Native” cattle, for example, were an indistinct European breed used for meat and milk or as draft animals. The commercial expansion of the nation in the 1850s and 1860s, however, prompted farmers to pay greater attention to breeding livestock for meat, dairy production, wool, or work in order to stay competitive.

A sense of the character of livestock raising in Michigan during the Civil War period can be gleaned from the State Board of Agriculture’s report for 1862. The secretary of the board observed that few farmers bred their cattle for milk production and had only slowly adopted bred stock—such as Devons, Shorthorns, Galloways, Herefords, and Ayrshires. The general indifference of farmers toward breeding for particular qualities was evidenced by the general use of these breeds for draft animals, milking, and beef. Indeed, each of these breeds was best suited to beef production, and Michigan remained an important source of meat until the 1890s. Horse and hog breeding was also not commonly practiced. Only sheep had been more carefully bred, though farmers tended to raise hardier breeds used for both meat and wool, eschewing specialized wool producers like the Merino (Howard 1862: 76-84; Shaw 1914: 17). In short, farmers sought hardy, general breeds that could survive frontier conditions.

The rise of dairy and wool production as specialized farming systems stimulated the adoption of milk producing cattle like Holsteins and wool breeds like the Merino after the Civil War, with concomitant improvements in horse and hog stocks. Breeder associations and stock farms flourished by 1900, and after that date, graded and registered livestock were the norm. Though not common, stock or horse farms existed in various parts of the state, and grain producers in the southern counties mixed wheat and corn production with sheep and hogs, respectively (Chase 1922: 18).

However, no area within the state became dominated by large-scale livestock operations before 1955. Rather, raising livestock was either a complimentary system to others or confined to sections of the state unsuitable to other crops and was practiced on a modest scale. Of the latter, Hill identified Areas 7, 9, 11, 13 and 14 as having livestock farming systems (usually in relation to other crops). An examination of Area 13 provides a glimpse of the livestock farming system in Michigan (Table 3.7). Situated at the tip of the Lower Peninsula this “cattle and forage” area was characterized by farms with few field crops (except hay, oats, and barley—each of which are used for feed) and, unlike the lower counties, no wheat, little corn, very few hogs, and modest numbers of dairy cows and poultry. Yet the average number of other cattle on even the largest farms was about six. In short, as Table 3.7 indicates, raising livestock appears overall to have been a small-scale system carried on at the margins of the state’s agricultural lands.

### **Specialty Farming**

Michigan has several types of specialty crops that have played important roles in its agricultural history. These include sugar beets, beans, potatoes, mint, and vegetables

(truck farming). A few, like hops in the 1860s and 1870s, came and went so quickly that they left little trace on the landscape.

For the purposes of this document, sugar beets, beans, and potatoes will be covered, though it is important to recognize that mint stills can still be found in central and southwestern Michigan, and truck farming operations existed near each of the major urban centers of the state. However, the latter two have not risen to such dominance that they could be considered a primary system in any section of the state.

The area around Saginaw developed as a sugar beet and bean producer by the turn of the 20<sup>th</sup> century for a variety of reasons. Sugar beets were introduced in Michigan as early as the 1860s in an attempt to tap the market for sugar created by the secession of Louisiana and, consequently, its production of sugar cane. But with labor costs high during the Civil War, sugar beets proved unprofitable because they needed intensive cultivation. Thus Michigan farmers did not take up the crop (Sewell 1960: 366-367). By the 1890s, at the prompting of the Michigan Agricultural College, farmers in the Thumb again experimented with sugar beets. By 1910, the state ranked third in the nation in production and the crop ranked seventh in the state in value sold, and beet farmers averaged \$7 million a year in sales between 1910 and 1923. The industry continued to expand after World War II, with tons produced exceeding 1 million in 1958 (Shaw 1914: 13-14; Chase 1922: 16; Church 1923: 20-21; Dunbar 1955: 7; Lewis 1960: 342).

Bean production in Michigan has a longer history than sugar beets, being traced to the Yankee migration from New England to Michigan via New York. The white bean, sold dried, has been the primary variety produced. In 1910, Michigan enjoyed its traditional position as the main producer of dried beans in the nation, and the crop ranked sixth among the state's leading crops in value, generating \$9.7 million in sales. In 1919, the state produced 60% of the nation's crop of dried beans of all varieties, having passed California, and boasted sales of \$15 million. Annual production averaged over 4 million bushels in the 1950s (Shaw 1914: 14; Church 1923: 17; Lewis 1960: 340).

As noted above, Elliot (1933) indicated that sugar beets generally were grown in conjunction with beans and, importantly, other crops, which remained the case into the 1950s (Dunbar 1955: 7). Both beans and sugar beet operations were, therefore, part of a general farming system which had at its core a lucrative specialty system (sugar beets and beans). Hill's analysis of Area 8 shows this relationship well, especially the complementary systems of dairying, hay, and poultry (Table 3.8).

Potatoes provided a major food crop for Michigan farmers for much of the 19<sup>th</sup> century and frequently were also used as a feed crop for livestock. A quick glance at Hill's tables for all of the farming systems listed here show that most farm families grew substantial amounts of the crop well into the 20<sup>th</sup> century. Farmers of this kind certainly sold some of their crop, but certain areas of the state, in particular counties northwest of Detroit and near Petoskey specialized in a particular potato farming system.

As with other crops, the Civil War helped stimulate the expansion of potato production. By 1893, potatoes were the leading cash crop in the northernmost counties of the Lower Peninsula, thanks to the sandy soils and cool climate of the area that made large-scale mechanized production feasible. The state's potato production ranked second in the nation in 1910, a total of 38 million bushels valued at nearly \$10 million. Revenues for potatoes placed the crop third in the state in 1921, with value produced averaging \$24 million from 1910 to 1923 (Sewell 1960: 362; Jochim 1893: 36; Shaw 1914: 13-14; Church 1923: 12-14).

Hill identified two primary areas of the state (Region 6: covering parts of Oakland and Lapeer counties, and Region 11: Montcalm County and surrounding areas; Figure 3.1) that exhibited a potato farming system in the 1920s. The crop was high value and generally combined with dairy farming (usually butter, which could be transported the long distance to market). This is shown in Table 3.9.

Potato production required storage and processing facilities on the farm, likely in combination with dairy buildings. In the 1950s, the potato farming system had been reduced to the northern counties, including the Upper Peninsula. While potato blight lowered production in the early 1950s, it had recovered by 1958 (Dunbar 1955: 7-9; Lewis 1962: 342-343).

### **Forage**

Farmer specialization in animal forage crops—hay, clover, alfalfa, and timothy—began in earnest during the Civil War years. Three factors helped spur the growth of this farming system. First, when dairy farmers adopted bred stock the animals required higher-quality feed in order to produce adequate yields all year round. Second, plants such as clover and alfalfa help restore soils, which aided in maintaining fertility for other crops. Third, population, agricultural, industrial and commercial expansion demanded draft animals, particularly horses, to transport goods. Though the invention of the automobile slowed demand for the latter, the continued growth of dairying before World War II provided a constant demand for forage crops.

As with livestock raising—and often in tandem with it—forage crop farming systems tended to emerge in more marginal agricultural areas such as the Upper Peninsula and the northeast quadrant of the Lower Peninsula. By 1910, hay and forage production in Michigan ranked 13<sup>th</sup> in the nation—3.6 million tons valued at \$36 million—in addition to the state's production of timothy and clover seed for sale to other farm states. By 1919, hay had become the state's leading crop, taking up about a third of Michigan's agricultural lands (Shaw 1914: 13; Seymour 1919: 469; Church 1923: 10-11).

Hill's analysis of the hay/forage systems placed them in Areas 7, 9, 10, 13, and 14, areas in the northeastern part of the Lower Peninsula or in the Upper Peninsula, and all either with short growing seasons, poor soils, or lack of access to markets. Area 9 on the northern shore of Saginaw Bay, for example, specialized in forage and livestock. As suggested by the data in Table 3.10, Hill found that typical crop mixes on these farms

included substantial acreages of hay, oats, and pasture, modest amounts of corn, beans, or wheat, and livestock at or above state averages.

The rapid transformation of transportation after World War II lowered the need for forage crops outside of dairy production; hence, by the 1950s, the crop had diminished in importance and many of the hay-forage operations of the pre-war years had begun to decline (Dunbar 1955: 2-9).

### **General or Mixed Farming**

The foregoing discussion has identified specialized farming systems, with the caveat that most of the state's farmers before World War II practiced "general farming" even within areas noted for particular crops or products. Readers will readily appreciate from the tables provided in each of the previous sections that farming systems were exclusive in nature. That noted, only the Area 5 in the lower center of the state, surrounding Lansing, was identified by Hill as a general farming area. It is worth a brief examination of the features of farming in this section of the state to better understand general farming as a system.

Hill used Eaton County as his example of an area of general farming, and the average acreage in various field crops demonstrate the sustained effort of mid-Michigan farmers to balance output of corn, wheat, oats, barley, hay, beans, and wheat (Table 3.11). This was a logical response to their relatively advantageous geographical position between the major cities of the state and their access to interstate transportation networks and agricultural processing plants. As well, they engaged in dairying to tap these urban markets, and raised sheep and poultry. In short, the diversity of agriculture in this section of the state—even on the farm level—exceeded other parts of Michigan.

This is not to say that the farms of this area were only general farms; however, one is likely to find the richest array of specialized and multi-use structures here. Also, because of this diversity, mapping carefully the evolution of a farm—as individual farmers shifted crop strategies over time to meet demand—is especially relevant here.

### **Conclusion**

Unlike many other states, Michigan's agricultural history is a story of diversity, not concentration on a single cash crop. This section has attempted to alert those conducting research to the need, therefore, to recognize specialized farming systems as they operated within a state characterized by general farming. For preservation purposes, Michigan's unique farming economy presents a particular challenge: to map historical changes on the landscape of farms not likely to have remained static. The following chapters will help with the identification of specific buildings and layouts associated with the farming systems.

**FIGURES**    *Chapter III*

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Figure 3.01    Agricultural Regions of Michigan (Hill *et al.*, 1930: 48).

**TABLES**    *Chapter III*

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Table 3.1    “Typical farming systems in Area 12A, the fruit, potato, and dairy region of northwestern Michigan (Leelanau county).” From Hill *et al.* (1930: 74, Table 23).

Table 3.2    “Typical farming systems in Area 1 of southeastern Michigan (Macomb county).” From Hill *et al.* (1930: 52, Table 5).

Table 3.3    “Typical farming systems in Area 3, the small grain and livestock section of southwestern Michigan (St. Joseph county).” From Hill *et al.* (1930: 56, Table 8).

Table 3.4    “Typical farming systems in Area 2, the corn and general livestock section of southern Michigan (Lenawee county).” From Hill *et al.* (1930: 54, Table 6).

Table 3.5    “Typical farming systems in Area 12B, the fruit section of southwestern Michigan (Berrien county).” From Hill *et al.* (1930: 71, Table 20).

Table 3.6    “Typical farming systems in Area 4, the general dairy farming, poultry and special crop section of southwestern Michigan (Ottawa county).” From Hill *et al.* (1930: 57, Table 9).

Table 3.7    “Typical farming systems in Area 13, the cattle and forge section of northeastern Michigan (Montmorency and Alpena counties).” From Hill *et al.* (1930: 67, Table 17).

Table 3.8    “Typical farming systems in Area 8, the bean, sugar beet, and dairy area of eastern central Michigan (Saginaw, Gratiot, and Tuscola counties).” From Hill *et al.* (1930: 63, Table 14).

Table 3.9    “Typical farming systems in Area 11A and 11B, the potato and dairy region of north central Michigan (Osceola, Missaukee, Grand Traverse counties).” From Hill *et al.* (1930: 69, Table 18).

Table 3.10    “Typical farming systems in Area 9, east central Michigan (Arenac, Iosco, and Gladwin counties).” From Hill *et al.* (1930: 65, Table 15).

Table 3.11 “Typical farming systems in Area 5, the general dairy farming and cash crops section of south central Michigan (Eaton county).” From Hill *et al.* (1930: 58, Table 10).

## CHAPTER IV.

### AGRICULTURAL RESOURCE ASSEMBLAGES

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#### Introduction

Each farming system discussed in Chapter III has required specific geographic and economic conditions to flourish. The systems have also required system-specific types of infrastructure, although the composition of the infrastructure is more unique for some systems than for others. The infrastructure usually consists of a collection of buildings and other historic resources (“property types”), that when present, could be diagnostic of a particular farming operation. For the purposes of this report, the combination of specific property types associated with a specific farming system is termed that system’s resource assemblage. It is important to note that some systems needed only generic buildings and resources, and others needed none at all. In the latter case, the lack of historic resources present sometimes makes it difficult to determine the historic significance of a particular farming system.

#### Resource Assemblages by Farm System

A list of the property types grouped as resource assemblages associated with specific farming systems is included below (Table 4.1). An analysis and discussion of individual property types, including their function and evolution, is presented in Chapter V.

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#### ***TABLES***      ***Chapter IV***

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Table 4.1      Property Types and Resource Assemblages Associated with Michigan’s Farm Systems.

**Table 4.1      Property Types and Resource Assemblages Associated with Michigan’s Farm Systems**

*Note: Not all buildings may be present on a given farm. Also, a farmstead may have buildings from more than one system or time period.*

## **19<sup>TH</sup> CENTURY (PIONEER AND ESTABLISHED) FARM**

- House
- Threshing Barn and/or Livestock Barn with hay storage above
- Horse Barn or Stable
- Wagon Shed
- Corn Crib (generally gable-roof, also keystone-shape)
- Granary
- Smoke House
- Root cellar
- Outhouse
- Older house, possibly converted to another use (e.g., granary, garage, tenant dwelling)
- Miscellaneous outbuildings, sheds, special purpose barns
- Well house, Pump house; beginning in the 1870s, a Windmill with Pump
- Wood shed
- Chicken coop
- Maple sugar house
- Orchards
- Wood lots
- Fencing

*Continued on next page*



**Table 4.1, continued**

<b>20<sup>TH</sup>-CENTURY DAIRY FARM</b>
<ul style="list-style-type: none"><li>• House</li><li>• Dairy Barn (sometimes retrofitted older barn with newer gambrel roof)</li><li>• Hay Barn (optional)</li><li>• Milk House (if Grade A milk was processed)</li><li>• Silo (one or more)</li><li>• Tool Shed (a.k.a. Equipment shed, Machine shed)</li><li>• Corn Crib (one or more)</li><li>• Garage</li><li>• Miscellaneous outbuildings (e.g., tractor shed)</li></ul>
<p><i>Typically included during early part of century:</i></p> <ul style="list-style-type: none"><li>• Outhouse</li><li>• Chicken coop, brooder houses</li><li>• Hog pen (not as common)</li><li>• Horse Barn (or designated horse stalls in main barn)</li><li>• Pump or Well house, Windmill</li><li>• Corn crib(s) of wood, with gable roof; later metal cage on concrete pad</li></ul>
<p><i>Typically included toward end of century:</i></p> <ul style="list-style-type: none"><li>• Pole Barn (Machine shed)</li><li>• Loafing shed</li><li>• Feeder sheds</li><li>• Milking Parlor, Bulk Tank (1950s and later)</li><li>• Silage Bunker</li><li>• Feed shed</li></ul>

*Continued on next page*

**Table 4.1, continued**

<b>20<sup>TH</sup>-CENTURY GRAIN (CASH CROP) FARM</b>
<ul style="list-style-type: none"><li>• House</li><li>• Garage</li><li>• Machine sheds (or Equipment sheds)</li><li>• Workshop</li><li>• Corn cribs</li><li>• Grain storage units or bins</li><li>• Grain elevator and dryer</li><li>• Fertilizer shed</li><li>• Absence of hedge rows, minimal fencing</li><li>• Large cultivated fields</li></ul>
<b>20<sup>TH</sup>-CENTURY FRUIT/VINEYARD FARM</b>
<ul style="list-style-type: none"><li>• House</li><li>• Garage</li><li>• Packaging shed</li><li>• Fruit Storage/cooling locker</li><li>• Wine Aging Facilities</li><li>• Loading Dock</li><li>• Equipment shed or Machine shed</li><li>• Migrant Worker Cottages/Housing</li><li>• Fruit Stand or Tasting Room</li><li>• Orchards or Vineyards</li><li>• Parking Area</li></ul>

*Continued on next page*

**Table 4.1, continued**

<b>20<sup>TH</sup>-CENTURY POULTRY FARM</b>
<ul style="list-style-type: none"><li>• House</li><li>• Garage</li><li>• Machine sheds (or Equipment sheds)</li><li>• Chicken coops</li><li>• Brooder houses</li><li>• Poultry or Broiler houses</li><li>• Metal feed bins</li><li>• Possibly Hatchery</li></ul>
<b>20<sup>TH</sup>-CENTURY LIVESTOCK FARM</b>
<ul style="list-style-type: none"><li>• House</li><li>• Garage</li><li>• Livestock Barn (and/or pole barn)</li><li>• Hog Houses</li><li>• Sheep shelters</li><li>• Hay Barn (and/or feed storage shed)</li><li>• Silo</li><li>• Tool Shed (or Equipment shed, Machine shed)</li><li>• Corn Cribs</li><li>• Garage</li><li>• Workshop</li><li>• Calf Huts</li><li>• Fencing</li><li>• Pasture Land</li><li>• Pond or other water source</li></ul>

*Continued on next page*

**Table 4.1, continued**

<b>20<sup>TH</sup>-CENTURY SPECIALTY AND TRUCK FARM</b> <i>(Includes potatoes, sugar beets, tomatoes, beans, mint, etc.)</i>
<ul style="list-style-type: none"><li>• House</li><li>• Garage</li><li>• Equipment and/or machine sheds</li><li>• Storage sheds</li><li>• Drying units (mint)</li><li>• Workshop/Tool shed</li><li>• Miscellaneous outbuildings for processing</li><li>• Packaging shed and/or sales shed</li><li>• Migrant Worker housing</li><li>• Open fields</li><li>• Parking area</li></ul>

<b>20<sup>TH</sup>-CENTURY FORAGE FARM</b>
<ul style="list-style-type: none"><li>• House</li><li>• Garage</li><li>• Equipment Sheds</li><li>• Other sheds</li><li>• Hay Barns (older structures), Pole Barns (newer structures)</li></ul>

<b>20<sup>TH</sup>-CENTURY GENERAL OR MIXED FARM</b>
<ul style="list-style-type: none"><li>• House</li><li>• Garage</li><li>• Collection of barns and outbuildings associated with specific systems, often serving dual purposes</li></ul>

## CHAPTER V.

### MICHIGAN'S AGRICULTURAL HISTORIC RESOURCES

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#### Introduction

On a typical Michigan farm, the farmstead has historically comprised of a cluster of facilities supporting and focalizing most of the daily living, working and storage activities of the farm operation. The infrastructure, defined as property types or historic resources, includes, but is not limited to, the farmhouse and occasionally smaller domiciles for hired hands or migrant workers, house yards and gardens, orchards, one or more barns and a variety of other outbuildings, as well as defined work areas, enclosed yards and pens, lanes, and landmark trees. It consists of all features present that have been created or influenced by human interaction with the natural world. In some instances, even today, resources may be located in the fields beyond the farmstead. Finnish farmers, for example, have been inclined to construct and utilize outlying hay barns (Kaups 1989).

The range and complexity of these farmstead resources have varied over time and according to farming system employed. This chapter discusses the characteristics of the individual resources over time, in order to assist with the determination of building function, approximate age, and relationship to one another of the individual resources. It begins with an overview of the appearance of a farmstead, both on a regional and on a farm-level scale. This enables one to place the individual farmstead and its historic resources into a larger context to evaluate the potential historic significance. The second part of this chapter then discusses the individual resources.

#### The Michigan Cultural Landscape

While agricultural systems assist in the evaluation of significance in terms of economic themes, cultural landscapes provide a tool for analyzing the significance of rural material culture in the evolution of Michigan's agricultural heritage. The geographer Fred Kniffen has argued that the culture group that establishes "the first post-pioneer, permanent settlement imprint" upon the land determines to a large extent, the parameters of successful occupance and the visual character of the emergent cultural landscape. He calls this the concept of "initial occupance" (Kniffen 1965: 551). Later settlers, unless they come in sufficient numbers as to culturally overwhelm their predecessors, adopt the occupance strategies and cultural ways of those already present. Wilbur Zelinsky has subsequently elaborated Kniffen's concept as "The Doctrine of First Effective Settlement." He states "whenever an empty territory undergoes settlement, or an earlier population is dislodged by invaders, the specific characteristics of the first group able to effect a viable, self-perpetuating society are of crucial significance for the later social and cultural geography of the area, no matter how tiny the initial band of settlers may have been" (Zelinsky 1973: 13).

In the case of southern Michigan, the people who succeeded in creating a lasting cultural landscape during the years preceding the Civil War were Yankees from upstate New York and New England.<sup>4</sup> In clearing the land, building homes and farm structures, erecting churches, grist- and sawmills, laying out town sites and road systems, and giving classical names to villages and townships, settlers forged a cultural landscape in Michigan combining visual elements of their New England regional background with emerging national landscape characteristics (McLennan 1988: 15).<sup>5</sup> Most of the rural house types and barns erected in Michigan before the Civil War were based on Yankee prototypes. The two most common farmhouse types were the New England One-and-a-Half Cottage and the Upright-and-Wing House, while the origins of the Three-Bay Threshing Barn can be traced back to England via New England.<sup>6</sup>

Another phenomenon also influenced the appearance of Michigan dwellings constructed in the pre-Civil War period. Many Michigan homes in both town and country incorporated national design elements associated with the Greek Revival architectural style. During Greece's war of independence from the Turks, America's perception of Greece as the cradle of its own democratic institutions, recently defended in the War of 1812, was fanned into a national enthusiasm for adopting other elements of ancient Greek culture as well. In the South, the architectural impact of this cultural fashion was largely limited to the gentry, and the Greek Revival style became the hallmark of patrician endeavor. It was in New England and upstate New York that "Greek mania" took hold among all elements of society. A romanticized "New Greece" sprang up in the Yankee landscape, particularly on the upstate New York frontier. Greek-temple churches and dwellings populated brand new settlements named after places of classical antiquity (Zelinsky 1967: 463-495). Many of these classical names reappeared in Michigan as New York Yankees migrated westward. As literate yeoman farmers built their first permanent homes in Michigan's countryside, they embraced the Greek fashion with enthusiasm. They clothed their traditional New England folk houses with Greek Revival ornamentation. Sometimes they even reorganized the spatial arrangement of their houses to better accommodate the style. In so doing, the early nineteenth-century settlers of Michigan combined fashion and tradition. This architectural synthesis, drawing from a regional heritage while at the same time partaking of a national cultural enthusiasm, contributed to the fashioning of a new regional landscape in the eastern Great Lakes region.

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<sup>4</sup>The notion that culture groups, by means of their occupance strategies, forge distinctive cultural landscapes and thereby endow culture regions with a characteristic sense of place originated with the geographer Carl Sauer. See Leighly (1967: 315-350), Mikesell (1972: 9-15), Meinig (1979), and especially papers by Pierce Lewis (1979, 1983, and 1998). Another central figure in the study of American cultural landscapes is John B. Jackson, former editor and longtime contributor to *Landscape*. For a review of Jackson's influence upon American landscape studies, see Meinig, "Reading the Landscape; An Appreciation of W.G. Hoskins and J.B. Jackson," 195-244. The October 1998 issue of *Geographical Review* also features several articles pertaining to Jackson. For the New York and New England origins of most of southern Michigan's early settlers, see Rose (1987a): 74-87.

<sup>5</sup>The distinction between local or regional landscape elements and national design components is made explicit by Stilgoe (1982: 85-134).

<sup>6</sup>House and barn prototypes are hereafter capitalized in this report.

Considerable experimentation took place during the 1810s and 1820s in upstate New York in the achievement of this synthesis. In Michigan, Greek Revival structures were built by settlers primarily during the 1830s through the 1860s. The great similarities between houses of the same type reveal that by the time Yankees began to settle in Michigan a general consensus had been achieved regarding the integration of classical architectural vocabulary with restructured vernacular forms and plans.

### **Spatial Arrangement of the Rural Landscape**

One of the largest resources found in the agricultural landscape is the arrangement of the land itself. The division of the land into spatial units consisting of farms, farmsteads, and a mix of farm fields, pastures and wood lots lends visual character, texture and context to the landscape. Roads and, secondarily, other kinds of rights of way provide the skeletal framework within which all other divisions of the land nest. The boundary lines of these divisions may be further individualized by a variety of fences, hedgerows, ditches or tree lines.

Underlying the spatial arrangement of the rural landscape is the survey system by which the public domain was divided for the purpose of distributing land into private hands. The look of the land is fundamentally determined by the nature of the survey system utilized. A number of conceptually different systems of survey have been employed in different parts of the country, only two of which are found in Michigan. The older of the two, the long-lot system of survey, was introduced into the state by the French in association with their early settlements in southeastern Michigan. Subsequently, the American government employed the township and range method of survey, the system that applies throughout most of the state. The latter was defined in the Northwest Land Ordinance of 1785. In areas settled after passage of the land ordinance of 1785, rural settlement commonly took the form of a dispersed single-family farm, consisting of a single contiguous parcel of land upon which the farm house and outbuildings were located. Geographers call this type of rural property a “unit-block farm.” It stands in contrast to fragmented landholdings so common in other parts of the world wherein a farm family lives within a village and tends multiple parcels of land outside the village. Whether modeled in the form of a French long lot or a township-and range derived purchase, Michigan farms almost invariably originated as unit-block farms.

Within the context of the township and range system, Congress, in 1832, reduced the required minimum amount of land purchased from the public domain to forty acres and mandated that larger purchases consist of assemblages of forty-acre blocks. The blocks were required to be contiguous, but not necessarily forming a square. As noted by Hildegard Johnson, “Through this act the 'forty' became not only the basic, but also the most frequent cadastral component in the landscape of the Upper Middle West” (Johnson 1976: 61).

To date no attempt has been made to analyze the evolution of farm shapes and sizes in Michigan. cursory review of selected late nineteenth century county atlases from Michigan reveals that clusters of forty acre farms took form in some localities and that

eighty acre farms with the narrow boundary fronting on a sectional road were also common. In the latter instance, a series of neighboring long lot properties is sometimes suggestive of a formative linear village, a type of settlement found in parts of Central Europe. In Germany, these are known as a *Hufendorf* (long-lot village) or *Reihendorf* (row village; Dickinson 1949: 239-263). For the most part it is not known what the circumstances were that explain why clusters of like-size farms materialized in some localities or along selected roads. Occasionally the reason has been documented. For example, it is reported that in 1873, in Sanilac County, one Sam Ward, who earlier had purchased 20,000 acres to extract lumber in the vicinity of Forestville and Minden, made 10,000 acres available for sale. He divided the land into forty-acre parcels, advertised their availability in Saxony, and disposed of them to the forthcoming immigrants (Wahla 1965). As another example, the Homestead Act of 1862, which authorized the free acquisition of 160 acres with the provision that the settler took up residence on the land, played a role in the settlement of Michigan's Cutover lands in the aftermath of lumbering and massive forest fires.<sup>7</sup>

In recent decades the number of farms has declined while farm size has increased. As farmers have retired or sought alternative forms of employment, they have sold or leased their land to other farmers. This has given rise to the “part-ownership farm” (Hart 1998: 291-298). Such transfers of farmland are not necessarily of contiguous properties. Consequently many of today's farm operations comprise fragmented land parcels (Smith 1975: 58-70). In fact, the development and expansion of fragmented farms in the United States is seen as one kind of adjustment to the demands of mechanized agriculture (Smith 1975: 58). In 1992 part-owners operated 56 percent of all farmland in the United States, while full-owners operated 31 percent, and tenants 13 percent (Hart 1998: 277). Since the specific parcels rented by a farm operator can change from year to year, the scale and spatial organization of each operating unit is in constant flux. Although the fragmented farm is more pervasive in the United States than is generally realized, it differs from Old World fragmented farms in that it is not integrally associated with a village form of settlement. Instead it is generally associated with a dispersed pattern of rural settlement in which the farmstead is located on one of the land parcels comprising the operating unit. Nevertheless, some farmers do live in a nearby community and simply commute to their farm fields. They are referred to as “sidewalk farmers” (Smith 1975: 59).

Perusal of Michigan plat maps from the second half of the nineteenth century reveals many instances in which a farmer owned scattered parcels of land. Not infrequently the aggregate landholding exceeded 200 acres. Given the limited level of mechanization at that time, it is unlikely that these farmers could manage landholdings of such size as a single general-farming operation.<sup>8</sup> On the other hand, as a single operation, they may have been viable for raising livestock. While some land may have been acquired for the purpose of real estate speculation or banked as part of the next generation's inheritance, it

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<sup>7</sup>As an example, see Natsolim (1977: 110), for the acquisition of 160 acre homesteads in Posen and Pulaski Townships, Presque Isle County, in 1870.

<sup>8</sup>Smith (1975: 67-68) argues that, on the prairies, farm fragmentation began with initial European settlement, and he enumerates examples from Illinois, Iowa, and South Dakota. However, he also points out that we don't know whether these early fragmented holdings were integrally operated or whether some parcels were rented out and operated as separate operations.



is likely that some individuals actually owned more than one farm. These additional farm(s) may have been operated by family members or by tenants.<sup>9</sup>

Fields are convenient subdivisions within the farm operating-unit and can change in size and number according to the farming system being pursued at any given time. Individual fields are made visible by fences. Fencing is a pastoral tool, its primary purpose being to control livestock. Today much of the landscape texture made visible by the fences so characteristic of nineteenth century rural Michigan has been lost. Three developments are primarily responsible. First, mechanized equipment displaced work animals on the farm early in the twentieth century, a process that continued until World War II and beyond. As farm equipment grew in size and specialization, fences proved confining. The second development had its inception after World War II. A shift away from general farming with its integration of crop growing and livestock-raising toward forms of specialized agriculture occurred that did not include livestock, and largely obviated the need for confining fences. Third, where fences continue to be needed to mark property lines and to impede hunters and deer, the use of barbed wire contributes to the translucency of surviving fencing. Only where barbed-wire fencing has contributed to the formation of hedgerows and where fields conjoin with woodlots are field and property boundaries clearly defined today. Instead, it is the land itself that lends visual textural definition when plowed and unplowed fields lie in juxtaposition or where fields growing different crops stand side by side.

### **The Farmstead**

To interpret the appearance of a Michigan farmstead today, it is necessary to understand the typical 19<sup>th</sup> century Michigan farmstead. Just as Kniffen and Zelinsky identified the principle of occupance strategy on a regional level, the principle can also be applied at the farmstead level. The 19<sup>th</sup> century farmstead was generally influenced by the subsistence farming system applied by most farmers. This resulted in the construction of numerous buildings, each providing shelter for livestock, farming products, and/or human activity associated with the act of farming. The collection of these shelters created the baseline appearance of an individual farm. From this baseline, the farm's appearance evolved, as buildings were added, modified, or removed in direct response to related farming activities.

A number of treatises provided nineteenth and early twentieth century American farmers with advice regarding how they should lay out the spatial organization of their farmstead for purposes of efficiency and as expressions of "down to earth" conservative rural values. Earlier generalizations, mostly applicable to colonial America, mention the preference of farmers to face the farmhouse to the south with the barn behind and north of the house to protect the latter from bitter winter winds. Study of late nineteenth century lithographs and casual field observation in Michigan suggests that farmers gave

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<sup>9</sup>While some examples observed in county atlases were seen to have had farm buildings on more than one property, it must be admitted that the majority of the multiple parcel properties that were noted had buildings on only one parcel.

locational primacy to orienting their farmhouses to the immediate sectional road rather than to the sun.

Advice concerning the orientation of the barn within the farmstead changed in the early twentieth century, particularly with regard to the location of dairy barns. Barns should be at least two hundred feet from the house and located not only behind, but to one side of the house, sited in such a way that the prevailing winds do not bear barn odors to the dwelling (Vogeler 1995: 104). With the discovery that bacteria responsible for tuberculosis survive passage through a cow's digestive system and remain active in the airborne dust of manure, not only improving ventilation, but increasing interior lighting to reduce bacterial growth became imperative (Visser 1997: 97-98). In order to increase interior penetration of sunlight into dairy barns, it was recommended that the long side of barns, with their many windows, should be aligned in a north-south orientation (Vogeler 1995: 104). It was stressed that this orientation was particularly advisable in northern latitudes so as to maximize penetration of the low-angle of the sun during the winter months. This orientation also allowed the prevailing winds from the south and southwest to create a cooling draft through the barn in the summer. Another source states "South windows are always excellent, but, unless numerous, do not admit as much light on all [interior] parts of the barn as when placed on both east and west sides" (*Farm Buildings* 1919: 31). Early in the twentieth century, the silo and milk house became invariable adjuncts to the dairy barn.

Analysis of 88 farmstead lithographs from 1874 to 1895 in south-central Michigan, and cursory examination of lithographs from elsewhere in the state clearly reveal that a double-cluster farmstead was prototypical of the late nineteenth century farmscape in Michigan<sup>10</sup> (Figures 5.01 and 5.02). With few exceptions, the psychological separation of the farmhouse from the barn-focused cluster of buildings is made explicit by a fence around the house, embracing a landscaped front yard, usually a back yard area, and sometimes an extensive side yard or two. Sometimes these side yards were landscaped and integrated with the front yard. In other instances side yards were used for vegetable gardens. Orchards also frequently buffered domestic space from farm work buildings. This double cluster arrangement, which dominates the spatial arrangement of the Michigan farmstead, diffused to this state from upstate New York (see Kiefer 1972: 493, who notes the semi-isolation of the farmhouse in northern Indiana with respect to the other farm buildings).

Another form of spatial separation of the Michigan farmstead into two clusters is "the road-split farmstead." A farmer owning land on both sides of a sectional road often put his house on one side of the public right-of-way, sometimes in isolation, in other instances accompanied by a horse stable or carriage house and some kitchen-ell<sup>11</sup> related

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<sup>10</sup>Lithographic birdseye views of Michigan farmsteads from the early 1870s to the mid-1890s can be found in selected county atlases, biographies and histories. In this study, 88 farms in a nine county area of south-central Michigan and random samplings from other areas of the State were examined (sources listed in Appendix A-2).

<sup>11</sup>Stilgoe (1982) calls the kitchen ell "the focus of family life." Hubka (1986)'s research indicates that the kitchen ell became a commonplace of New England farmhouse spatial organization only after 1800. Many domestic activities extended from the kitchen ell out onto the back porch and into the immediate area,

dependencies, while placing the barn and its cluster of work buildings on the opposite side (Figure 5.03). The spatial arrangement of the latter cluster might be linear along the road or form a loose courtyard or a strewn cluster.<sup>12</sup>

Although linear farmsteads were never common in Michigan, examples can be found among the lithographs. In some instances dwelling and farm buildings may be roughly aligned along the road. An alignment of farm buildings behind the farmhouse, in perpendicular projection away with the road, also occurred. In the latter instance, the house faced the sectional road, while the farm buildings were oriented to a lane extending at a right angle away from the road. Similar is an L-pattern arrangement. The house stands separate from the other buildings and fronts the road, while the barn and outbuildings are offset from the dwelling, but again are oriented linearly to a farm lane at a right angle to the road. Still another variation is the T-pattern. The house faces the public road and forms the stem of the T, and the barn and outbuildings are aligned in a row behind the house in parallel orientation with the road.

### **The Michigan Farmhouse**

The farmhouse was and is often the most prominent structure on a Michigan Farm, due to its relative importance as a functional place. It houses the center of operations for the farmer—a place where he eats, sleeps, and conducts his living and planning. It is also the place where the farm owner received the public. As such, the house is more likely, although not necessarily, to exhibit architectural embellishments. During the 19<sup>th</sup> century, it served as a backdrop on which the farmer could show off his relative success.

### **Style and Farmhouses: An Overview**

Virtually all Michigan farmhouses seen on the landscape today date to the 19<sup>th</sup> or 20<sup>th</sup> centuries. Vernacular structures of European origin that predate the inflow of Yankee settlers into Michigan beginning with the opening of the Erie Canal in 1825 do not survive. The settlement of southern Michigan by pioneers from New England, New York, and secondarily, other states beginning in the 1820s coincided with the growing popularity of the Greek Revival architectural style. The style remained popular until the advent of the Civil War. Nonetheless, examination of lithographic evidence in county atlases, histories, and biographies, which was extended as far north as Clinton and Shiawassee counties, reveals that in southern Michigan even as late as the 1870-1890 period the majority of farmhouses were still constructed in the Greek Revival style. Today the spectrum of styles represented by farmhouses in southern Michigan is far more diverse. Over the decades farmers have replaced many of the older Greek Revival houses. A few examples of Italianate and other contemporary styles appear in the above mentioned lithographs and reflect the beginning of this evolutionary process. Today one

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which Hubka refers to as the dooryard.

<sup>12</sup>The term “strewn” refers to a loose cluster of farm buildings not organized around a common work space. Since some buildings on a farmstead may cluster around a common work space while others are not so oriented, distinguishing between a loose court yard as versus a strewn cluster is often arbitrary and subjective.

observes a sprinkling of Queen Anne houses, and considerably more Colonial Revival, Arts and Crafts, and post-World War II ranch and bi-level dwellings. Nevertheless, a comprehensive survey of rural houses carried out in 1980-81 in Washtenaw County documented more than 500 surviving rural Greek Revival structures, almost all of them dwellings.<sup>13</sup>

Although picturesque styles such as the Gothic Revival and Italianate became fashionable nationally by mid-century, the impact of these styles upon rural southern Michigan was a gradual one. Gothic-style farmhouses never became popular except in some of the Lower Peninsula's eastern counties with considerable Canadian settlement. A number of Italianate farmhouses have been observed by the writer in Ionia County and in adjacent counties to the west, as well as in scattered fashion in the southern portion of the state. Agricultural settlement was delayed in the north until lumbering ran its course. Once undertaken, agriculture in the Cutover lands provided modest returns in much of the region. Casual observation leaves the impression that with the exception of Arts and Crafts bungalows, understated Colonial Revival structures, and ranch houses, the majority of farm houses in the north reflect modest income and a pervading utilitarian view of the home. Other rural dwellings in this region reflect post-World War II recreational and retirement activities.

During the early decades of the twentieth century, as mechanization of agricultural activities and household tasks expanded, the size of new farmhouses contracted as there was less need to house domestics and hired hands. To the extent that hired help was still needed, the automobile and improved road systems made their lodging in towns and villages more practical and desirable. Consequently smaller farm dwellings of four to six rooms became adequate in contrast with earlier farmhouses of eight or more rooms.<sup>14</sup>

### **Common Michigan Farmhouse Types**

The following house forms are categorized by "type," not "style." Most preservation practitioners possess competence in identifying architectural styles. Classification of houses by "type" is less widely understood. On the whole, it is a more useful classification construct than "style" for analyzing the vernacular buildings characteristic of rural architecture, and can be applied to the categorization of barns as well as dwellings. Rather than speaking to time-specific fashion, type analysis treats buildings as regional manifestations of material culture.

Identification of a "house type" is based on the dwelling's morphological or form characteristics. The most fundamental diagnostic elements are building shape/massing, height, roof type and orientation, and floor plan. Secondary morphological features may include the piercing pattern of the facade by doors and windows, chimney placement, the presence and/or form of a front porch, and wings that are conceptual to the design of the house, rather than later additions. Integral wings are important to the identification of

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<sup>13</sup>The survey is on file with the Michigan State Historic Preservation Office and the Washtenaw County Planning and Environment Department.

<sup>14</sup>Agricultural Experiment Station (1934: 17).

several Michigan house types, specifically the *Upright & Wing*, the *Upright & Doublewing*, and the *Hen & Chicks* types. These will be described in the pages that follow. It should be kept in mind that the diagnostic morphological elements enumerated for each are associated with a “prototype” characterization.<sup>15</sup> The forms listed below are placed in approximate chronological order rather than in frequency of appearance.

When identifying house types in the field, one frequently encounters a degree of deviation from the prototypical morphological identifiers, a deviation that may have occurred when the house was built, or it may be the result of subsequent expansion or remodeling. One also must expect to encounter many farm dwellings that do not accord with any of the following types. Most commonly these will be either high style homes, modern popular houses such as ranch houses, mobile homes or other rudimentary vernacular cabins and shacks, for the most part of twentieth century provenance. Other nonconforming dwellings from the late nineteenth and early twentieth centuries are likely to owe their design to pattern books and ready-built catalogues (Schweitzer and Davis 1990, and Stevenson and Jandl 1986). Except for ready-built houses, which catalogues generally endow with a model name and published plan, no analytical frameworks have yet been developed for these types of popular houses.

### The I-House

The morphological characteristics that define the I-House (Figure 5.04) in Michigan are a rectangular one-room deep plan extending two or more rooms in length, a two story height with a side-facing gable roof, end chimneys, and a hall-and-parlor floor plan, with the two rooms usually separated by a central hallway. A few I-Houses have a central chimney, reflective of older New England material culture practices. Subsequently, as heating technologies evolved, chimneys frequently disappeared to be replaced by flues. Many Michigan I-Houses, like other nineteenth-century farmhouses, have rear extensions, called “ells,” generally housing the kitchen and sometimes one or more additional rooms. When evaluating dwelling shape and floor plan, ells are not considered to be part of the house proper. Common analytical practice treats ells as additions even in cases in which they were constructed at the same time as the rest of the structure.

Most five bay I-Houses, for the most part in the Greek Revival style, were built before the Civil War. It has been observed in Washtenaw County that some rural three-bay as well as irregularly fenestrated I-Houses lack stylistic embellishment and bear abbreviated second stories, as evidenced by small upper story windows. They appear to be post-Civil War in construction. Whether they have central hallways has not been investigated.

The I-house originated in the British Isles during the seventeenth century. By the following century it emerged as a common dwelling form of the American upper-middle class throughout the American colonies. The colonial New England variant was characterized by a central chimney, but by the time Yankee settlers arrived in Michigan, they had, for the most part, abandoned this distinguishing trait to allow for a central

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<sup>15</sup>Most of the house types described in this report have been identified in the academic literature (Noble 1984a, Lewis 1975, and McLennan 1988).

hallway (McLennan 1988: 27-29). The I-House is not as prevalent in Michigan as it is in many parts of the East and South.

#### The New England One-and-One-Half Cottage And Its Variant

The New England One-And-One-Half Cottage (Figure 5.05) is the second most common type of farmhouse built in the parts of Michigan settled prior to the Civil War. Many have survived even to the beginning of the twenty-first century. The morphological characteristics of the One-And-One-Half Cottage include a rectangular or square shape, depending on whether the dwelling has a hall-and-parlor or New England floor plan.<sup>16</sup> Other defining characteristics are a one-and-a-half story height, and a side-facing gabled roof. A house type sharing the same characteristics except that it is a full two stories in height is called a *New England Large House*.

The ancestry of the New England Cottage harkens back to eighteenth century Massachusetts (Connally 1960: 95-104). This early nineteenth-century house type, clothed in Greek Revival ornamentation, is derived from two New England house types, the *Central Chimney Hall & Parlor House* and the famous *Cape Cod Cottage* (McLennan 1988: 22-27; Noble 1984a: 104-106). With few exceptions, Michigan examples lack the central chimney that was so characteristic of their New England predecessors. In Michigan the type was so closely associated with Greek Revival that when the style lost its popularity after the Civil War, the morphological type also fell from favor. Most of the Cottages were built between 1830 and 1860.

#### The Temple House

The Temple House (Figure 5.06) originated in New England early in the nineteenth century in response to the “Greek mania.” The Temple house possesses two characteristics that, in combination, identify it. First, it, too, is associated with the Greek Revival period (emulating a Greek Temple). Lacking colonial folk roots, the Temple house represents a fundamental break with colonial New England cultural traditions. Second, it is oriented, in contravention to English habit, with a pedimented gable façade facing the public road.<sup>17</sup> Reorientation of the house necessitated a relocation of the front entry, and more fundamentally, a restructuring of interior space. The urban townhouse side passage plan, with its double parlor, provided a convenient model. The primary motivation for orienting the house with the gable facing the front was to be able to decorate the gable as a classical pediment. Sometimes the pediment is merely suggested with cornice returns and wide raking boards; more ambitiously, the pediment may project forward from the facade to cap a colonnaded porch. The height may range from one to

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<sup>16</sup>The New England floor plan has a front tier of rooms consisting of a full-sized hall and parlor and a narrow rank of one or more rooms stretching across the rear extent of the dwelling. While a few Michigan examples have a central chimney fronted by a vestibule entry, this typical colonial New England arrangement has been modified by the substitution of a central passage in most Michigan *One-and-a-Halves*.

<sup>17</sup>While architectural historians generally use the term “temple house,” the literature in cultural geography commonly refers to this type as a *Gable-Fronter* house (Noble 1984a: 107-108; McLennan 1988: 31-33; Mattson 1988). However, another gable-fronted house type, the Upright House, appeared in Michigan and elsewhere after the Civil War, and could as justifiably lay claim to the term “gable-fronter.” The term “temple house” recognizes the classical affiliation of the earlier dwelling.

two stories. The facade is one room wide usually with a three-bay fenestration pattern. Floor plans vary but the most common is a *double-parlor plan*<sup>18</sup> with a side passage.

Although high style examples of the Greek Revival idiom appeared throughout the early American Republic, it was quickly integrated into the fabric of yeoman material culture throughout New England and on the New York frontier. It soon became a regionally expressed adaptation of a nationally fashionable style and, consequently, an artifact of New England material culture. Among pre-Civil War farmhouses in Michigan, it was outnumbered only by *Upright-and-Wing* houses and *New England One-and-a-Half* cottages.

#### The Upright and Wing House And Its Variant

The Upright and Wing House (Figure 5.07) is the most common nineteenth-century farmhouse in southern Michigan. More complex in form than the previous house types, the Upright-and-Wing superceded the New England Large at the top of the Yankee socioeconomic pyramid early in the nineteenth century. Its distinguishing feature is its two-part composition, a one-and-a-half to two-story upright conjoined with a one to two-story side wing ranging in length from one to three bays. Generally, an open porch was attached to or recessed into the wing. In early Michigan examples, the length of the wing varied from one to three rooms, but by about 1850 a one-room and passage or two-room length had become the norm. While floor plans vary, the parlor has traditionally occupied the front room in the upright, while the kitchen, originally located in the wing, was eventually shifted to a rear-ell addition and replaced by a dining room. A derivative house type, with a wing on each side of the upright is called an *Upright-and-Double-Wing House* (Figure 5.08). An example may be glimpsed on the extreme right in Figure 5.3.

During the period in which the Greek Revival style was employed, the Upright unit went through two stages of development. In the initial stage the Upright was three bays in width and contained the formal entry. A 1983 survey of Upright-and-Wing houses in Oakland, Livingston and Jackson counties found that all the dwellings with the main entry located in the Upright, for which construction dates could be determined, were built between 1840 and 1865 (Mackie 1983: 11-12). In the second stage of development, the Upright relinquished the front door to the wing and its massing contracted to two bays. The wing also tended to gain in height. Dates of construction for this type range from about 1830 to the early twentieth century.<sup>19</sup>

The Upright and Wing house illustrates another example of the Yankee response to Greek mania.<sup>20</sup> However, the house form eventually outlived the Greek Revival

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<sup>18</sup>A double-parlor plan is one in which the front parlor has a dining room directly behind it.

<sup>19</sup>Although some of the later type can be given an earlier date of construction than any among the earlier three-bay type, the latter is conceptually older. Examples of the three-bay with front-door type can be found in upstate New York from the 1820s. For another approach to subdividing the temporal evolution of the Upright-and-Wing House, see Bastian (1977: 116-117). For more extensive discussion of the Upright-and-Wing house, see McLennan (1988: 33-36) and Noble (1984a: 109).

<sup>20</sup>It is also sometimes called a *Tri-Gabled Ell* or a *Lazy-T House* (Pillsbury and Kardos, n.d.). Michigan residents have been known to refer to it as a Model-T house.

architectural fashion. Today, a surveyor is likely to encounter Upright and Wing houses embellished with elements of the Gothic Revival, Italianate, and Queen Anne architectural styles. Vernacular versions of the form also exist.<sup>21</sup> During the late nineteenth century, responding to Victorian period architectural influences, the Upright-and-Wing House evolved into a configuration that emphasized the vertical rather than the horizontal dimension. Windows became narrower and taller, and the Upright component tended to be tall and narrow, sometimes compressed into a single bay. Conversely, the massing of the wing grew larger in relation to the upright and sometimes was of a parallel height.

#### The “Hen-And-Chicks” or Basilica House and Its Variant

Of all the farmhouse types associated with the Greek Revival style, the “Hen-and-Chicks House” (Figure 5.09) is most strongly associated with southeastern Michigan. Talbot Hamlin's observation from the 1940s concerning the prevalence and possible uniqueness of this basilica form to southeastern Michigan holds largely true.<sup>22</sup>

The Hen-and-Chicks house consists of a centrally located gable-front block complemented on each flank by matching wings of lower elevation. Unlike the cross-axial orientation of the gable roofed wings of the Upright-and-Double wing house type, the axial orientation of the wings on Hen-and-Chicks dwellings run front to back, paralleling the axis of the central upright. The roof form of the wings is either a half-hip or a shed slope. The total profile of the facade gives the impression of a mother hen with her wings hovering protectively over her brood of chicks gathered around her feet. In more formal terms, the massing approximates a basilica, a spatial grouping of building components more commonly employed for religious and public buildings than for domestic structures. A subtype, the *Half-Hen-And-Chicks-House* (Figure 5.10), with only one wing, is also found in southern Michigan.

#### The Italianate Cube

The Italianate Cube (Figure 5.11) is a product of national influences, not those of the New England architectural tradition; although in its cubic form the Italianate seems to have enjoyed greater popularity as a rural dwelling within the greater Yankee culture realm than elsewhere in the country. The Cube is defined by its cube-like massing, two story height, and a shallow-pitched hip or pyramid-shaped roof. It is representative of the picturesque aesthetic. While the Italianate stylistic idiom is not limited to cube-shaped buildings, this common bearer of the style with its morphological simplicity easily subjects it to “type” identification. In Michigan the Italianate Cube enjoyed its greatest popularity during the 1870s and 1880s. It is a common farmhouse type in central

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<sup>21</sup>Some scholars refer to a house type they call a *Tri-Gabled Ell*. It remains unclear whether the Tri-Gabled Ell and the Upright-and-Wing are the same house type or whether there are subtle morphological differences especially as relates to an ell or tee shape. Certainly, late nineteenth century ell- and tee-shaped houses have lost their Yankee cultural association and are distributed far beyond areas of New England settlement; however, the same can be said for the Cape Cod Cottage, which other than the New England One-and-a-Half Cottage exception, has continued to bear the same name in its revival manifestations.

<sup>22</sup>The term “hen-and-chicks house” has vernacular origins and is reflective of the dwelling's morphology. Some architectural historians, however, disdain the use of vernacular nomenclature even in a vernacular context. A more formal designator is “basilica-plan house.”



Michigan, where the period of stylistic popularity coincided with the time frame when pioneer shelters were replaced with a substantial home. The degree of ornamentation and sophistication of surviving examples ranges over a broad spectrum. Some Italianate Cubes are adorned with metallic cresting or a belvedere at the peak of the pyramid roof. The most upscale are usually of brick or other masonry construction. In some localities in Michigan such as Ionia County, the cube may be conjoined with a side wing.

#### The Upright House

The Upright House (Figure 5.12), like the earlier Temple House, is oriented with the gable end presented as the facade. A common vernacular house form in the aftermath of the Civil War, this house type has received little academic attention. Compared with the Upright-and-Wing House, it simply consists of the upright without the wing. Although brick examples have been specifically observed in Monroe County and in Ann Arbor's "Old West Side," most examples are modest wood structures appropriate for the lower middle class. Because it is adaptable to urban lots, it is far more common in town settings in Michigan than as a farmhouse. It has no ethnic or culture group affiliation. Given the lack of study, it is unknown when construction of this house type ceased.

#### The Foursquare House

Popular between 1890 and 1930, the two-story Foursquare House (Figure 5.13) has a square or rectangular footprint, is two-and-one-half stories in height, and is surmounted by a shallowly pitched pyramid roof. A chimney or flue is located at or just off-center of the peak of the roof. The Foursquare is often confused with the similarly massed Italianate Cube. In comparison, the Foursquare is generally wider than the Cube, and first began to appear on the scene in the 1890s just as the Italianate style was fading in popularity in Michigan. In terms of stylistic embellishment, the Foursquare farmhouse is usually rather plain compared with its urban cousin and is often referred to as a "Cornbelt Cube" (Kniffen 1965). One or more dormers are frequent although not invariable roof elaborations.

The Foursquare House has a nationwide distribution, its dissemination being associated with house plan catalogs and its availability as a mail-order kit house. It fills the same socio-economic niche as the Upright-and-Wing House; however, while common in rural Michigan, it is nowhere as numerous as the older house type. Conversely, as one moves westward through Illinois and into the Great Plains, where the Upright-and-Wing House is frequently referred to as a "Yankee house," the ratio of the two house types shifts in favor of the Foursquare. By the time catalog plans for the Foursquare materialized, most Michigan farms already had post-pioneer-period farmhouses, and between 1880 and 1920, many Michigan farmers were investing their capital in new barns to accommodate increased numbers of livestock rather than in a replacement farmhouse. To the extent that Michigan farmers in the southern part of the state built new, up-to-date farmhouses during this period, they were as likely to choose a late nineteenth-century version of the Upright-and-Wing House (or Tri-Gabled Ell) as a Foursquare. Whether this generalization is applicable to those parts of Michigan that were pioneered after 1870 awaits survey work for resolution. Few Foursquare houses were built after the onset of the depression in 1929.

### The Bungalow

A wide variety of one to one-and-a-half story dwellings were built during the first three decades of the twentieth century that were called Bungalows (Figure 5.14) at the time of their construction. Some bear little or no decoration, while others range through a variety of styles.<sup>23</sup> Other than their height and a porch or elaborated stoop, they have few morphological common denominators. Whether to define the bungalow as a house type or as a style of house is perplexing. Style books, in large part, have established our mental image of a bungalow, but the examples illustrated in most style books are limited to the Craftsman or Arts and Crafts style, a design aesthetic not limited to bungalows (Gowans 1986: 74-76). In an issue of *Keiths' Magazine* in 1916, it was argued that bungalows represented “the dominance of an idea over the form in which it is embodied” (Gowans 1986: 75).<sup>24</sup> Nevertheless, in Michigan, most rural Bungalows are in the Arts and Crafts style.

Bungalows, especially those of the Arts and Crafts style, are particularly prominent as farmhouses in the Upper Peninsula and the northern third of Michigan's Lower Peninsula. In these late settled areas, many farmers did not possess the wherewithal to build a fashionable house before the first years of the twentieth century. In fact, in the Upper Peninsula the demand for food to export during World War I created one of the region's few periods of agricultural prosperity, leading to the opening of many new farms (Heimonen 1957: 46).

A significant number of these Bungalows were constructed with cobblestone and fieldstone endowing them with a pleasing beauty transcending the usual farmhouse. The use of uncoursed cobble and fieldstone has been used for a variety of buildings and yard constructions in northern Michigan, and these buildings contribute to the regional sense of place.<sup>25</sup> These stone bungalows and other rural cobble- and fieldstone structures possess regional and period-specific significance and where they have maintained exterior integrity, they should be recorded and every effort made to preserve them.

During the early decades of the twentieth century, as mechanization of agricultural activities and household tasks expanded, the size of new farmhouses contracted as there was less need to house domestics and hired hands. To the extent that hired help was still needed, the automobile and improved road systems made their lodging in towns and villages practical and desirable. Consequently smaller farm dwellings of four to six rooms like the Bungalow became adequate in contrast with earlier farmhouses of eight or more rooms (*Michigan Farm Homes* 1934: 17).

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<sup>23</sup>Alan Gowans quotes critics of the day deploring colonial revival bungalows (1986: 65, 75), and identifies other styles associated with bungalows. In Chicago, whole neighborhoods of self-proclaimed bungalows carry the aura of the Prairie style; and the writer once lived in a Spanish colonial-revival bungalow in California.

<sup>24</sup>This also seems to be the essence of Mattson's interpretation of the bungalow (1981).

<sup>25</sup>An occasional bungalow incorporating the use of uncoursed cobblestone can also be encountered in central and southern Michigan.

## **The Michigan Barn**

### ***Michigan Barn Types: An Overview***

Recently John Vlach (2003) and Thomas Hubka (1994: 2-7) have each provided excellent general overviews of the history of the barn in the United States. Hubka defines a barn as “a farm building for sheltering, processing, and storing agricultural products, animals, and implements. Although there is no precise scale or measure for the type or size of an agricultural building that constitutes a barn, the term barn is usually reserved for the largest or the most important structure on any particular farm. Smaller or minor agricultural buildings are often labeled [as] sheds or outbuildings and are usually used to house subordinate activities” (Hubka 1994: 2).

Hubka argues that one of the major themes in the historical development of the American barn is the diffusion of European ethnic barns to America and then the gradual abandonment of ethnic construction and the adoption of building practices reinforcing greater unity and standardization in construction and function. The two most important groups to influence barn development in the colonial period were the English, whose single-level barn was designed for threshing and small grain storage, and the Germans, who centralized multiple agricultural activities in a single two-level structure. The subsequent blending of the two traditions “largely defined the major developmental trends in American barn building” during the eighteenth and nineteenth centuries (Hubka 1994: 3-4).

In the late nineteenth century, a revolution in American barn building erupted, which represented a watershed division in barn construction between modern and pre-modern types. The medieval heavy timber, mortise-and-tenon system was relinquished for a balloon frame and nail system of construction. The modern barn incorporated first gambrel, then gothic roof forms and standardized, lightweight, machine-sawn structural members with nail construction supporting advanced truss configurations. These barns were products of the application of agricultural science at various university agricultural experiment stations. A second major shift in barn construction materialized after World War II when pole barns constructed of metal and concrete proliferated (Hubka 1994: 6). Their appearance more approximates that of a warehouse than the iconographic image we carry in our minds of a cathedral barn. This last period, still ongoing, can be called the era of industrial barns.

The multi-functionality of the barn is expressed in its interior spatial organization. It may be divided into either one or two levels, each serving one or more functions. In colonial New England and Michigan during much of the nineteenth century, most barns generally consisted of one level, subdivided into a multifunctional ground story and an interior balcony-like loft overlooking the central aisle. Farm animals were limited to those serving the subsistence needs of the farm such as draft animals and a milking cow, therefore were few in number. After the Civil War the number of livestock per farm increased in Michigan, necessitating more barn space for shelter. New two-level barns were constructed to meet this need. In these new barns, the traditional earlier barn spaces

were elevated to a second level, and a basement floor to stable animals assumed the ground-level position. Each level will be discussed in turn (Visser 1997: 63-66, and Noble and Cleek 1994: 51-51).

In a single-level general-purpose barn, the ground floor is typically divided into three sections. The central section, or bay, cuts across the long axis of the barn linking large entry doors in the front and back elevations of the barn. This bay comprises a runway called the wagon drive or drive floor. It allowed the farmer to drive his wagon directly into the barn to off-load hay and grain for storage. The rear door enabled the farmer to exit the barn without having to force his wagon team to back up. When the drive bay was not in use for other purposes, the wagon was also often parked there out of the weather. The central bay was also frequently referred to as the “threshing floor.” Before the advent of mechanical threshing machines, grain crops were hand-threshed in this space using a flail to separate grain from straw. Accordingly, the floor needed to be tightly planked to prevent the loss of grain. Open doors at each end of the central bay created a wind tunnel. Consequently, after threshing, the grain was winnowed in the same location by tossing the grain and its admixture of chaff into the air, allowing the lighter chaff to separate and blow away. Some Michigan barns have double drive floors (Hartman 1976: 78).

The side bays also served specific functions. One of the side bays was divided into stalls for milk cows, draft animals, and sometimes one or more horses and, more rarely, other farm animals. If a farmer had more domestic animals than could be accommodated in the stable area, he added a shed-roofed addition attached to the rear or one side of the barn. These lean-tos became more common in the nineteenth century as farms grew in size and productivity. The other side bay housed the “great haymow” or was used to store grain, and sometimes straw derived from threshing and used for animal bedding.

The area above the barn plates consisted of a partial or full loft. When the loft was a partial one, it was most often located over the stable bay. On the mow side, the loft might be left open with hay extending up to the rafters. Whether full or partial, the loft was not necessarily floored-in. Instead, loose boards or saplings could be laid between bent beams sufficient to support the hay or shocks of grain. New England farmers called this configuration “the scaffold” or “the rye beams.” This method of scaffolding frequently extended over the wagon aisle. On one or more scaffolds, bound sheaves of grain were laid down in preparation for threshing, which began in the late fall and extended into the winter months. These ground-level barns could be expanded not only by the addition of lean-tos, but also by extending the length of the barn with the addition of bays.<sup>26</sup>

At mid-nineteenth century, agricultural publications furiously debated the merits of expanding or replacing ground-level barns with two-level barns that incorporated a ground-level stable (Soike 1995: 84). Soon after the Civil War new two-level barns began to appear in Michigan, reflecting a shift in commercial enterprise from small grain

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<sup>26</sup>Noble and Cleek (1994: 52) shows six common combinations of threshing floors and bays; and Visser (1997: 68) has still another documented combination.

agriculture to one of mixed enterprises, enlarging the role of animal husbandry. Broadly speaking, the spatial arrangement of functions in the new two-level Michigan barns was patterned after those of Pennsylvania where German and Swiss settlers had introduced mixed farming agricultural practices in colonial times. In appearance, however, the post-Civil War two-level barns of Michigan looked much like the earlier single level barns except that they were pushed skyward to make room for a basement underneath.

In two-level barns stabling and storage functions were separated and relegated to separate floors of the barn. The new basement level became the area where animals were stabled. Depending on the type of two-level barn, the functional spatial organization within the basement level varied. Even within each barn type, variation existed. Late in the nineteenth century and continuing into the twentieth century, increasing numbers of windows were built into the basement walls once it was realized that the health of livestock benefited from ample interior light.

The former ground level became the second story in these new barn types. Michigan farmers were relieved of the arduous and time-consuming tasks of threshing and winnowing by the introduction of mechanical threshers and winnowing mills even before the Civil War. Consequently, the threshing floor lost its functionality.<sup>27</sup> Nevertheless, the wagon drive remained essential for transporting hay directly into the barn until the invention of overhead hay carriers, hay slings and hay forks. Wagon access to the second story was achieved by one of two means. The barn might be built into a hillside or embankment, allowing animal entry into the basement on the down-slope side and direct wagon access into the second level on the up-slope side. On the other hand, if the barn was constructed on level ground, it became necessary to erect an earthen wagon ramp up to the second story drive.<sup>28</sup> Since livestock were no longer housed on the same level as the drive, and because of the increased number of animals on the farm, the second story became essentially a storage area for animal feed, primarily hay crops. An open area in the floor, where hay was dropped down to the stable area below was called a “hay bay.” Alternatively, chutes were utilized for the same purpose. For small grain storage, some farmers installed grain bins on the second floor (their presence often marked by windows), while others relied on separate granary structures outside the barn.

Initially two-level barns continued to use the traditional side-gable roof; however, beginning in the 1870s and accelerating during the 1880s, the gambrel roof made its appearance on new barns, or in some cases by means of re-roofing an old barn<sup>29</sup> (Figure 5.15). A variant of the gambrel roof with three pitches per side is found in Ingham County. Called a “three-hip” roof, they were built by a single barn builder at the turn of the twentieth century who developed his own unique system of diagonal bracing

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<sup>27</sup>Visser (1997: 64, 75) reports that mechanical threshers had become common in the 1820s, and generally replaced the need for threshing floors in New England by the 1830s. One would expect that this transition took place somewhat later in Michigan, after the period of pioneering had passed. The labor shortage precipitated by the Civil War accelerated the shift to mechanical threshing.

<sup>28</sup>Because of the ramp, the associated barns are often incorrectly called “bank barns,” thereby confusing them with those that are built into a natural embankment.

<sup>29</sup>During the 1880s lumberyards started to stock prefabricated gambrel trusses (Hart 1998: 201).

(Hartman 1976: 83).<sup>30</sup> Still another roof type, the arched roof,<sup>31</sup> with late nineteenth century roots in Isabella County, Michigan, became popular for both one- and two-level barns during the 1920s in selected Michigan localities (Fogel 1925). This was particularly the case in the Cut-Over areas of Michigan where agriculture became significant only after land abandonment by the forestry industry. The functional desirability of these roof types was that each, in turn, increased loft space for the storage of hay (Vogeler 1995: 106). They reflect the continuing trend toward the expansion of livestock in farm operations and the declining functional association of the barn with small grains. From central Michigan northward, gable roof barns are relatively uncommon except on pioneer-era structures.

After about 1920 advances in mechanization and a trend toward productive specialization created new demands for implement storage facilities and further altered traditional barn functions (Harper and Gordon 1995: 224). Animals were displaced by tractors and a variety of other specialized gas- and diesel-powered machinery. As the equipment increased in size, traditional barn doors and post-and-beam construction became obstructions to easy entry. New barn types free of interior post supports were required. As described by Dandekar, Darvas and MacDonald (1992: 59): “All of the new demands placed upon barns meant that the resulting structures were significantly more complex than traditional American barns. The development of ‘factory barns’ marked a transition in the way farm buildings were conceived, built, and used. Farm buildings no longer remained the domain of folk designers. They were no longer the products of local craftsmen or community cooperation in the form of traditional ‘barn raisings.’ Farm buildings were increasingly becoming the domain of a new breed of professionals known as ‘agricultural engineers.’”

By the 1930s the laminated arched-roof barn type and early single story metal-paneled pole barns were demonstrating their flexibility in meeting the changing circumstances, and heralding the end to the era of great timber-, plank- and balloon- framed barn building in Michigan. A new era of industrial agriculture was underway. As early as 1972, J. B. Jackson, America's preeminent landscape scholar and founder of the quarterly journal *Landscape*, called attention to the changing skyline of the American agricultural landscape. He observed a shift from a vertical to a horizontal emphasis in agricultural structures and the organization of functional space (Jackson 1972b: 155-158, Carlson 1978: 32). As ranch houses succeeded nineteenth century two-story dwellings and pole barns displaced the cathedral barns of an earlier time, only silos still stood tall. Today horizontal silos, trenched into the ground or bunkered above ground and geared to grass ensilage provide an alternative to vertical silos, although the latter still hold their own for green corn. Jackson named the emergent landscape “American Classicism.” The use of these new building forms has continued to the present.

Once a barn was built farmers generally adapted it to changing functions as their farm operations evolved over time. Consequently function does not provide a reliable basis

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<sup>30</sup>The source does not identify the barn builder.

<sup>31</sup>Also called a Gothic roof, a round roof, or rainbow roof, depending on the configuration used (Noble and Cleek 1995: 37-38). The latter source depicts the full range of roof types, pages 35-40.

upon which to base a barn typology. Nevertheless, we should realize that in most cases the *original function* of the structure is reflected in its morphology. The morphology, then, becomes one piece of evidence concerning the prior history of the farm operation. In evaluating the significance of an individual farm property, it is important to identify not only the current function of the barn, but in the case of an older barn, to reach an understanding of its original function, and when possible, the history of its intermediate uses. Such an investigative path assists in understanding the sequence of farming systems that have been employed on the farm over the years.

Cultural geographers have carried out the majority of scholarly studies that emphasize barn types and their functions, origins and diffusion. Wilber Zelinsky claims “enough work has been done on barns to indicate that they are perhaps the most conservative of structures in general use and may serve quite as effectively as house types to indicate sources, routes, and dates of settlers and the spatial outlines of culture areas” (Carlson 1978: 29).

A wide range of barn types is to be found in the United States, only some of which are prevalent in Michigan (Noble and Seymour 1982: 155-170; Noble 1984b; Noble and Cleek 1995).<sup>32</sup> As was the case with pre-Civil War dwellings, the ancestral roots of Michigan barns can, for the most part, be traced back to New England (Figure 5.16).<sup>33</sup>

Despite an overall growth over time in the size of barns in Michigan, a continuing response to evolving agricultural systems, the majority of Michigan barns belong to a related family of barn types derived from the “English barn” (Kniffen 1965: 11-12; Glassie 1974: 177-235; Noble and Cleek 1994: 49-63). Throughout the colonial period, New Englanders utilized a standard design brought with them from England although they made modifications in adjustment to the rigors of New England winters, and with the widespread availability of timber, they built their barns of timber rather than stone (Noble and Cleek 1995: 77).<sup>34</sup> Dimensional standards were adhered to sufficiently that farmers often referred to their barns as the “thirty-by-forty” (Visser 1997: 61). “The English barn,” in its original single level form, moved westward to the grasslands with remarkably little change (Kniffen 1965: 11; Calkins and Perkins 1995: 43).

In terms of morphology, the English barn is a rectangular-shaped one story-and-loft, side-gabled structure. Although the number of bays can vary, prototypically the barn is divided into three functional units or bays, as previously described.<sup>35</sup> Large hinged or sliding doors provide entry to a wagon drive in the central bay. During the 1830s New Englanders not only reoriented new dwellings so that the gable was front-facing, but according to Visser (1997: 74), they began to do the same with new barns (see Hubka

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<sup>32</sup>Noble and Seymour (1982: 192) provide maps depicting the distribution of barn types but they should be used with caution. The distributions were not determined by field observation but by questionnaires returned to the authors by agricultural extension agents whose interpretations of diagrams of barn types are likely to have varied.

<sup>33</sup>For the most comprehensive existing analyses of New England barns and outbuildings, see Visser (1997).

<sup>34</sup>Nevertheless, many barns in southeastern England were also built of wood. M. S. Briggs noted that early New England barn framing is exactly like that of southeastern England (Briggs 1932: 62).

<sup>35</sup>Given the spatial layout, this barn type has also been called a “tripartite barn.”

1984: 52-61). One of the advantages of the gable-front barn was that new bays could be added to the rear and remain accessible to the central wagon drive. While this diminished the effectiveness of the drive as a wind tunnel for hand winnowing, the change in barn orientation coincided with the appearance of mechanized threshing and winnowing. Hart suggests that this reorientation began in the 1820s and reflected a fundamental change in the function of the barn in New England. It had evolved into a hay barn, no longer intended for threshing. Animals were sheltered under the hayloft on one side of the wagon drive, while the other side stored more hay (Hart 1998: 207). Coincidentally this is the very period during which substantial Yankee migration to Michigan was initiated. In Michigan settlers encountered an environment more amenable for growing wheat, their traditional small grain crop, than was the case in New England and upstate New York. Moreover, frontier conditions delayed adoption of mechanized threshing and winnowing. Consequently Michigan farmers continued to use the traditional English threshing barn rather than the newer version with its gable entry.

After the Civil War, as commercial wheat growing moved westward into the plains across the Mississippi, Michigan and the rest of the Great Lakes region gradually shifted into mixed or general farming with a consequent increase in farm animals. The at-grade three-bay English barn lacked the capacity to shelter the increased number of animals. Expanded versions of the English barn, such as the Bank Barn and the Raised Barn, incorporating a basement stable area under the traditional barn, emerged to meet the need. Wing and shed additions also increased shelter capacity for livestock as well as for the fodder and bedding that they required.

Regional preferences for the configuration of additions to the barn can be found in Michigan. At this point our knowledge about such regionalisms is scattered and incomplete. In Genesee and Shiawassee Counties, lean-to additions on the rear long wall are common. In other parts of the state a local preference for lean-to appendages on one or both of the short ends of the barn, or right-angle “L” or “T” configurations may be observed (Dandekar, Darvas, and MacDonald 1992: 105).

Although many older barns were refitted for dairying, as health and sanitation regulations became more stringent and as the scale of dairying operations increased, many farmers found it expedient to build new barns especially designed for the purpose. Unlike earlier barns that had folk roots, specialized dairy barn designs were largely the product of land-grant college agricultural experiment stations and departments of agricultural engineering. Designs developed at Michigan State College, the University of Wisconsin, Iowa State College, the University of Minnesota and the University of Illinois were particularly influential. Another source of barn designs and plans was the James Manufacturing Company of Fort Atkinson, Wisconsin, founded in 1906. By 1914 it claimed to be “the largest exclusive barn equipment manufacturer in the world” (*The James Way* 1918: 304). At the back of their 1918 catalog is a partial list of their users throughout the United States. Among the Midwestern states, Michigan's list is the longest (Vogeler 1995: 104).<sup>36</sup> In fact, after 1900 affordable and readily available barns

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<sup>36</sup>If a copy of the above publication can be located and made available to field surveyors, it could provide useful information about barns linked to this manufacturer.



could be ordered by mail. A variety of popular designs were rendered by such companies as Sears, Roebuck and Company, using the “Honor-Bilt” product name; Aladdin; Sterling; Crane-Johnson Company; Gordon VanTine Company; Rilco Laminated Products Company of St. Paul; and the Radford Company (Brooks and Jacon 1994: 50; Dandekar, Darvas, and MacDonald 1992: 61).

One counter-trend to the increased presence of livestock was the replacement of horses by the automobile and draft animals by the tractor during the first decades of the twentieth century. Generally, this increased barn space for cows or beef cattle.

### **Common Michigan Barn Types**

When surveying a group of farm properties, using a morphologically-based typology provides a constant categorical basis for statistical analysis and fosters regional comparisons of cultural landscapes and the development of historical and regional generalizations. The following barn types are among the most common found in Michigan.<sup>37</sup> As for farmhouses, the descriptions are of prototypes. Many barns that fall into one category or another are well disguised by attached appendages such as sheds and transverse wings, atypically located doors, extension of the barn by the inclusion or addition of extra bays, variety in roof shape, and ranges in scale.

It is by no means certain that all the generic barn forms that exist in Michigan are yet identified. If field surveyors encounter a barn form appearing neither in this typology nor in the books of the aforementioned barn authorities, it may be a unique, individually designed barn and it should be documented and evaluated as to whether its uniqueness confers sufficient significance for preservation or mitigative documentary recording. If, however, surveyors “repeatedly” encounter the same undescribed barn form, they very likely have come upon a heretofore unidentified barn type, and they should analyze the type in terms of its external morphological characteristics and its most common internal organization of functional space. It should also be evaluated as to whether it was designed to serve an agricultural system that is still practiced or whether it is a relict feature reflective of a bygone agricultural system.

### **The Threshing Barn**

The Threshing Barn (Figure 5.17), typically three bays in width, was Michigan's first substantive timber-frame barn (1820s) and remained the dominant barn type until the 1880s. This barn type comprises a ground-level structure with hay loft, rectangular in shape, three or more bays wide and one bay in depth, with a wagon-drive normally located in the central bay, capped by a side-gable roof. A similar ground-level three-bay barn, called a *Grundscheier*, was a common type in parts of Germany (Noble and Cleek 1995: 85-89) in the nineteenth century, and may explain why so many German immigrants to Michigan so readily made use of this Yankee barn type.<sup>38</sup> Michigan

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<sup>37</sup>More extensive typologies may be found in Visser (1997), Noble (1984b), and Noble and Cleek (1995).

<sup>38</sup>See Wilhelm (1992: 70-71), in which the author reports that Lower Saxon German barns of this type, employing a Dutch-North German mortise-and-tenon framing detail, have been identified in Auglaize and Mercer counties in Ohio. Consequently, when surveying in Michigan areas of German settlement, bent

farmers built three-bay barns until well into the twentieth century (Hart 1998: 209). Although three bays is the prototypical dimension, extended threshing barns are not unusual, especially four bay examples. Even now, at the beginning of the twenty-first century, the Threshing Barn remains commonplace as a relict feature in southern and central Michigan. As larger barns appeared to meet changing agricultural circumstances, many of the smaller, one-level threshing barns were recycled to meet secondary functions. The extent of the Threshing Barn's distribution and the nature of its functions in sections of northern Michigan await systematic barn surveys within the state.<sup>39</sup>

As farm animals increased in number on the Michigan farm during the second half of the nineteenth century, a series of barn types, collectively called "Basement Barns," evolved to meet the need. Most of these barns owe their ancestry to the English threshing barn, and all contain a basement of masonry construction to provide more efficient weather protection for the stable level. Initially the approximate 30'x40' dimensions were retained for these two-level barns, but after the Civil War basement barns grew in size to accommodate a larger mixed farming operation, and eventually, specialized dairying. Roof form also evolved from gable to gambrel to a rounded or pointed arch, with each change increasing hay storage capacity. Initially basement barns retained the principal opening in the long axis of the barn as was the case with the earlier Threshing Barn. With the emergence of the Raised Barn (described below), however, the principal entry to the basement for many new barns shifted to the gable elevation. As John Fraser Hart points out (1998: 221), this shift in entry location indicated a major change in the function of the barn, which was associated with a fundamental change in the entire farming system. The barn no longer served the primary purpose of threshing wheat, but became a structure for storing hay. The farming system, itself, made a transition to agricultural operations devoted to the production and sale of livestock and their byproducts.

### The Bank Barn

The Bank Barn (Figure 5.18) is morphologically similar to the Threshing Barn. However, the distinctive difference is that the Bank Barn, sometimes called the Side-Hill Barn,<sup>40</sup> rests on a stone basement level that has been built into a hillside. The barn is situated on a slope sufficient to allow the basement level to be entered by man and animal from the downhill side of the structure. The basement comprises the stable area and houses all the functions needed for sheltering, feeding and caring for the animals. The doors are generally smaller than those for a wagon drive since they simply serve for

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construction techniques should be investigated to distinguish between Yankee Three-Bay Threshing Barns and potential *Grundscheier* Barns.

<sup>39</sup>Any survey of barns in northern Michigan should be sensitive to the possibility that some Three-Bay Threshing Barns have been constructed of notched logs. Hart provides a photograph of one in Quebec (1998: 206). Calkins and Perkins also note that ethnic immigrants in the latter part of the nineteenth century built the three-bay barn form, but utilized different building materials and construction techniques (1995: 52-54, 59). This is likely to be the case in the Upper Peninsula and in the Cut-Over areas of the Lower Peninsula settled by Finns, Poles and other groups. It is probable that the Three-Bay Barn has been used primarily for hay storage in northern Michigan.

<sup>40</sup>In various publications Noble and Cleek (1995) have called this type a Bank Barn; Visser uses the terminology, Side-Hill Barn (1997: 70-71).

passage of man and animal. The second level, with its wagon drive and large hinged or sliding doors, is entered from the uphill side. With animal shelter shifted to the basement, more room is available within the drive-level for the storage of hay and crops. If necessary, as on a small slope, a shallow ramp may lead up to the central bay to accommodate the entry of the wagon. The loft is used for the storage of hay to feed the livestock during the winter. A disadvantage of the Bank Barn is that the basement, partly entrenched into the ground, is damp and dark, to the detriment of the health of the livestock.

Visser (1997: 70) reports that Side-Hill Bank Barns were being built in New England as early as the 1820s. This information suggests that once early Michigan settlers were in a position to move beyond the log structures associated with pioneering, some may have built Bank Barns as early as they did Three-Bay Threshing Barns. Those built later in the nineteenth century are larger in dimension than their predecessors.

A transitional form between the Threshing Barn and the Bank Barn was a traditional threshing barn with a low cellar tucked underneath to provide a frost-free manure storage area under the stables. Fieldstone typically encapsulated three sides of the cellar, which could be left open at the down-slope end or enclosed with a wooden wall, door(s) and windows. Sometimes the cellar also housed some animals, especially pigs, or was used to store tools (Visser 1997: 70-71).

### The Raised Barn

The Raised Barn (Figure 5.19) is similar in many respects to the Bank Barn. Like the Bank Barn, the Raised Barn is rectangular in shape and consists of two levels: an on-grade basement encased in masonry walls; and the main level with accompanying loft, sided with vertical boards. However, the Raised Barn is sited on relatively level ground, which necessitates erecting an earthen ramp or barn bridge up to the wagon door at the second level. The barn type is larger than earlier barn types with many extending up to 30 to 50 feet in depth and 60 to 100 feet in length. Some range up to five bays (Noble and Cleek 1995: 81-82).<sup>41</sup>

The main story and loft provided storage for hay and, sometimes, small grain, as was the case with the Bank Barn. While the basement remained an animal stable, interior spatial organization varied considerably. Because the basement now was fully on grade, doors and windows could be located at the pleasure of the farmer and better provide sunlight for the health of the livestock. Many farmers found it more efficient to realign cattle and horse stalls to an aisle oriented along the long axis of the barn. The internal rearrangement of functional space was accompanied by a shift of the basement doors to the gable elevations.<sup>42</sup> Although the latter feature is not a defining characteristic, when

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<sup>41</sup>These dimensions need local verification.

<sup>42</sup>Hart (1998: 201) argues that in the analysis of barns, “the size and placement of doors and other means of access, which reveal how a barn could be used, are more significant than its roof, building material, or color. While small doors can admit people and animals, wagons and machinery require larger entryways. The principal doors of threshing barns usually are in the sides of the barns, but the principal door of a hay barn often is in the end.” See also Noble and Cleek (1994: 56-58).

present, it does suggest the internal organization of space. The reorientation also represents a precursor step toward the development of the modern dairy barn.

Beginning in the 1880s, Raised Barns were increasingly built with gambrel roofs to amplify the storage capacity of the hayloft. Early in the twentieth century the gothic or arched roof became popular, again increasing the loft's storage capacity (Figure 5.19), although by that time innovations in motive power for moving hay into the loft enabled farmers to build a Foundation Barn (see below) instead of a Raised Barn if they so chose.

### The Foundation Barn

The Foundation Barn (Figure 5.20) has only recently been identified as a distinct barn type, although examples have been illustrated and discussed for some time in functional, if not morphological, terms within the context of the dairy industry (Noble and Cleek 1994: 59-60; Noble and Cleek 1995: 82-83).<sup>43</sup> Morphological characteristics include a rectangular shape massed in two levels with the major doors into the ground level located in the gable ends of the structure. Roof shapes range from gable and gambrel to an arched variety with the latter two forms the most common. The ground level is frequently constructed of masonry materials, including cement block, and rows of windows in the eave-side elevations testify that the structure is a dairy barn. Early Foundation Barns are similar to the Raised Barn except that wagon access to a second story is no longer necessary, and consequently the barn lacks a ramp. This being the case, the stable level should no longer be considered a basement but rather the main floor, located on-grade.

This reformulation of barn space proved to be ideally suited for service as a dairy barn and could be built on a more massive scale than earlier barns for large dairy operations (see *Wisconsin Dairy Barn*, below). The large entry usually is into the stable level at the gable end. For purposes of health and light, dairy barns utilize by far more windows than is the case with barns built before the twentieth century.<sup>44</sup> Moreover, for health related cleaning purposes, cement floors now become characteristic. Gambrel or arched roofs are most common because they enhance hay storage capacity. Barn roof form is such a distinctive morphological feature that it may be advisable, when inventorying, to identify Foundation Barns in subtype groupings according to roof profile even though the form of the roof does not influence either the function or the organization of interior space beyond that of storage capacity. The Foundation Barn is the first barn type for which the gambrel and Gothic or arched roof is commonplace.

The so-called *Wisconsin Dairy Barn* (Figure 5.21) mentioned in a number of typologies simply appears to be a latter day more mature and volumetrically expanded version of the Foundation Barn,<sup>45</sup> which incorporates more windows in the stable walls. Another

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<sup>43</sup>Visser (1997: 97-101) calls it a Ground-Level Stable Barn. Visser's illustrations all appear to be of functional dairy barns. Some typologies identify barn types variously called a New York basement barn and a Wisconsin dairy barn. These are large, highly specialized Foundation barns developed by the agricultural extension services of various universities.

<sup>44</sup>The cost of window glass was substantially reduced with the introduction of glass rolling mills after the middle of the nineteenth century (Noble and Cleek 1995: 48).

<sup>45</sup>Noble (1984b: 45), states that one of the advantages of the Wisconsin Barn is that it can be built in

common feature introduced before World War II is a series of metal roof ridge ventilators with metal fans (Noble and Cleek 1995: 44). In the late nineteenth century, before the appearance of metal ventilators, cupolas and dormers were sometimes used to provide light and ventilation in the hayloft (Vogeler 1995: 104-105).<sup>46</sup> Noble and Cleek discuss a number of these loft ventilation systems in *The Old Barn Book* (1995: 43-45). Such features can assist in dating barns and/or when modifications occurred.

The Foundation Barn appeared as a response to the invention of the hay fork. The hay fork operates on a pulley and track system mounted under the roof ridge in the barn loft called a bay door. Hay can be mechanically lifted from a wagon or truck outside the barn through an opening in the loft, and guided to its place of storage. Hay forks appeared in New England during the 1860s, their invention possibly stimulated by the shortage of labor during the Civil War (Visser 1997: 48, 50, 80). Sometimes the roof ridge pole and the hay track are cantilevered beyond the gable wall, protected by a sheltering hay hood, to facilitate the lifting.<sup>47</sup>

The Foundation Barn (or Wisconsin Dairy Barn) is sometimes referred to as a *Land Grant Dairy Barn* or a *Ground-Level Stable Barn*.

#### The Round And Polygonal Barns

Round and Polygonal Barns (Figure 5.22) comprise another closely related family of barns. Originating in the Northeast and the South, they are, nevertheless, preeminently barns of the Midwest although there are only a limited number reported present in Michigan (Sculle and Price 1995: 188).<sup>48</sup>

Round and polygonal barns usually function as dairy barns. They may range from one to two or more levels, with a drive ramp leading to the second level, or, in some instances, with a high-drive into the upper loft. Originally a hayloft occupied the central area of the barn, but in some barns built early in the twentieth century, the center is occupied by an enclosed wooden silo (Visser 1997: 94). The Illinois Agricultural Experiment Station, in particular, championed round barns built around silos (Hart 1998: 225).<sup>49</sup> As a variety of functional deficiencies emerged and were noted in the agricultural press, few were built after 1920 (Sculle and Price 1995: 204-208).

Unlike earlier barns, the origins of the Round Barn are not derived from folk culture. Instead, the barn design is a product of advocacy literature associated with the

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varying lengths to accommodate herds of various sizes.

<sup>46</sup>The author states that cupolas were more commonly employed on dairy barns in the East than in the northern Midwest.

<sup>47</sup>Several kinds of hay hoods, also called hay bonnets or hanging gables, are illustrated in Noble (1984b: 7), and Noble and Cleek (1995: 42).

<sup>48</sup>The authors provide a distribution map of 1,048 known non-orthogonal barns in twelve Midwestern states, although the Gagetown Octagon in Tuscola County was omitted, p. 189. For identification, photographs, and discussion of several Michigan examples, see Hartman (1976: 85-90).

<sup>49</sup>For the earlier importance of Franklin H. King as a designer and advocate at the University of Wisconsin, see Sculle and Price (1995: 195-196).

progressive agriculture movement of the late nineteenth and early twentieth centuries.<sup>50</sup> Most round barns were built between 1880 and 1920 (Sculle and Price 1995: 188). For polygonal barns, the number of wall elevations range from six to fourteen, but an octagon configuration is most common (Noble and Cleek 1995: 120). They may be constructed of wood frame, brick, or stone.

### The Erie Shore Barn

The Erie Shore Barn (Figure 5.23) is a small, one-level barn of approximately 30 by 40 feet dimensions with the drive floor located at one end of the barn, running from front to back. The rest of the ground-level interior consists of stabling, separated from the drive floor by granaries and equipment rooms. A secondary livestock door services the stabling area and is located in the gable elevation at the opposite end of the barn from the drive floor. A hay loft runs the length of the barn and provides a vault that is free of obstructing cross members. Noble states that it is the first barn type specifically incorporating a gambrel roof in its design (1984b: 44).

The barn was first identified as a morphological type in a survey of nineteenth century barns in southern Ontario (Ennals 1972: 256-270).<sup>51</sup> Subsequently it has also been found in widely scattered areas of the United States, particularly in the Great Lakes region. A small barn, it is reportedly found on small farms needing limited barn space (Hart 1998: 225). According to Ennals, the Erie Shore Barn in Ontario meets the needs of farmers producing one or more specialty crops such as tobacco, fruit or grain crops (1972: 267). Its use(s) in Michigan remain to be investigated.

This barn type has no known ethnic material culture affiliation. Noble suggests study is needed to determine whether it originated from a design worked out by Professor G.T. Fairchild at Michigan Agricultural College around 1880 (1984b: 44).

### The Roof Barn

The Roof Barn (Figure 5.24) is descended from earlier barns with gambrel and arched-roofs, but it is distinguished by the lack or near lack of vertical walls. The roof sits directly on the barn foundation, which ranges in height from about one to three or four feet. Arched roofs may be rounded or pointed. Some of the earlier roofs are of laminated wood construction, but many, dating right back to the use of Quonset huts, are built with metal sheeting. A major advantage of the Roof Barn to the farmer is the reduced cost of construction implicit in foregoing walls. It is generally characterized by a single, on-grade level.

The interior stands free of supporting obstructions and the gable entry can be sized to accommodate whatever purpose the farmer desires for his barn. Although there is some inefficiency in use of space under the lower slope areas of the roof, the barn provides

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<sup>50</sup>Admittedly the first round barn design originated with the Shakers community of Hancock, Massachusetts, built in 1826.

<sup>51</sup>In many respects southern Ontario is an agricultural region with cultural and environmental similarities to Michigan; therefore Peter Ennals paper (1972), based on dissertation field work, is useful for comparative purposes.

maximum flexibility. It can serve as a machine or equipment shed, as a warehouse for storage of bulk harvests such as potatoes, or it can function as a hay barn. Like the earlier Bank Barn, some Roof Barns straddle a hill slope and sit atop an excavated basement (Figure 5.25). A recent form of the Roof Barn contains two above-grade levels. The main entry is in the arched gable, but one or two drive ramps on the side of the barn angle up to entries in the second level allowing a tractor to tote loads of hay into a loft area.

At what point after World War II the Roof Barn first materialized remains to be determined. Those of fabricated metal construction provide an alternative to the Pole Barn, simple and inexpensive in construction.

## **Farm Outbuildings**

### **Michigan Outbuilding Types: An Introduction**

During the nineteenth century, prior to the advocacy by university agricultural experiment stations for specialized farm buildings, farmers met many of their needs with a variety of improvised buildings that could serve multiple functions.

Lithographs for the last quarter of the nineteenth century reveal the commonality of one or more small, one-story gabled sheds of indeterminate purpose. Occasionally a low elongated building with a single slope roof is depicted, suggesting a specialized poultry or hog house. Wagons were sheltered from the weather in the barn, although on large farms, a wagon shed with one or more equipment cavities might be attached as an ell extension to the rear of the barn. Characteristically, the large, open-mouthed entries to each wagon stall are beveled at the upper corners. Tools and small farm equipment could also be stored in the barn or in one of the all-purpose sheds. Many farmers maintained bins within the barn for the storage of small grains such as wheat, buckwheat barley and oats, although the lithographs do reveal the presence of a specialized granary on a minority of farms. The storage of corn (maize), however, did demand structures specifically designed for the purpose, and corn cribs and silos meeting this need are discussed below.

## **Silos**

Silos are associated with dairy and cattle farms. They are product of the scientific approach to farming, and have a 120-year history in Michigan. They first appeared in the state somewhere between 1880 and 1882 (Noble 1984b: map, 71). Most, however, have been built in the twentieth century. There is an extensive, and for the most part, accessible literature concerning American silos and their evolution.<sup>52</sup> The history of the silo reflects the evolving process to effectively store ensilage (also “silage”) under

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<sup>52</sup>Allen Noble has been among the most prolific writers concerning silos. See 1984b: 69-80; 1981a: 11-14; 1981b: 118-126; 1980: 138-148; 1976; 1974: 12-21; also Noble and Cleek (1995: 157-161). Other useful sources of information include Visser (1997: 130-140); Hart (1998: 246-248); Dandekar and Savitski (1989: 2-5, 11); N.S. Fish (1924); Hawke (1978: 43-48); Meyer (1963 and 1977); Suter (1964); and McCalmont (1960).

airtight conditions. In the traditional order of things, it was desirable to thoroughly dry harvest ripe corn before storage so as to retard spoilage. The growing season for corn in Michigan, however, is shorter than is the case in the traditional Corn Belt, and early frosts frequently damaged the crop before it had time to ripen. When this occurred, Michigan farmers cut the green stalks and stacked them in shocks in the fields to dry (Hart 1998: 246). These bundles of dry corn were then fed to their cows during the winter. The drawback was that dairy cows that were fed dry fodder stopped giving milk during the winter months.

The silo was designed to store green field corn and, secondarily, other moisture-containing fodder crops such as hay. When cornstalks are chopped up and compressed to prevent their exposure to air, the silage ferments rather than spoiling (Visser 1997: 130). In more northerly areas of Michigan where hay is a principal crop, some of the harvest may also be stored in a succulent condition as silage, and, in fact, in recent decades, there has been a shift toward the utilization of grass ensilage (Dandekar and Savitski 1989: 3). Driving the desire to find a way to preserve green fodder through the winter months was the realization that feeding dairy cows moisture-laden silage during the cold months enabled the animals to yield milk comparable in quantity and quality to summer production. The silo increased productivity by converting corn stalks, which contains about one-third of the food value of the entire crop, into palatable food for the cows and enabled farmers to expand their herds. By 1924, Michigan, with some 49,000 silos, numbered third among its fellow states, behind only Wisconsin and New York (Noble 1984b: 72).

The most efficient kind of silo is the one that is most airtight, thereby precluding spoilage of the corn or hay. The earliest silos were stone-lined pits in the ground, but because of their many drawbacks, they were never common. The earliest vertical silos were sometimes built within the barn, but by the 1890s silos were more usually located outside so as not to disrupt traditional farm activities within.<sup>53</sup> They were square or rectangular in shape, constructed of dimension lumber and covered with barn siding. Nothing is known about the use of rectangular silos in Michigan, but their reported history in other states indicates they posed difficulties in maintaining structural integrity and an airtight environment.

Further experimentation led to octagonal and cylindrical silos during the early 1900s. A variety of building materials were utilized --stone, brick, concrete block, ceramic tile, pressed metal sheets, and poured-in-place concrete (Dandekar and Savitski 1989: 3).

Dandekar and Savitski inform that "Stone silos were built in Michigan in areas where stones were cheap, often obtained during the clearing of the land; consequently one would hazard to predict that surviving stone silos will be found primarily from central Michigan northward. Typically 18 inches in thickness at the base, tapering to 10 or 12

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<sup>53</sup>Should a field surveyor encounter a pit silo in a barn or an above-ground vertical silo built entirely within the structure of the barn, he should refer to Visser (1997: 130-131), for further information. One potential clue to the presence of the latter type of silo would be a small, dormer with door in the barn roof, through which the interior silo could be filled.



inches at the top, plastered smooth with portland cement on the inside and reinforced by 1/2 inch iron rods, the stone silo was a sturdy and durable structure that can still be found in the Michigan countryside.”

Other Michigan round silos were constructed of vertical wood board or stave construction, and used adjustable metal hoops, telephone cable, four strands of #11 fence wire twisted together, and other “available and affordable” materials. With time, as these silos lost air tightness, the staves could be tightened. “These handmade wood silos were also called 'tenant silos' as they were easily dismantled and rebuilt on rented fields” (Colon C. Lillie, cited in Dandekar and Savitski (1989); see also Noble 1984b: 76; and Visser 1997: 134-136). The University of Wisconsin Agricultural Experiment Station developed a low-cost circular silo formed of tongue-and-groove boards, which were soaked in water and bent into gigantic hoops (Noble 1984b: 74). They were built from 1894 through the 1930s (Noble and Cleek 1995: 159; Visser 1997: 136). As early as the first decade of the twentieth century, several Michigan companies, such as the Farmers Handy Wagon Company in Saginaw and The Saginaw, Mitchell and McClure Lumber Company, were marketing ready-made stave silos. The latter company also sold ceramic tile silos (Dandekar and Savitski 1989: 3-4).

The roof shapes of silos, if used with caution, can provide rough evidence of the age of a silo, at least in terms of sequence of development. Late nineteenth century and early twentieth century rectangular silos generally had gable roofs. Hipped roofs were most compatible with octagon silos. Initially circular silos bore a variety of shapes including both the gable and polygonal hipped configurations. Gradually roofs designed specifically for circular silos were employed. One of the earliest was the cone, and then came a hipped cone, and still later, a low dome surmounted by a vent, and finally the smooth, rounded hemisphere dome. According to Visser (1997: 136), conical roofs, topped by a metal ventilator, are most common on wood stave silos; usually they were covered with composition sheet roofing.

About the time of World War I, new silos began to be built of masonry materials, which were more durable than wooden stave structures. Poured-concrete silos, formed of separately poured, interlocking rings stacked one upon another made their appearance. Cement staves were perfected about 1906, and led to experimentation by cement companies. Concrete stave silos were first constructed in southwestern Michigan and many can still be encountered there (Noble 1984b: 77; Dandekar and Savitski 1989: 4). By the 1920s various patented interlocking concrete stave designs were being produced in factories and shipped throughout the country (Visser 1997: 137-138). During the 1920s, glazed tile building blocks were also sometimes utilized, although not in great numbers. They continued to be built into the 1930s but declined in popularity once the fragility of the tiles became apparent.

After World War II a much more technically sophisticated kind of silo constructed of insulating fiberglass bonded to sheets of metal, and called by its trade name, *Harvestore*, made its appearance. Fiberglass provides sufficient insulation to prevent ensilage from freezing during the winter, and more than any of its predecessors, it “attained the long

sought objective of a completely airtight container” (Noble 1984b: 77). With an auger system to mechanically unload silage at the bottom and deliver silage directly into feed troughs, it also provides a considerable saving of labor (Hart 1998: 247). The main disadvantage of a fiberglass silo as compared with a concrete-stave one is that it is double the cost to acquire (Noble 1984b: 78-79).

About the same time that the *Harvestore* was gaining popularity, trench and bunker silos, collectively called horizontal silos, were coming into favor in the Great Plains. Horizontal silos with capacities ranging from 100 to 300 tons could be constructed in the mid-1950s for about one-third the cost of vertical silos (Noble 1984b: 80). Subsequently, they have diffused to other areas of the country including Michigan. Given their economy of construction, they are particularly attractive to large-scale dairy and cattle farmers who require vast quantities of silage to feed the numbers of livestock that they maintain today. A shift toward the utilization of grass ensilage and the ease of moving it around with heavy machinery has also contributed to the appeal of horizontal silos. Given their large capacity, some spoilage at the walls and at the top of the pile can be tolerated. They also have the advantage that cattle can eat directly from the silo.

The trench silo comprises a long, wide cavity excavated by a bulldozer. A bunker silo is similar to a trench silo, but is constructed of treated wood, metal, or concrete and sits atop the ground. Trench silos are more susceptible to moisture penetration than the bunkers. A common method of sealing the top of the ensilage is to lay a large plastic tarp over it and weigh the cover down with old tires.

Because they are relict features associated with bygone agricultural systems and landscapes, and because they are rapidly disappearing, any silos predating World War II should be considered potentially significant structures. Where possible they should be preserved. When circumstances dictate against preservation, mitigation procedures such as preparing and preserving measured drawings and photographic documentation ought to be undertaken.

Noble and Cleek (1995: 158-161) recently summarized the above description of silos and their evolution with the following typology:

**Rectangular Wooden Silo**

*Built as late as 1910 in some areas, it is the first form of tower silo. Using framed lumber walls, it was built with the same materials and techniques as the barn.*

**Octagonal Silo**

*An attempt to achieve the advantages of a circular silo while keeping the ease of angular construction.*

### **Wooden-Hoop Silo**

*The first of the round silos. Wood was soaked and shaped into gigantic circular hoop forms and then fastened together horizontally in a circular tower shape. This type did not become popular because the hoops tended to spring apart.*

### **Wooden-Stave Silo**

*The tongue-in-groove, vertical wooden staves are held in place by iron bands and turnbuckles. First built in 1894; later common throughout the dairy belt.*

### **Fieldstone Silo**

*Early variant of the tower silo; expensive to build; limited in distribution to areas of abundant cobble- and fieldstone.*

### **Masonry Silo**

*Usually concrete blocks, but sometimes the more expensive hollow tile blocks were used. Brick construction is rare. Frequently it was topped with a distinctive, low-domed masonry roof. Dates from around World War I, and found throughout the dairy belt.*

### **Poured Concrete Silo**

*Built early in the twentieth century, it was formed of separately poured, stacked, concrete rings. Like earlier silos, unloading was from the top. A ladder of metal rings, sometimes enclosed by a wooden projection, is found on the outside of the silo.*

### **Cement-Stave Silo**

*Similar in construction to the Wooden Stave Silo, but with cement staves. This structure was perfected by cement companies about 1906. A number of companies still build concrete tongue-and-groove stave silos, held together by steel bands.*

### **Harvestore Silo**

*Invented by the A.O. Smith Company in Milwaukee, Wisconsin, after World War II, this dark blue silo is assembled with fiberglass and metal panels. Among other companies producing similar silos, popular brands include the light-blue Sealstore and the dark-green Cropstore (Brooks and Jacon 1994: 68). All these silos empty from the bottom.*

### **Horizontal Silo**

*Trench (below ground) and the bunker (above ground) silos date from the end of World War II (Figure 5.26). They are geared to grass ensilage rather than corn, mechanical harvesting, and self-feeding. They are often distinguished by sheets of plastic held in place by large numbers of used tires.*

## Corn Cribs

The purpose of the corn crib is to dry and store ears of corn. Corn (maize) is indigenous to the Western Hemisphere, and early European settlers soon assimilated it into their agricultural practices and food preparation methods, learning the techniques of its cultivation from Native Americans. By 1650 European pioneers were already building simple cribs of unchinked log construction (Hart 1998: 242). Nevertheless, until the late eighteenth or early nineteenth century, the common practice was to simply cut corn stalks and stack them vertically in the fields (a practice called “shocking”), husking as needed for feeding livestock. However, as livestock per farm grew in number, this approach became increasingly impractical. Therefore, farmers turned to husking corn directly in the field while harvesting, and tossing the ears into a wagon for transport back to the farmstead. Alternatively, harvested but unhusked corn was stripped at the barnyard later, often as part of a neighborly husking bee (Hart 1998: 242). With the cessation of shocking, corn cribs became a storage necessity.

Most early corn cribs were of rounded log construction utilizing saddle notching, although some were made of hewn logs and utilized more complex notches such as dovetailing. According to Keith Roe, log construction of corn cribs remained popular throughout the nineteenth century wherever timber resources remained readily available, such as in the northern Midwest (Roe 1995: 170-171).<sup>54</sup> In Michigan's case, however, it should be kept in mind that at the beginning of the twenty-first century most surviving log structures lie above the northern limit for ripening corn in the field. A 1922 publication reported that statistics based on a six year average from the Michigan Cooperative Crop Reporting Service showed corn to be among the three leading crops in all of counties in Michigan's Lower Peninsula except Presque Isle and Alpena and even in Luce and Menominee counties in the Upper Peninsula. However, it went on to say that climatic conditions are favorable for corn cultivation only in the southern part of the Lower Peninsula. To the north corn is grown simply for forage (Chase 1922: 181, 186, 189). One can expect, therefore, that corn cribs, log or otherwise, will be found mostly in southern Michigan.

Corn can be stored almost indefinitely when its moisture content is reduced to 15 percent or less (Hart 1998: 242). However, once it has ripened, corn takes months to expel its moisture to dry the ears. The corn crib, whatever its morphology, is designed to season the corn, protect it from molding, allow wind to pass around the ears of corn to dry it, and, at the same time, protect it from consumption by pests. As soon as cheap lumber became available, wooden boards or narrow slats replaced logs, but continued to be widely spaced to allow air penetration. The need for adequate air circulation also necessitated that corn cribs have narrow dimensions. The proper width for a corn crib depends on the typical weather characteristic of the locality during the first eight months of storage (Noble 1984b: 106). For southern Michigan the maximum recommended width was six feet or less (Kelley 1933: 6).

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<sup>54</sup>For the most in-depth analysis of corn cribs, see Roe (1988).

While some nineteenth century cribs were constructed with straight sides, others flared outward in a V-shape both to afford better rain protection and to prevent rodents from climbing the walls (Gordon 1992: 172). Further discouragement to vermin was achieved by raising the crib off the ground and, sometimes by the employment of a wooden or metal skirt just above the base of the crib (Noble 1984b: 106-107). Simple gable or single slope lean-to roofs were common roofing options. Some corn cribs had a man-size door in one gable end. This door was not intended to provide walk-in entry. Directly behind the door, removable, horizontally stacked boards set into vertical grooves provided height flexibility in removing corn (Noble 1984b: 106). In other instances a series of small doors near the base of the wall provided for removal of the fodder. For loading husked corn into the corn crib, one or more hatches were located either under an eave of the crib or in the roof. Initially, the height of a corn crib was limited to about ten feet, to facilitate loading by shoveling from the bed of a wagon (Roe 1995: 173). With the development of the mechanical loading elevator in the mid-nineteenth century, cribs could be built much higher.

As size of farm and herd grew together with corn production after the Civil War and continued into the twentieth century, the need for more corn storage led to new crib designs. One solution was to align two cribs in parallel separated by a wagon drive and place a single gable roof over the entire configuration. This type is called the *drive-in crib* or the *double-crib shed*. These wooden cribs could handle the harvest for an 80-acre farm (Kiefer 1972: 501). A floored loft space over the central aisle was commonly used as storage space for small grains. Eventually, the addition of a cupola provided ventilation for the loft granary and housed an elevator for moving the grain about (Noble 1984b: 107).

The aisle of the *double corn crib*, like that of the barn, has often been used to shelter farm equipment. During the heyday of double crib construction in the mid-twentieth century, wider alley drives were utilized to accommodate a variety of tasks requiring more room. Farm equipment used for loading vehicles with grain from the overhead granary had been growing in size as had the equipment that hauled loads for emptying into an inside cup elevator. Many farmers also poured grain from the granary directly into portable grist mills within the aisle (Roe 1995: 173, 174). Using the corn crib for equipment storage was considerably mitigated, however, by the advent and popularity of a new type of outbuilding, the machine shed, with doors capable of accommodating large-scale machinery (Roe 1995: 174).

Double corn cribs emulated barns in roof morphology, utilizing gambrel roofs beginning in the late 1800s, and turning to the arched roof between the 1930s and the 1950s. These configurations allowed the loft granary to be divided into bins for storage of a variety of small grains. “The creation of larger corn cribs and their overhead grain bins depended upon the invention of new methods to raise the grain and ear corn higher than a farmer could scoop it. The era of building Midwest corn cribs, typically capped with cupolas for elevator access, coincided with increased grain production. High cribs were made possible by the commercial adaptation of the continuous belt-and-cup elevator for grain mills during the mid-nineteenth century, and by the portable grain elevator in the 1890s.

Farmstead architecture changed as the industrial and agricultural revolutions marched in step and accelerated in the twentieth century” (Roe 1995: 175).<sup>55</sup>

The twentieth century witnessed a revolution in the Corn Belt in the production of corn brought about by increased mechanization, the introduction of commercial fertilizers, improved corn hybrids, consolidation and growth in size of farm operations, and increased specialization involving more limited crop associations. These changes led to a tremendous increase in corn production per farm and a need for corn cribs built to a larger scale.

Given its geographic location north of the Corn Belt, Michigan has been largely bypassed by this revolution. With the possible exception of some limited examples in the southernmost tier of counties, the large concrete, steel, and hollow clay tile corn cribs with ventilating slots of rectangular, circular, oval, or polygonal plan are not found in Michigan. Only a smaller round corn crib with a conical roof constructed of steel rods and heavy wire mesh, and called a “*circular corn crib*,” is a common sight in southern Michigan. This type of corn crib emerged in the 1930s (Roe 1995: 179). It became widely popular after World War II because of its low cost, ease of filling, and low maintenance. Roe reports that it is still the principal kind of corn crib manufactured.

Another form of corn crib that is common in some parts of Michigan, such as the Thumb area, is the *shed-roof corn crib*. It is a tall, elongated rectangle with vertical rather than slanted sides, capped with a shed roof. Initially the sides were composed of spaced wooden slats, but the ones most commonly observed in Michigan today are sided with wire mesh mounted on vertical steel poles.

Noble and Cleek (1995: 155-157) recently summarized the above description of corn cribs and their evolution with the following typology. Only those types relevant to Michigan are included:

**Gable-Roofed Corn crib**

*Rectangular structure with vertical or horizontal slats. The gable roof usually has loading doors and, sometimes, ventilators.*

**Slant-Sided or Keystone Corn crib (Figure 5.27)**

*Has a gable roof with sides slanting inward to the base. Became popular early in the nineteenth century but its small size makes it impractical today. Once called a Connecticut corn house. Appears in late nineteenth-century Michigan lithographs.*

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<sup>55</sup>Utilization of the portable elevator by farmers to fill corn cribs was slow before the labor shortage created by World War I.

**Shed-Roof Corn crib (Figure 5.28)**

*Long, narrow crib with a shed roof. Traditionally had lathe siding, but modern versions, which can be quite long as well as tall, have wire mesh sides. Common in Michigan today.*

**Drive-In Corn crib or Double Crib (Figure 5.29)**

*Two slant-sided cribs separated by a drive alley standing under a shared gable roof. Frequently has a granary in the loft area.*

**Circular Corn crib (Figure 5.28)**

*A circular open wire-mesh structure with a conical metal roof.*

**Granaries**

Small grains, such as wheat, barley and oats, have been stored on farms in a variety of ways. Pioneer farmers often used their attics. Subsequently, on many farms grain bins were situated within the barn. Other farmers constructed specialized granaries. Noble states that “separate granaries had long been used in the farming villages of Europe,” and suggests that on mid-level size farms in central North America, they seem to have been most common on German, Scandinavian, and eastern European ethnic farms. They are not found on large cash-grain farms (Noble 1984b: 103-104; Noble and Cleek 1995: 154). Today, because of mechanical harvesting and threshing most small grain is moved directly to off-farm storage facilities.

Surviving on-farm granaries, often now recycled to other uses, are typically a small to moderate size one-story rectangular building with a gable roof and minimal window and door openings to make the building as pest proof as possible. Its most distinctive feature, which aids recognition of the structure's function, is that it stands off the ground on short piers of stone, cement, or wood blocks. An example may be seen, second structure from the left in Figure 5.30. A closer view of a granary in Monroe County is depicted in Figure 5.31. While this further discourages entry by pests, it also removes the floor of the granary from the damp ground. Early granaries employed small chutes for removal of the grain. In many respects the Finnish granary (*aitta*) is similar. Sometimes of log construction, but more commonly of milled lumber, the typical Finnish American *aitta* is a “simple slim two-story building protected from the weather usually with tar paper or shingles on the outside” (Vidutis 1994: 43).

Later granaries with a top-load system used a portable elevator that passed the grain into the granary through a small trap door under the peak of the gable. Still later granaries, akin to grain elevators, were serviced with an elevator leg and a conveyor belt with scoops. A movable chute at the top of the elevator guided the grain to different bins (Brooks and Jacon 1994: 63).

On some farms associated with Norwegian ethnicity, vertical board siding was overlaid with battens to seal the interstices between boards, while the use of overlapping horizontal clapboards was more characteristic of German and eastern European practice

(Noble 1984b: 104). According to Noble, no systematic scholarly studies have yet been undertaken to more fully document the ethnic associations of granaries.

A late nineteenth century approach to the storage of small grains was to combine granary and corn crib in a single structure. The structure combining these functions is discussed under Corn cribs.

### **Grain Bins**

During the 1960s the development of the self-propelled corn-harvester combine with prong-type corn heads led to the appearance in the rural landscape of a new type of storage complex, particularly prevalent in the traditional Corn Belt. “The combine tears the ears from the stalks, shells the kernels of grain from the cobs, and stores the grain in a bin behind its cab. When the bin is full, the farmer unloads it through...a spout on its side into the vehicle that hauls the grain back to the farmstead” (Hart 1998: 244).

Prior to the emergence of the combine harvester, corn was stored as ears in corn cribs. Shelled corn required a different kind of storage container, the cylindrical grain bin, made of corrugated metal. Because moist grain molds in an enclosed metal bin, it must be dried before storage. The storage facility that emerged in the 1960s in response to the new harvesting method consists of a grain dryer and elevator nesting with one or more grain bins. Towering above the dryer is a “leg” containing a cup elevator that lifts the dried grain to a distributor head at the top, where a long metal tube directs the dried grain into the appropriate bin. Bins can be unloaded at the bottom by an auger mechanism. Soybeans can be similarly harvested, dried, and stored, so that a corn-soybean rotation has replaced the older corn-small grain-hay rotation system in the Corn Belt (Hart 1998: 244-245). Some farmers have acquired their own dryer-elevator-bin facility; others pay for the drying service at a commercial grain elevator operation. In either case, much shelled corn is sold immediately upon drying with the consequence that less storage capacity is needed on this type of farm today (Kiefer 1972: 501).

Over the years the northern periphery of the Corn Belt has included the southernmost one or two tiers of Michigan counties. The switch to a corn-soybean rotation and a cash-grain farming system has also taken place in southernmost Michigan. A map assembled by Hart for 1987 shows that in St. Joseph, Branch, Lenawee, and Monroe counties 80 to 90 percent of harvested cropland was devoted to a corn-soybean rotation (Hart 1998: 103). While the percentages of harvested cropland for this rotation may decline as one moves northward in Michigan, the writer has observed the dryer-elevator-grain bin complex on selected farms at least as far north as Lansing. On many farms, however, the corn acreage is too small to justify investment in the new technology for harvesting and handling grain. These farmers still use older kinds of mechanical corn pickers and continue to make use of a variety of corn cribs (Hart 1998: 247).<sup>56</sup>

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<sup>56</sup>The writer has observed the continued use of metal cage corn cribs for ears of corn in Washtenaw County.



### Horse Barns or Stables

Although horses were often quartered in the stable area of the barn, a separate horse stable (Figure 5.32) or barn was, nevertheless, a common building type found in the late nineteenth century lithographic sampling. The typical horse barn illustrated in the lithographs is a one-and-a-half story rectangular building with a gable roof. As opposed to the norm for most barns, the entry to the stable area is generally in one of the gable elevations. A hayloft is located above the stable quarters, usually marked by a loft window or hay opening. Because the well being of horses is enhanced by having dry quarters and lighted stalls, stable windows that can be opened and shut are desirable (Visser 1997: 143). Although some of the identifiable Horse Barns bear vertical siding, they are more likely to be sheathed in horizontal siding than any other outbuilding. Since the other outbuildings are almost invariably vertically sided, the horizontal siding on an outbuilding provides a useful clue to the investigator doing field surveying or analyzing lithographs that the building was a horse stable.

Although his description is based on documenting Horse Barns in New England, Visser provides useful information that probably has general applicability to Michigan Horse Barns.<sup>57</sup> He says, “Inside, horse stables often have standing walls or box stalls with a feed box, a manger, and a receptacle for water. Workhorse teams often stand together in eight-foot-wide double stalls. Five-foot-wide single stalls are for saddle and driving horses, and box stalls-- measuring about twelve feet square--may hold three or four animals or a mare and colt. In addition to a hayloft above, many larger stables also had a grain room, harness room, an area for washing and grooming, and quarters for hired help, as well as an area to store carriages and sleighs” (Visser 1997: 148). The flooring of a Horse Barn is generally of pine.

During this time period, horses were used for a variety of agricultural purposes. They had largely replaced oxen in the task of field plowing, and provided the power for operating a variety of mechanical equipment. In New England the common practice was to quarter work horses, riding horses, and carriage horses together in the barn along with the other farm animals until the 1830s-1850s, when the increasing scale of operations on many farms led the operators to build separate shelters for the horses. This transformation accelerated during the 1860s and 1870s as many farmers replaced their oxen with workhorses (Visser 1997: 143-144, 146). In some instances provision for sheltering horses and carriages was accommodated in a single building called a *Carriage Barn*. In this circumstance the Carriage Barn provided quarters only for riding and carriage horses, not the farm's work horses. The latter were placed in the horse barn.

It is likely that a similar process occurred in Michigan, but with the transformation occurring at a somewhat later period. Therefore the Horse Stable may not have become a familiar building type on Michigan farms until after the Civil War. In the farmstead lithographs that were examined for the 1874-1895 period, Horse Barns were common

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<sup>57</sup>Dandekar and Bochstahler (1990: 45) inform us that Michigan Horse Barns are likely to have an oats granary and a harness room. Some Michigan farmstead lithographs include stables that have windows with curtains, suggesting live-in quarters for a farm hand.

features, although not present on the majority of farms. One farm history suggests that once a farmer built a Horse Barn, he was likely to transfer all his horses to the new building. On the Raab family farm in Bridgewater Township, Washtenaw County, the surviving Horse Barn has six stalls. In the 1930s the farm maintained five horses, four of them making up two teams of work horses. The fifth was a “buggy horse,” although it was occasionally also used as a third horse to help pull the plow (Dandekar and Bockstahler 1990: 45-46). The carriage house, which was a separate structure, apparently never housed the “buggy horse,” and now serves as a garage. In areas of Finnish settlement in Michigan, horses were the status tilling animal. Even more care was given to building a log horse stable (*talli*) than to the cow barn to provide weather protection. Like the cow barn, the *talli* has a hay loft over the stabling area (Vidutis 1994: 43).

After the introduction of automobiles, trucks and tractors, horses all but disappeared from any but specialized horse breeding farms. In individual instances, some riding horses have been maintained for recreational purposes. Today surviving horse barn structures have been recycled to other uses, such as to provide storage space, or remain vacant.

### **Poultry Houses**

For much of the nineteenth century, farmers allowed their chickens to fend for themselves. They roosted in trees or sheltered in the hayloft of the barn, and laid their eggs for the farm family's consumption in the haymow. Gradually, however, as disposal of surplus eggs provided income, farmers became more solicitous of the welfare of their poultry. The earliest poultry houses were unspecialized buildings, often recycled for the purpose. The identification of such surviving structures is difficult without making inquiry because other than being small buildings, the internal layout and organization of space, walling material, roof type, and other architectural features vary from example to example.

Michigan farm lithographs of the late nineteenth century reveal the occasional presence of a low, elongated shed roof structure that may be either a chicken house or a hog house, but more likely the former (Figure 5.33). Other small gable-roofed rectangular sheds may have served this function, but they blend in functionally with all the other sheds. Of the 88 lithographs that were analyzed, only one clearly portrayed a chicken run. The accompanying chicken coop was gable roofed.

At the beginning of the twentieth century specialized Poultry Houses materialized. By this point agricultural extension services were advising farmers that adding south-facing windows to the poultry house would be beneficial to the health and productivity of their chickens. In addition, roof vents, and monitor or half-monitor roofs were often used to increase sunlight and improve ventilation. Alternatively, a saltbox roof with the steeper roof facing in the direction of the sun was employed (Vidutis 1994: 44). One of the more distinctive features of the new chicken houses was small entry doors to the roost raised off the ground and serviced by the “chicken walk,” a wide plank angled from the ground up to the entries. Thin strips of lathe were nailed to the board at intervals of six to eight

inches to prevent slippage as the chicken ascended to the roost. Notable interior features of the Poultry House for much of the twentieth century included a horizontal roost, nesting boxes, dust-bath area and food and water facilities.

Specialized brooder houses used to incubate and raise young chicks made their appearance in the late nineteenth and early twentieth centuries (Figure 5.34). It was important to keep the hatchlings and young chicks warm; therefore they were frequently located in sunny sites. Inside, heated pens were maintained for the chicks, and to provide for continuous production, some brooder houses had separate pens for different age groups (Visser 1997: 171). Brooder houses take various morphological forms, but can frequently be identified by a flue projecting from the building. Portage brooders even became available by mail order.

Despite the trend away from general farming to specialization in one agricultural system or another, chickens were raised on every farm until the middle of the twentieth century. Fried chicken was synonymous with Sunday dinner, and fried eggs were served at breakfast daily, while the sale of surplus eggs provided a supplementary income for the farm wife. Wayne Kiefer offers clues for identifying a poultry house (in the context of the 1960s and 1970s): 1) it was usually the closest building to the house, 2) it was a small, single-level structure, rectangular in shape, and narrow in width, and 3) it was oriented east-west with a line of windows on the south side (Kiefer 1972: 504). Again in the context of the 1960s and 1970s, he notes that roof shapes were the most variable for any farm building. Those that primarily served the purpose of domestic production had shed, shallow saltbox, or half-monitor roofs. Gable roofs were the signature of commercial production. Shed roofs were the most popular, probably because they were the cheapest and easiest to construct. The recommended slope for a shed roof was a one foot rise for every three feet in depth. If the chicken coop was more than 16 feet deep, the resultant roof slope would rise so high that the body warmth radiated by the chickens would be insufficient to keep the coop warm in the winter. Consequently, most shed-roof structures ranged from 12 to 14 feet in depth. Tall, south-facing windows permitted sunlight to shine directly onto the floor to keep bedding dry and control lice and mites. The saltbox and half-monitor roofs allowed the coops to be larger without a disproportionate increase in air space. Although these structures were still present when Kiefer carried out his survey in northern Indiana, he notes that production for domestic use had already been phased out. Egg factories in which chickens were kept in cages and eggs gathered mechanically were already on the scene. Intermediate were the gable roof chicken houses associated with small commercial operations in which the chickens were still allowed to run loose and eggs were hand-gathered. These Poultry Houses were both longer and wider than the aforementioned structures. See also Noble (1984b: 116-117); Noble and Wilhelm (1995: 135-138); Hart (1998: 231-235); and Brooks and Jacon (1994: 57-58).

Commercial poultry operations continued to increase in scale in the late twentieth century to the point they can be described as a form of industrial farming. Because of their relatively recent evolution, these operations currently lack historical significance.

### **Hog Houses**

Hog Houses can be divided into two general categories: 1) a large durable house community house (also called a colony house) consisting of multiple pens, and 2) a small, individual house and pen that often is moveable (Seymour 1919: 403). Some farms had both, rotating the animals between winter and summer quarters (Figure 5.35).

In the nineteenth century almost every farm family raised at least a couple of hogs to provide the family with pork and bacon. As was the case with chicken coops, farmers originally used any available shed, which together with an outdoor enclosure and wallow, comprised the pig sty. By the late nineteenth century, some farmers constructed a simple one-story rectangular building composed of several pens and provided with a food trough. Usually it was constructed of wood and had south-facing windows or other openings to provide light and ventilation. Roofs were generally gabled or single-sloped (Figure 5.36). Sometimes individual ground-level swinging doors provided each hog with access between its pen and yard. Subsequently, hog houses with half-monitor roofs provided more light (Figure 5.37).

Larger piggeries, sometimes called hog barns,<sup>58</sup> were divided into pens inside. Each pen was serviced with a small opening in the wall leading to an exterior enclosure. Some piggeries included a separate room with a stove to cook grains and root crops for the animals. Grain and corn were stored overhead.<sup>59</sup>

Individual hog houses were generally moveable, and sometimes were mounted on skids, which allowed for the rotation of pastures and paddocks. This form of housing was practical and economical for beginners or owners of small herds. They also provided a protective environment for farrowing piglets with their mother (Seymour 1919: 405).

### **Spring and Milk Houses**

During the pioneering period, the farmstead site was often selected for the availability of a dependable spring at the base of a nearby slope. The spring provided water for drinking and washing and also served to cool and thereby preserve perishable farm products such as milk during the summertime. Very quickly the farmer protected the his water source from pollution by constructing a Spring House (Noble 1984b: 81-82; Kauffman 1975: 181-190).

Spring Houses are usually small, rectangular or square shaped buildings with a gable roof. Although a Spring House can be constructed of any material, stone or brick provide the best insulation. Because Spring Houses of masonry construction are more durable to the weather and resistant to moisture damage, they are also more likely to have survived to the present. In all instances the floor of the Spring House was constructed of some

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<sup>58</sup>A Washtenaw County “hog barn” that was torn down in the 1930s was a two-story affair with corn for feeding the hogs stored in the loft. It housed 20 to 30 hogs in its heyday (Dandekar and Bockstahler 1990: 45-46).

<sup>59</sup>Visser (1997: 155-157).

impervious masonry material. Sometimes, in order to more efficiently tap into the water supply, the structure was recessed into a slope. Louvers and a roof ventilator are common features to alleviate damp and mold. Except for their down-slope location Spring Houses are difficult to distinguish from other small outbuildings.

Sometimes Spring Houses were elaborated into *Wash Houses* (Brooks and Jacon 1994: 70). As dairy activities increased, empty milk cans were washed in an interior washroom or in an exterior Wash House (Vogeler 1995: 109). When only a small dairy herd was being maintained, a milk room or dairy room was frequently situated in the ell of the dwelling between the kitchen and the woodshed. Some farms actually had separate milk and dairy rooms. In the milk room fresh milk was poured into shallow pans and placed on shelves or racks. Once the cream rose to the surface and was skimmed off, it went to the dairy room where cheese and butter were made (Visser 1997: 109-110).

Early in the twentieth century government regulations meant to assure sanitary conditions and constant temperature regulation for the production of commercial dairy products led to a new type of outbuilding, the Milk House (Figures 5.38 and C.25). The Milk House was used for storing milk at 50 degrees or less and for washing milk cans and other equipment. While it could be close to the barn or even attached to it, it was, nevertheless important to separate the milk from the barn so that the liquid did not absorb odors from the silage and manure. Usually rectangular in shape with a gable roof, and occasionally partially sunk into the ground, the Milk House was small, generally just large enough to carry out the latter functions and provide storage space for the cans to stand in cold water. If the milk was intended for the production of cream or butter, the Milk House needed to be larger than for production of whole milk (Seymour 1919: 437-438). The Milk House, therefore, can provide physical evidence of the nature of past dairy farm production.

Early Milk Houses were likely to be of wood construction, but were hard to maintain because of dampness. Later Milk Houses were built of cement block or tile (Kiefer 1972: 505), reducing the problem of moisture as well as providing more sanitary conditions. The milk house, barn, and silo, make up the distinguishing landscape features of the dairy farm during the twentieth century. Since the 1960s, however, large-scale dairy operations have turned to the labor-saving automated pole-barn and milking parlors equipped with pipelines that carry the milk off to bulk storage tanks (Vogeler 1995: 110).

### **Windmills and Pump Houses**

The type of *Windmill* used to lift water was invented in the middle of the nineteenth century in Connecticut. Eventually it was also adapted to the task of generating electricity (Noble 1984b: 82). To quote Noble, “The standard farm windmill consisted of a light, but strong, steel frame of four sloping legs, braced at intervals. A steel ladder provided access to the blade and rudder mechanism which required periodic maintenance, repair, and, especially, lubrication. Unlike traditional European windmills, which had enormous paddle blades, the American windmill possessed a series of curved steel blades set in a rosette pattern. The advantage which the American windmill had over European windmills was that only the blades and rudder rotated and these were designed to

automatically follow any wind shifts. The windmill operated continuously, no matter what the wind's direction, and often in very light breezes, too” (Noble 1984b: 83). For a substantive analysis of the American windmill, see Baker (1985).

Frequently associated with the Windmill was a *Pump House*. Its purpose was to house and protect the water pump. If located directly between the legs of the Windmill, it was square in shape. If situated to one side of the Windmill, it could be either square or rectangular. Generally, this one-story structure was constructed of wood and had a gable, hip, pyramid, or shed roof.

On 19<sup>th</sup> century pioneer farms lacking a reliable spring, the water supply was provided by a dug well, which was marked by a well-head structure with a pulley system for drawing water. Subsequently, well water was lifted by mechanical pumps, which were usually placed on a simple wooden platform to avoid a problem with mud. The latter are depicted in several 19<sup>th</sup> century lithographs examined. In some instances, where the water table was high and ground water plentiful, the pumps were located in the farmhouse ell or the summer kitchen. Another pump might be located in proximity to the barn. The Michigan lithographic sampling of 88 farms in E. B. Hill’s Region Five (Central Michigan) for the period 1874-1891 reveals that only twenty of the farms as yet had windmills. The sampling is skewed to 1874, but does suggest that a trend to installing windmills was in progress during this period:

FARMSTEAD WINDMILLS  
FROM A STUDY OF 88 LATE NINETEENTH CENTURY LITHOGRAPHS  
REGION V

1870s:	7 out of 55 Farmsteads=	13%
1880s:	7 out of 19 Farmsteads=	37%
1890s:	6 out of 14 Farmsteads=	43%

**Other Outbuildings**

A variety of other agricultural buildings made their appearance on Michigan farms during the late nineteenth and twentieth centuries. Until then many functional needs were served by generalized, all-purpose sheds. Although progressive farm journals and some books began to offer specialized designs for *ice houses*, *sheepfolds*, *hog houses*, and the like after the Civil War, most farmers continued to economically recycle sheds and other buildings to meet their evolving needs. Late in the nineteenth century land-grant colleges began to publicize their research findings pointing out the deficiencies of existing buildings. They suggested a variety of designs for barns and other buildings that would improve efficiency and better provide for the health of farm animals. By the early twentieth century many of these specialized buildings began to make a widespread appearance on Michigan farms. The designs of these specialized buildings are so diverse, however, that it is not practical to overview them. Some relevant publications are

included in the bibliography. Farm journals of the day also provide another source of information concerning specialized buildings.

No farm would have had the full range of special purpose structures, and because of the increasing specialization of Michigan farms since World War II, the number and type of buildings found on most farms today have narrowed greatly from the norms of the past. Here and there the surveyor may encounter surviving examples of *smoke houses, equipment and work sheds, cattle shelters, wagon sheds, older forms of cold-storage buildings or cellars, a smithy, a cider mill, a maple sugar house, or woodshed*. Some of these buildings form attachments to a barn. Others are stand-alone structures. While some of these surviving buildings have been recycled for purposes not originally intended, many stand in a state of abandonment, and if evaluated as significant, pose problems for preservation.

Generally speaking, *garages*, while often present during the 20<sup>th</sup> century, did not contribute to the agricultural context of a farm. However, it is noteworthy that early twentieth century single bay garages in the Upper Peninsula and the northern Lower Peninsula were typically located close to the road, thereby enabling easier access to the road during snowy winters.<sup>60</sup>

### **Orchards and Fences**

Except for commercial fruit growing farms, *orchards*, so prevalent on nineteenth century general farms, are greatly diminished or entirely gone as a component of the farmscape today. At their peak many of the orchards were sufficiently extensive that it might be questioned whether they comprised part of the farmstead or some middle ground buffering the farmstead from the fields. In their heyday diverse fruits and varieties were grown for family subsistence needs with any surpluses disposed of with a green grocer or at a farmers' market in a nearby town.

Study of farm lithographic illustrations from the last thirty years of the nineteenth century not only supports the extensive nature of orchards on Michigan farms at that time, but also provides information concerning the landscaping of front yards, kitchen gardens, fences, workspaces and enclosures (Figures 5.39 and 5.40). They reveal, for instance, that, unlike today, the Michigan farmstead was enveloped in *fences*. The farmhouse with its' associated lawns, gardens, and shade trees was explicitly separated by fencing from the work areas and outbuildings. However, some mix of summer kitchens, privies, woodsheds, wash houses, outdoor root cellars, spring houses or dairy houses as they later came to be called, wells or water pumps and, occasionally, smoke houses were located within the house yard (Noble 1984b: 85-98), for the most part in proximity to the kitchen ell of the farmhouse (Stilgoe 1982: 161, Hubka 1986: 161-166).<sup>61</sup> Ideally, the smoke

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<sup>60</sup>Communication with Lloyd Baldwin.

<sup>61</sup>Stilgoe (1982) calls the kitchen ell "the focus of family life." Hubka (1986)'s research indicates that the kitchen ell became a commonplace of New England farmhouse spatial organization only after 1800. Many domestic activities extended from the kitchen ell out onto the back porch and into the immediate area, which Hubka refers to as the dooryard.

house was further positioned to be downwind of the house. More aesthetic and expensive fencing was frequently limited to deployment across the front yard in close proximity to the road. The most ornamental were wrought iron and picket fences. Other less common fencing designs included lattice, crossed board panels, vertical board, and hedges. The most common upscale fence, however, was a post and finished board fence made up of three or four horizontal, individually spaced boards nailed to the posts. A few farms also provided hitching posts and carriage steps outside the front gate. Sometimes, especially in the case of post and board, these upscale fences continued along one or both sides of the house yard. In other instances more utilitarian side fences served the function of separating front and side yards, the occasional landscaped pleasure garden, and vegetable patches from the outbuildings and workspaces.

Post and board fencing was also the most common form employed for animal enclosures. Until general farming and dairy enterprises began to displace wheat and other small grain farming in the latter part of the nineteenth century, the numbers of livestock on each farm were limited. Examination of post-Civil War farmstead lithographs suggests that barnyards were more prevalent in association with the various basement barn types than with the older Yankee threshing barns. The sequential evolution of “bank barn,” “raised barn,” and “foundation barn” into the specialized dairy barn reflects a growing emphasis upon livestock husbandry and the consequent need for a barnyard.<sup>62</sup> Common practice was to use the barn as a barrier to distance the farmhouse from the odors emanating from the barnyard. A variety of other stockyards and enclosures depicted in the lithographs reveal a need to control and segregate the range of animals characteristic of late nineteenth century general farming. Among the considerations were control of breeding and the segregation of young animals and their mothers from potential harassment by other animals. A breeding bull generally required a separate enclosure, inside the barn and out, for the safety of all. While many farmers allowed their chickens to run free, others preferred to provide a chicken run.

Throughout the nineteenth century outfields continued to be fenced with split rails or employed the sturdier split rail with rider fences despite the availability of barbed wire late in the century.<sup>63</sup>

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<sup>62</sup>A typology of barn types will be introduced and discussed subsequently.

<sup>63</sup>The first Glidden barbed wire was sold in 1874, but no examples appeared in the lithographs in our Region 5 case study (see also Webb 1931: 241, 295-318).



- Figure 5.01    An example of the typical separation of the dwelling from the other farm buildings, in this case by physical distance, landscaping, and fences (refer to County Atlases in Appendix D-2 of this report).
- Figure 5.02    The farmhouse is physically and psychologically separated from the working buildings by a side yard and orchard. The lean-to near the house may be a woodshed or hen house (refer to County Atlases in Appendix D-2 of this report).
- Figure 5.03    An example of a “road-split farmstead” in Eaton County. The farmhouse is of the Upright-and-Double-Wing variety, while the barn exemplifies the Three-Bay Threshing Barn type (refer to County Atlases in Appendix D-2 of this report).
- Figure 5.04    A prototype five-bay I-House. Some I-Houses are three or four bays in dimension. Michigan I-Houses are likely to have a kitchen ell (Pillsbury and Kardos, n.d.).
- Figure 5.05a    Prototype example of a three-bay New England One-and-a-Half Cottage (Margaret Geib, in Noble and Cleek 1994).
- Figure 5.05b    Prototype example of a five-bay New England One-and-a-Half Cottage (Margaret Geib, in Noble and Cleek 1994).
- Figure 5.06    A prototype Temple House. A colonnade is an optional feature (Robin Haynes, former graduate assistant, EMU).
- Figure 5.07    A prototype Upright-and-Wing House. The dimensions of the upright tended to constrict from three to two and then to one bay as the nineteenth century progressed (R. Haynes).
- Figure 5.08    A prototype Upright-and-Double-Wing House (R. Haynes).
- Figure 5.09    A prototype Hen-and-Chicks House. The form of the roof on the wings (chicks) may be configured as a half-hip, as depicted here, or as a shed slope. The axes of the wings are parallel to that of the central upright (R. Haynes).
- Figure 5.10    The Half-Hen-and-Chicks House (R. Haynes).
- Figure 5.11    An Italianate Cube. Sometimes the Cube is surmounted by a belvedere (R. Haynes).

- Figure 5.12 A Representative Upright House (Alan Gowans 1986: 95).
- Figure 5.13 Prototypical Foursquare (“Cornbelt Cube”), built between c. 1890 and 1930 (Kniffen 1966).
- Figure 5.14 A representative early twentieth-century Michigan Bungalow (R. Haynes).
- Figures 5.15 a-c  
The most common roof types utilized for barns are the gable (Figure 5.15a; Noble and Cleek 1995: 35), gambrel (Figure 5.15b; Noble and Cleek 1995: 37), and the arched configurations (Figure 5.15c; Noble and Cleek 1995: 38). The arched roof may also be called a round roof, or, if it comes to a point at the ridge, a gothic roof.
- Figure 5.16 Evolution of the English Barn in America (Noble and Cleek 1994).
- Figure 5.17 Prototypical Three-Bay Threshing Barn, derived from the English Barn (M. Geib, in Noble and Cleek 1994).
- Figure 5.18 A prototypical Bank Barn with the basement level built into the side of a slope (M. Geib, in Noble and Cleek 1994).
- Figure 5.19 A prototypical Raised Barn. Alternative roof types include the gambrel and arched forms (M. Geib, in Noble and Cleek 1994).
- Figure 5.20 Prototypical Foundation Barn. Entry into the stable level is in a gable elevation. There is no ramp or bridge access to the second level. Alternative roof types are the gambrel or arched configurations (M. Geib, in Noble and Cleek 1994).
- Figure 5.21 Although barns such as depicted above are commonly called Wisconsin Dairy Barns, land grant colleges in other Midwestern states and New York contemporaneously developed similar designs. If they are to be distinguished from the Foundation Barn, it is suggested that they should be called a *Land Grant Dairy Barn* (M. Geib, in Noble and Cleek 1994).
- Figure 5.22 A prototypical Polygonal Barn (M. Geib, in Noble and Cleek 1994).
- Figure 5.23 A Michigan example of an Erie Shore Barn. One of the distinguishing features of this barn type is the location of the drive floor in an end bay. This Michigan example has an arched roof instead of the more characteristic gambrel. It is being used as a livestock stable (Marshall McLennan, EMU).

- Figure 5.24 A gambrel version of the Roof Barn in Presque Isle County (M. McLennan).
- Figure 5.25 Windows in the cobblestone foundation reveal that this Emmet County Roof Barn has a basement level entered from the downslope side (Sally Bund).
- Figure 5.26 An example of a bunker silo in Washtenaw County. A collection of vertical silos stand in the background (M. McLennan).
- Figure 5.27 An abandoned keystone corncrib of lathe construction in Washtenaw County (M. McLennan).
- Figure 5.28 A circular wire-mesh corncrib stands next to two shed-roof corncribs in Michigan's Thumb area (M. McLennan).
- Figure 5.29 A double-crib or drive-in crib of the keystone type in Allegan County (M. McLennan).
- Figure 5.30 The structure second from the left is a granary. It is identified by the fact that it stands off the ground supported by short piers of wood or stone.
- Figure 5.31 An abandoned granary on a Monroe County farm (M. McLennan)
- Figure 5.32 A nineteenth-century horse stable with horizontal siding (Henry Glassie 1974).
- Figure 5.33 A shed-roof poultry house (Bailey 1907).
- Figure 5.34 Interior of a brooder house (Bailey 1907).
- Figure 5.35 Winter and summer quarters for hogs (Bailey 1907).
- Figure 5.36 Example of an early twentieth-century community piggery (Bailey 1907).
- Figure 5.37 Example of an early twentieth-century colony-type hog house with a half-monitor roof possessing windows that amplify interior sunlight to the betterment of the animals' health (Seymour 1919).
- Figure 5.38 The milk house is usually located adjacent to the barn. By law, in Michigan, it must have its own direct entry. This illustration also provides an excellent example of a Raised Barn with a gothic version of the arched roof (Noble 1995).

Figure 5.39 A lithograph illustration of late nineteenth-century field divisions on a Washtenaw County farm. An orchard stands directly behind the farmstead (Everts and Stewart 1874).

Figure 5.40 An 1880 farm in Clinton County. Note landscaping, enclosures, and fence types (Durant 1880).

## CHAPTER VI.

### CENTENNIAL FARM SURVEYS

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#### **Introduction**

Given an understanding of the history of Michigan's agriculture, associated buildings, and the concept of farm systems, it is now possible to survey a farmstead to see how its history is reflected on the landscape, and determine if it has sufficient integrity to be considered historically significant.

For the Michigan Agricultural Heritage Project (MAHP), field surveys of selected Michigan farms were conducted for several reasons. First, the surveys provided an opportunity to document the evolution of numerous individual farms by recording the appearance of the farms, in particular the collection of buildings and other man-made features, over time. Second, the information collected was combined with archival and other data collected to conduct a general historical analysis of farmsteads and test the concept of systems and building assemblages to determine the significance of agricultural resources as described in previous chapters. The experience of this documentation and analysis is compiled below to provide the individual tasked with conducting a farm survey a set of examples.

#### **Methodology**

The methodology followed for surveying farms was devised using procedures and guidelines outlined in the State Historic Preservation Office's Manual for Historic and Architectural Surveys in Michigan, and the National Register Bulletins, Nos. 15, 16A, and 30. The work was conducted in accordance with the "Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation" (Federal Register, vol. 48, no. 190, Thursday, September 29, 1983).

Given the overall number of farms existing in Michigan, it was necessary to systematically reduce the number of farms to be surveyed. Initially, surveys were limited to Centennial Farms because their owners, unlike owners of most other farms, are often able to provide information and/or documentation related to the history of their farm. It also enables one to study the processes of change affecting a farmstead while minimizing the impact introduced by the arrival of a new owner.

The potential pool of farms was further limited to one Centennial Farm located within each of the townships already selected for other aspects of the MAHP project. These townships were chosen in proportion to the number of farms that existed during 1910 in each county. The year 1910 was the year in which the number of farms in the state reached a maximum. The Centennial Farm selected within each designated township was chosen based on two factors: (1) availability and willingness of the owner to participate; and (2) having the highest degree of integrity among all the designated farms within a

township as estimated from the Centennial Farm applications. Finally, the list of possible farms was further reduced to include primarily those located in the southern portion of the state, where most of the farms in the state are established. Thus, the 32 farms surveyed for this project are scattered throughout the Lower Peninsula of Michigan, with the majority located in the southern half of the state (Figure 6.01).

For each farm visited, the following information was recorded:

- Architectural descriptions of buildings and other historic resources;
- Photographs of buildings and other historic resources;
- Measurements for site plan of the farmstead; and
- Interview with the owner (or other designated person) to obtain information on current and past farming enterprises, buildings no longer standing, construction and demolition dates, other changes made to the farm site, ownership history, and genealogical information.

In addition, where possible, census records, Rural Property Inventory records, published biographical histories and plat maps, aerial photographs and 19<sup>th</sup> century lithographs (if available), tax records, and/or other archival records were retrieved. The archival information was located primarily in the State of Michigan Archives and the Michigan State University Archives and Library. It was combined with the information obtained in the field to compile a history of the farm property (Appendix A).

Finally, the history and extant historic resources on each farm were evaluated to determine the potential historic significance of each property following the guidelines set forth in National Register Bulletin No. 15. Of the Centennial Farms surveyed for this project, four have been identified as meeting National Register of Historic Places criteria for historic significance (two have agricultural significance, and two have architectural significance (Appendix A, and discussions below).

The collection of farms surveyed for the MAHP provide a glimpse of the typical Michigan farm and its common variations that a preservation consultant and/or surveyor are likely to encounter.

### **Analysis of Surveyed Farm Data**

Although the number of farms surveyed (32) is statistically insignificant, an examination of the data collection enables one to make observations that serve to aid those evaluating a farmstead for its potential historical significance. These observations were made when the farms surveyed for this report were compared to one another for the purpose of measurement, classification, and discussion. Throughout this chapter, a comparison will be made between agricultural resources/properties and non-agricultural resources/properties. By non-agricultural resources and properties, we mean those that do not have an agriculture use—urban residences, commercial structures, religious or educational structures, and other properties that are generally characterized with a single resource and a specific function not related to agriculture.

OBSERVATION #1: The amount and type of historical information needed to evaluate the potential historical significance of a farmstead is greater than that typically obtained for residential and other non-agricultural properties.

To determine the history of a typical urban or suburban residential property, one obtains such information as date of building construction, architectural style, owner and/or builder, and any other information that may have contributed to the construction, appearance, and perhaps evolution of that property. However, an agricultural property generally includes a number of unique resources rather than one or two, the resources all have their own but related histories, and each resource makes an important contribution toward the potential historical significance of the whole property. In addition, many of the building resources were usually built and subsequently modified at separate times by one or more individuals responding to varied forces, especially economic ones, which are often not a factor when evaluating a non-agricultural property. Finally, the buildings on a farm are not necessarily associated with an architectural style or feature, and any dates of construction and/or series of events related to those buildings are frequently not documented and consequently not readily available. It is therefore important to collect as much historical information about a farm property and its individual components as possible. Some of the best resources for such information are the owners, former owners, and neighbors of the property under study.

OBSERVATION #2: In order to estimate the age of a building, given the absence of an architectural style, one needs to look at construction details.

Creating a time-line of resource construction dates and other related events is necessary to understand the evolution of a farm and the relationship between buildings, and to evaluate the period of significance of a farm. Clues for dating buildings can be obtained from two general sources: 1) oral history and 2) the buildings themselves. For oral history, interviews with farm owners, former owners, neighbors, relatives, and members of the community at large (including the local historical society) can often provide information regarding changes made and the reasons for those changes. Most of the changes are also visible when one looks closely at the buildings. With careful study, these changes can be assigned a relative age, especially when facts of the farm's history (as determined from oral history as well as archival material) are taken under consideration.

Perhaps the most useful clue provided by the buildings is the type of materials used. For example, 19<sup>th</sup> century structures are likely to be constructed of wood resting on fieldstone foundations, whereas 20<sup>th</sup> century structures are more likely to rest on poured concrete or concrete block foundations. The outer shell of a barn or outbuilding can be approximately dated by the selection of material used for cladding: older buildings (generally mid- to late 19<sup>th</sup> century) are often covered with wide, vertical boards. Later buildings exhibit wide, tongue-and-groove boards, followed by increasingly narrower tongue and groove boards, tongue-and-groove bead-board, and finally cinder block and metal sheeting. The latter was used by the mid-20<sup>th</sup> century. In a similar manner, the

roofs were first made of cedar shingles until the early 20<sup>th</sup> century, followed by asphalt shingles or metal sheathing in the middle of the 20<sup>th</sup> century. These dates are approximate, because there are other factors that may have influenced a builder’s choice of material. Some of these factors include the relative prosperity of the owner at the time of construction, the availability of the building material, the distance to an urban area, and the amount of farm literature an owner may have been exposed to. However, the clues provided by the building material should suggest a relative date of construction (Table 6.1), enabling one to establish a sequence of construction events, some of which can hopefully be assigned a firm date.

Although not always possible, examining the interior of a building adds immensely to determining the possible age of a building. Older barns are built with the use of timber framing—first using hand-hewn timbers, and then later sawn timbers. Much later—well into the 20<sup>th</sup> century--barns were “stick built” (construction with the use of 2x4’s) and then by the 1960s, farmers returned to the idea of framing an exterior skeleton to make pole barns. Saw marks, relative lumber dimensions, graffiti (carved dates and initials), the use of round vs. square nails in the siding, age of equipment present in the barn (*e. g.*, wood vs. metal stanchions), and other small details add immensely to the pile of clues from which to estimate an approximate construction or modification date of a structure.

Determining the function of a structure can also help with estimating its age. For example, milk houses are associated with dairy farms, and are therefore generally from the first part of the 20<sup>th</sup> century. In similar fashion, corn cribs evolved from a small, wooden one having the cross-section of a keystone at the end of the 19<sup>th</sup> century, to a larger, drive-through version with or without inwardly sloping sides, to ones with concrete bases and cage-like tops that were more common during the middle of the 20<sup>th</sup> century. In order to assist with the identification of building functions, a brief list of some of the distinctive characteristics associated with building functions is provided in Table 6.2.

<b>Table 6.2 Building Functions and Distinctive Characteristics</b>		
<i>Note: The information provided in this table is designed to help an individual who is not familiar with farm buildings to make observations that help determine building function. Specific features may or may not exist on a specific farm.</i>		
<b>Buildings</b>	<b>Distinctive Characteristics</b>	<b>Comments</b>
<i>1. Residential Buildings &amp; Structures</i>		
House	location, style (arch. details)	Frequently faces road, is closest structure to road
Garage	garage doors, 1-story	
Outhouse	height/proportion, “holes”	Tall, thin, wood frame bldgs.

*Continued next page*



<b>Table 6.2 Continued</b>		
<i>2. Large buildings, often with multiple functions</i>		

Architectural detailing may or may not suggest a relative age. As discussed in the section on Architecture below, sawn “gingerbread,” steep narrow cross gables, window styles, and other architectural features familiar to architectural historians because they have residential counterparts, may be present and suggest an approximate age. An example is provided by a decorative cut-out in one or both gable ends on some gable-roof barns. The pattern is most often that of a stylized cross or diamond, although other patterns have been found, too (Figure 6.02). These cut-outs appear to be diagnostic of mid-19<sup>th</sup> century barns that have not been substantially resided, and therefore possess a relatively high degree of integrity (Hanel-Gerdenich 1997: 16; McIlwraith 1981: 27-38).

But then there are the many exceptions-- the outbuilding rebuilt out of recycled parts, the barn that received a gambrel roof (replacing a gable roof), or a barn that is an early example of a gambrel roof (see Observation #4). It is also important to remember that buildings were frequently moved and modified. While this characteristic contributes to the texture and fabric of the farmstead’s history, it makes the challenge of dating a structure and tracking the evolution of a farm an even greater one.

OBSERVATION #3: Some factors appear to influence the appearance of the rural agricultural landscape more than others.

Below is an evaluation of factors that have played a role in the appearance of an agricultural property. The factors were obtained by combining information generally gathered in non-agricultural settings (date of purchase, ethnic heritage, architectural style) with the information required for defining an historic context (theme, place, and time); and considering the fact that agricultural resources are generally defined by their function, rather than by form. The factors are listed in approximate order of increasing influence on the landscape:

1. Date of Purchase
2. Ethnic Heritage of Original Owner
3. Geographic Region
4. Architecture
5. Period of Significance
6. Farm Systems

***Date of Purchase and Ethnic Heritage of Owner***

An analysis of data collected for this survey suggests that the date of purchase of a farm and the associated ethnic heritage of its owner alone have only a small impact on the appearance of a farm today. The farms surveyed were purchased at different times throughout the 19<sup>th</sup> century (Figure 6.03), and there is no systematic variation in the appearance of any farm today that can be attributed to a particular time of purchase. This observation was consistent, regardless whether the purchase was made as a patent owner (where the land was purchased directly from the Federal government) or a secondary owner (where the land and one or more existing buildings were purchased from a previous owner). In general, the farms only reflected their appearance from the 20<sup>th</sup> century.

The exception to this generalization arises when one considers the ethnic make-up of the farm owner and the appearance of individual resources on the farm rather than the entire collection. The role of ethnicity has often been raised as a possible way to differentiate farms (Noble 1984b: 15-35; Thaden 1946: 102-111; Chapter VIII of this report). For this study, slightly more than half (20) of the original farm owners had exposure to an English/Yankee heritage (Figure 6.04). These include those born in Michigan, New York, northern Ohio, Ontario, Illinois, and Indiana. While some of these owners were descendants of immigrants from non-English speaking countries, they were all removed from these ancestors by several generations. Other original farm owners were more directly affiliated with a different ethnic background: German (4), Dutch (2), Irish (1), and French (1). The remaining ones were from Pennsylvania (three—two of whom were probably Pennsylvania Dutch) and in one case, the ethnic background was not known. Today, the families living on the farms are two to six generations removed from the ancestor that established their farms.

While in general the ethnic make-up of the farm family has not influenced the appearance of the farms surveyed in this study, there are individual historic resources, on a small-scale, that do reflect an ethnic influence. One example is the orientation of the Dutch barn, generally found in the southwestern portion of the State (Figure 6.05). These barns are distinctive because, unlike the more common English and modern barns that have a side-gable orientation (Figure 6.06), the Dutch barn has a front-gable orientation. A second example is provided by the presence of a brick farmhouse (Figure 6.07). It has been suggested that the use of brick is more common in regions of German settlement.<sup>64</sup> This observation appears to be consistent with two of the largest areas of rural German settlement in Michigan (although there are plenty of exceptions): the first settlement is centered on Freedom Township in western Washtenaw County, and the second includes the area around Westphalia, in Clinton County (Florer 1941). A third example is provided by the association between the Finns, who settled in the Upper Peninsula of Michigan, and log building construction (Noble 1984b: 148-149).

It does appear, however, that any ethnic influence visible on a farmstead is a little more likely to be apparent if the occupying family is the original (patent) owner rather than a secondary one. Families that have purchased their farms from a previous owner

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<sup>64</sup>Refer to discussion on Ethnic Influences of German settlers, Chapter VIII of this report.

generally maintained the existing infrastructure, rather than replacing or modifying them to depict their own ethnic background. This also suggests that ethnic features that might be identified on Michigan farms today probably do not include any that are functional in nature, but rather are decorative and/or simply “left-over” features.

### **Geographic Region**

The location of the farm within a geographic region can have an influence on the appearance of the farmstead. Variations in the geography (soil conditions, local climate, location relative to the lakes or urban centers, etc.) dictate to some extent the kind of crops and/or livestock raised on a given farm, which, in turn, influences the number, style, and types of resources present. For example, farms tend to have smaller operations as one travels north towards the Upper Peninsula. The fruit belt is situated near the shore of Lake Michigan because of the relative mild local climate, and fruit-producing farms have buildings associated with fruit production. And, finally, the dairy farms tend to be near the middle of the Lower Peninsula, a region that is anchored at several points by surrounding urban centers and their markets: Detroit, Lansing, Grand Rapids, Kalamazoo, Jackson, and Ann Arbor. Like the fruit farms, these farms generally have buildings with specific uses, as discussed in Chapters IV and V.

The geographic location also played a role in the initial appearance of a farm, given that the new farm owner had to rely on local, raw resources for construction and was possibly influenced by the presence of local geographic feature such as a hill or creek when planning the site of his farmstead. For example, many of the older farmhouses are situated on top of small rises adjacent to the public roads. However, the farms surveyed for this project have lost their original, 19<sup>th</sup> century appearance. With minor exceptions, the influence of geography on the appearance of a farmstead today is limited to the impact it has had on the type of farming conducted. More discussion on the type of farming follows in the section on Farm Systems below.

### **Architecture**

High-style architecture, too, when considered by itself, tends to have a minor role in the appearance of the Michigan farmstead. Because most farm buildings are vernacular and often not in the best condition, architecture only plays a dominant role when a particular house, barn, or outbuilding has been embellished and reflects a specific style or time period, or exhibits the mark of a unique construction method or feature. When compared to historic resources in an urban setting, the number of rural properties with one or more buildings of architectural significance is relatively low. It is even more unusual for an entire farmstead to have architectural significance.

Examples of architecturally interesting buildings and/or details found in this survey are discussed and depicted below.

#### **Houses**

Because the farm house provided a stable focal point of the farmstead, it served as the backdrop from where the farmer can show his relative prosperity to the outside world. Thus, the main residence of a farm was often the most embellished of the resources present. An architecturally stylish house clearly suggested that the farmer was doing reasonably well, at least at the time of construction, although the reason for construction was generally to meet a functional need rather than to be fashionable. There are four houses from this survey that pre-date the Civil War. They are each vernacular, side-gable structures with enough additions and changes made to them that they no longer have architectural significance. Of the 32 farmsteads surveyed, only two have houses with sufficient integrity to exhibit architectural significance (Figures 6.08-6.09). Most of the remaining farm houses have been modified and/or enlarged in a manner that reflects the more recent time of change, but not the original architectural style (Figure 6.10).

In at least six of the farm properties surveyed, the existing houses are known to be replacements of one or more older houses. As would be characteristic of the time, the older home was recycled if possible, such as into a granary or garage (Figure 6.11). In some cases, the house was moved, and/or continued to serve as a residence on the farm or on a nearby one. In two cases, a granary was improved and made into a residence (Figure 6.12). Not surprisingly, if a house was replaced, the newer one was built exhibiting the latest architectural style. A more detailed discussion of the architectural styles commonly adopted for Michigan farmhouses is given in Chapter V.

### Barns

Barns, particularly the main one, usually provide the second focal point on a farmstead. The barn was often at the center of farming activities, including serving as the site for processing, storage, shelter, or all of the above. Because of this, the barns on many of the farms surveyed for this project contribute significantly to the history of the respective farms and are very functional structures. To the eye of an architectural historian, most of the barns appear as vernacular structures. In addition, many of the older barns have been modified to accommodate advances in technology, such as receiving a gambrel roof to replace an older gable one. This makes it even less likely that a barn will have architectural integrity.

If present, the expression of an architectural “style” on a barn will be reflected in the details, and is only occasionally associated with a specific form. Architectural embellishments are most often present along the eaves, at the gable ends, on cupolas, and as decorative features on doors. Specific examples include decorative sawn cut-outs in one or more of several places, peaks or other decorative trim over window openings, rafter extensions visible in the eaves, and painted patterns on the doors (Figures 6.13-6.16). These features can be compared to mid-to late 19<sup>th</sup> century Victorian “gingerbread” and trim found on late Italianate and Queen Anne-style buildings; and on early 20<sup>th</sup> century Craftsman structures. However, in comparison to houses, there will generally be fewer architectural details present on barns, the details will probably date to a slightly later period than those found on residential (especially urban) structures, and the vernacular form of the building will dominate.

Examples of barns with architectural integrity from this survey are shown in Figures 6.17-6.22. There are some barns, of course, that do show architectural features more characteristic of the high styles usually associated with houses: a barn with high-style Gothic characteristics –including cross-gable dormers--is depicted in Figure 6.23. The Gothic features can be found scattered around the state. Other barns are unique because of their form, such as the Round Barn in Figure 6.24 or the Ogee Barn in Figure 6.25; or the material used in their construction, such as the cobblestone barn shown in Figure 6.26. The last four examples are of barns from properties not included in this survey.

### Other buildings

Most of the remaining structures on a farm are truly functional in nature, and, in general, little effort was made to make them architecturally interesting. Like the barns, any architectural expression is visible as a detail on a dominantly functional form. The number and frequency of details is even less than what one might find on a barn. A few examples are shown in Figures 6.27-6.29.

### *Period of Significance*

By definition, the period of significance has a large impact on the current appearance of a farmstead. The period of significance is defined as the period of time in a farm's history that is depicted by the historic resources present. For a farm, the period of significance is often much longer than for the typical non-agricultural property. Farms do occasionally represent the period of one generation or so, but given that change is necessary in order for a farm to survive, most periods of significance represent a relatively broad period of time, such as multiple decades or even a century. In this study, four properties reflect an early to mid-20<sup>th</sup> century period; three are representative of the mid-20<sup>th</sup> century; and two reflect the span of a full century (see Classification Categories below).

One cannot discuss period of significance without mentioning integrity. Integrity is defined by the National Park Service as having seven components: integrity of location, design, setting, materials, workmanship, feeling and association (National Register Bulletin No. 15 1995: 44-49). Partly because of the increase in time span for the period of significance, and partly because one of the defining characteristics of a farm is constant change, a farm will typically have a lower level of integrity in comparison to a non-agricultural property.

In summary, the period of significance does play a large role in understanding the appearance of an agricultural landscape today. It helps to explain the relationship of the individual farmstead resources to one another. In comparison to non-agricultural properties, it is rare for a farm to represent a museum-grade “slice in time” or be representative of the 19<sup>th</sup> century; and it is rare that a farm possesses a high degree of integrity for any particular period of time.

### *Farm Systems*

The most useful information for understanding the appearance of a farmstead is the identification of the systems, or type of farming, that have operated on a given farm. An in-depth discussion of Farm Systems and their influence on the landscape is discussed in Chapter III. Historically, a farm evolves from one system to another, depending on the influence of economic, market, geographic, technologic, and other factors present. Each system has an accompanying list of buildings and other infrastructure needed to enable that system to be economically viable. In changing from one system to another, the farmer often modified existing buildings to suit, and/or, less commonly, constructed one or more new buildings on his property. If not used, the older buildings on the farm were used for storage, torn down, or recycled on another farm.

Because most of the farms in Michigan are found in the lower portion of the Lower Peninsula, which coincides with a proximity to the urban markets of Detroit, Grand Rapids, and other cities, many of Michigan's farms switched operations to a dairy one during the 20<sup>th</sup> century. The dairy system has had the greatest impact on the current appearance of the farms in this study. Maintaining a dairy operation generally required the construction of specific buildings (silo, milk house, later corn crib) that would otherwise not be there, and the modification of other buildings (barn roof to a gambrel one; Chapter IV).

Today, many of the farms are switching to the cash grain (or crop) commodity. This system requires the presence of a pole barn with a large garage door opening to accommodate modern machinery; and open fields with as few obstacles (such as fences and hedge rows) as possible. The system also has little use for older, smaller outbuildings. These are now primarily used for storage, vacant, or are removed altogether (Figure 6.30).

**OBSERVATION #4:** There will always be exceptions to the observations made above. For example, a dairy operation may never have built a silo; or a fruit farming operation may not have constructed a packaging center.

This observation is especially important to note as this study is based on a limited sample of 32 farms and the experience of surveying additional farms previously (Hanel-Gerdenich 1996 and 1997).

**OBSERVATION #5:** To categorize a farm in order to better understand its potential historical significance, an analysis of the data, particularly those described in Observation #3, enables a classification scheme.

In order to better evaluate a farm's potential significance, the factors described above are combined with integrity to create categories of farm types. These categories include farms with integrity representing different periods in time, farms with integrity related to something other than agriculture (*e. g.*, architecture), the modern farm, and the remnant farm. The categories are discussed in Chapter VII.

**FIGURES**     *Chapter VI*

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- Figure 6.01     Location of Farms Surveyed (on County Map of Michigan)
- Figure 6.02     Photograph of Barn cut-out, Farm No. 9
- Figure 6.03     Centennial Farms – Decade of Purchase by Family (bar graph)
- Figure 6.04     Centennial Farms – Location of Birth, Original Owners (bar graph)
- Figure 6.05     Photograph of Dutch Barn, Farm No. 10
- Figure 6.06     Photograph of English Barn, Farm No. 30
- Figure 6.07     Photograph of Farmhouse, 1891 Italianate, Farm No. 27
- Figure 6.08     Photograph of Farmhouse, circa 1878 Italianate, Farm No. 13
- Figure 6.09     Photograph of Farmhouse, circa 1904 Queen Anne, Farm No. 12
- Figure 6.10     Photograph of Farmhouse, circa 1861, with additions, Farm No. 2
- Figure 6.11     Photograph of old Granary, Farm No. 15
- Figure 6.12     Photograph of Farmhouse (former granary), Farm No. 18
- Figure 6.13     Photograph of sawn cut-outs in gables, Vassar Road, Genesee County
- Figure 6.14     Photograph of decorative barn window trim, Price Road, Clinton County
- Figure 6.15     Photograph of exposed rafter extensions, Round Barn, Huron County
- Figure 6.16     Photograph of painted barn doors, Farm No. 25
- Figure 6.17     Photograph of early to mid-19<sup>th</sup> century barn, Farm No. 9
- Figure 6.18     Photograph of mid- to late 19<sup>th</sup> century barn, with additions, Farm No. 6
- Figure 6.19     Photograph of late 19<sup>th</sup> century barn, Farm No. 1
- Figure 6.20     Photograph of early 20<sup>th</sup> century barn, Farm No. 7
- Figure 6.21     Photograph of dairy barn, 1925, Farm No. 15
- Figure 6.22     Photograph of late 19<sup>th</sup> century log barn (northern end), Farm No. 27

- Figure 6.23 Photograph of Gothic Barn, Vassar Road, Genesee County
- Figure 6.24 Photograph of Round Barn, Huron County
- Figure 6.25 Photograph of Ogee-roof Barn, Highway 15, near Ina, Michigan
- Figure 6.26 Photograph of Cobblestone Barn, Mecosta or Montcalm County
- Figure 6.27 Photograph of Milk House, Farm No. 32
- Figure 6.28 Photograph of Milk House, Farm No. 6
- Figure 6.29 Photograph of Corn Crib with matching roof on barn, North Branch Road (M-90), Lapeer County
- Figure 6.30 Photograph of former farmyard, Farm No. 5

***TABLES Chapter VI***

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- Table 6.1 Evolution of Buildings Associated with Michigan's Farms
- Table 6.2 Building Functions and their Distinctive Characteristics



## CHAPTER VII.

### FARMSTEAD CATEGORIES AND SIGNIFICANCE

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#### Farmstead Categories

Understanding Michigan's agricultural history, farm systems, and associated historic resources, and combining that with information obtained in the field, enables the identification of a classification scheme that permits one to categorize a farmstead. The categories are listed in Table 7.1 and discussed in more detail below. It is important to note that these categories are not of Michigan farm systems that have evolved over the years, but a typology of farmsteads existing today that anyone is likely to encounter. This typology only applies to the farmstead—the infrastructure and other items that can be classified as resources—and not to the farm as a whole. The purpose of the categories is to help understand the evolution of a particular farmstead by connecting the existing infrastructure on a farm with a series of events from the past, and to provide additional information for evaluating historic significance. Individual farms that serve as examples of a particular category are included as case studies (Appendix A-4).

#### *Farmsteads with Agricultural Integrity to a Specific Period (Categories 1-3)*

Approximately one-fourth of the farms surveyed maintain enough integrity to reflect a specific period in time. Although all farms were purchased by ancestors of the current owners during the 19<sup>th</sup> century (Figure 6.03), there are no farms in this study whose extant resources primarily reflect that century. Category 1, therefore, consists of farmsteads that evolved into their current form mostly during the first half of the 20<sup>th</sup> century. These farms include several buildings from the 19<sup>th</sup> century (generally including the farmhouse), but consist mostly of structures built during the first half of the 20<sup>th</sup> century, in particular the period before World War II. Category 2 farms are similar to Category 1 farms, but have a higher percentage of buildings and other features that were constructed during the middle of the 20<sup>th</sup> century. Category 2 farms also have lost a significant amount of their 19<sup>th</sup> and early 20<sup>th</sup> century resources. In both categories, the degree of integrity may or may not meet the definitions for historical integrity and significance as used by the National Park Service for the National Register of Historic Places (National Register Bulletin No. 15).

Category 3 farms reflect a broader period of history—one that spans up to approximately one century. These farms have generally maintained many of their historic resources (primarily buildings) from the late 19<sup>th</sup> century onward, as well as the integrity of the agricultural setting around the farmstead. The two farmsteads surveyed for this project that are classified in this category show a continuum of agriculture-related activity as expressed by building construction dates. Because of the relatively high degree of integrity seen on the building exteriors and the farmstead landscape, these farms also meet the requirements set forth for Criterion A of the National Register of Historic Places.

In all cases, the farms in Categories 1, 2, and 3 followed a similar evolutionary path. They began in the 19<sup>th</sup> century as operations raising crops and livestock to feed the owner and his family. In a good year the farmer might even make a profit on the side from the sale of surplus produce or livestock. This type of farm is often referred to as the “general farm.” Structures typically found on farms during this time are best depicted in County Atlases.<sup>65</sup> They include a farmhouse, one or more larger barns, and a collection of smaller outbuildings used to provide shelter, food processing activities, and crop and equipment storage. Given the angle from which the drawings in the Atlases are made, not all buildings and other features on a farm are necessarily visible, and the use of each structure is not indicated. However, buildings easily identified in the drawings include the farmhouse, main barn, and the distinctive keystone-shaped corncrib. A building elevated onto corner posts was most likely a granary.

At the end of the 19<sup>th</sup> century and the beginning of the 20<sup>th</sup> century, many of these farms expanded into a dairy operation. This is particularly true for those farms situated near urban areas, such as in southeastern and central Michigan. While the owners still raised most of their own food from crops and livestock, a good portion of the farming efforts went into milking the dairy herd and raising the necessary feed. The emphasis on dairy farming led to a dramatic change on the agriculture landscape. The farmers added silos, milk houses, and new or enlarged barns with gambrel roofs. Some also added larger chicken coops, corn cribs, and other outbuildings that provided storage of feed and equipment necessary to operate the dairy farm and accompanying complementary enterprises such as the sale of chickens, eggs, and/or pigs. If the farmer was successful, he might have added a one-car garage adjacent to the house, and the house itself might have been updated or replaced. Nineteenth century buildings removed from the farmstead during this time were often the smoke house and wood shed. In addition, some 19<sup>th</sup> structures may have been replaced by a more modern equivalent (such as a tractor shed replacing a wagon shed), or they may have been modified in some way to accommodate a new use.

During the decades after World War II, many of the dairy farms sold their herds and began to specialize in crop farming. The buildings on the farmstead remained, but were and are primarily used for storage. An Equipment shed, often in the form of a pole barn, was typically the only type of building added to this type of farm during the mid- to late-20<sup>th</sup> century.

#### **Farmsteads with Agricultural Integrity representing two or more Systems (Category 4)**

Farms classified in Category 4 illustrate two or more distinct types of farming systems. Examples of farming systems conducted on Michigan farms over the last two centuries include dairy farming, poultry farming, cash crop farming, fruit farming, truck farming, and specialty crop farming. The farms surveyed in this project primarily reflect the dairy,

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<sup>65</sup>County Atlases were published during the latter half of the 19<sup>th</sup> century, and can be found in the State of Michigan Library in Lansing as well as in many local libraries and archives. Citations to a selection of Atlases are included in Appendix D-2.

cash crop, fruit, and truck farming systems. Resources found on a farm that are diagnostic to a particular farming system are presented in Chapter IV.

Rather than being grouped by construction date, the resources on these farms can be classified by the type of systems conducted on the farm. The result is a layering effect, where each farming system and its associated buildings form one layer, and later layers are superimposed over earlier ones. The oldest layer is generally defined by the 19<sup>th</sup> century buildings associated with general farming or an early 20<sup>th</sup> century enterprise. The second layer usually dates from the 20<sup>th</sup> century, and reflects a change in the main product being produced on the farm. As with the other categories, some farms falling into this category do and others do not have sufficient integrity to meet the National Register criteria of significance.

#### **Farmsteads with Architectural or Other Integrity (Category 5)**

Category 5 farmsteads have one or more individual buildings that exhibit a distinctive architectural style, or have vernacular buildings possessing a high degree of integrity. (Although the collection of buildings on a farm could have significance for a number of other reasons, architecture is the second-most common theme after agriculture illustrated on the farm.) The farmstead as a whole has lost its historical agricultural integrity, although it is theoretically possible for a farmstead to exhibit both architectural and agricultural integrity. For many of the farms in this category, the building with the most architectural features and integrity is the farmhouse. However, there are also farms that exhibit a distinctive, unique and/or unmodified barn, granary, silo, milk house, and/or hog pen.

#### **Farmsteads with little or no historical Integrity (Categories 6 and 7)**

The majority of the farms today can be classified into one of two groups: the “Modern Farmstead” or the “Remnant Farmstead.” The exceptions are those farms that have integrity and can be classified in one of the five groups described above. The Modern and Remnant farms have relatively little integrity, primarily due to the loss of a critical number of older structures and/or other historical resources. Case studies highlighting these remaining categories (6 and 7) are included in this report to provide additional information and examples of the more common farmstead type existing today.

“Modern Farmsteads” are older farmsteads that have been rebuilt to accommodate modern farming needs to such an extent that they more accurately portray the mid- to late 20<sup>th</sup> century period rather than an earlier time. The landscape of the modern farm generally includes the removal or abandonment of smaller, older buildings and hedgerows, and the addition of larger pole buildings. The older buildings were removed to upgrade the types of buildings and accommodate new uses; or to replace those lost in a catastrophic event such as a fire. In addition, the farm consists of numerous newer buildings that surround the older ones, substantially modifying the feel of the landscape. It is often the owner, as a full-time farmer, who operates the farm. While these farms no

longer possess integrity to a time period in the past, they may meet such criteria for the late 20<sup>th</sup> century at a point in the future.

Category 7 includes those farms whose farmsteads are “remnants” of what was once present. This is the largest category, containing the highest number of farms from this survey. Like the modern farms, the remnant farms typically have little integrity to the period of significance suggested by the extant historic resources and the farm history. The buildings generally removed (whether by design or accident) include the barn (10 farms), outbuildings (13 farms), an older house (5 farms), or another feature affecting the setting of the farmstead (8 farms). Despite these losses, the farmsteads in this category generally have a smaller number of buildings removed in comparison to the “Modern” farms. The buildings are often left vacant or are stuffed with artifacts from a by-gone era. With exceptions of those near urban areas, the land is leased to a nearby farmer raising cash crops. The farmstead itself continues to be occupied by descendants of the original owners, who do relatively little farming themselves.

The farms surveyed for this project were grouped into one or more of the categories described above (Table 7.2). Note that the largest number of farms was able to be classified as “Remnant Farms,” suggesting that, in general, there are many Michigan farmsteads that are not being actively used to support a farming operation. Approximately one third (11) of the farms do retain at least one building with architectural significance; and another quarter (9) have reshaped themselves into modern farmsteads in order to compete in today’s agricultural economy.

### **The Relationship between Farmstead Categories and Other Factors**

Although it is tempting to end the discussion of classification categories here, it is important to note that not all farmsteads fit into one category at the exclusion of the others (hence, in Table 7.2, the total number of farms in individual categories is greater than the sum of 32). There is a continuum that exists between the remnant farmsteads, the modern farmsteads, and/or those farmsteads that exhibit some form of integrity—whether it is agricultural or architectural in nature (Figure 7.01). The number of farms from this survey that fit into more than one classification category is almost one-third (10).

There is one exception to the observation that farmsteads can be classified on a continuum between category end members: it is not possible to have a remnant farmstead with agricultural integrity. There are farms that may consist of a mixture of remnant farm and modern farm (*e. g.*, Farm No. 19, Appendix A), or remnant with architectural integrity. One farm on this study maintains integrity while continuing to operate as a modern farm. The latter situation is accomplished by effectively constructing a new farmstead supporting a large fruit processing operation adjacent to the old farmstead, supporting a small-scale (and compatible) beef operation. If the owner should choose to eliminate the smaller enterprise from his business plan, then the old farmstead would lose its function and, eventually, probably its integrity.

Of the eight farms graphed at the “Integrity” apex of the triangle, all exhibit some form of agricultural integrity. The eight farms are mostly smaller farms whose owners are pursuing cash crop farming. The system of cash crop farming is relatively gentle on an older farmstead, because it requires only a few changes to be made, such as the addition of a large pole barn to house larger equipment and machinery. The danger is that as the older buildings are no longer used; they deteriorate or are removed, impacting the integrity of the farmstead. This status has already been achieved on the farms classified as “Remnant Farms.” The farms that appear on the continuum between “Remnant” and “Integrity” are all there because they exhibit some form of architectural significance. Of all the farms surveyed, two exhibit elements of three end members. These are a remnant farm with some architectural integrity in combination with a component of a modern farm. The farms include the fruit/beef farm described above, and a beef operation that has been able to use most of its existing outbuildings in addition to one, large newer one, but whose integrity factor is contributed by architecture rather than by anything agricultural—again, because there is no relationship possible between a farm with agricultural integrity and a remnant farm. As already stated, it is possible to have a remnant farm exhibit some form of architectural integrity; and, in theory, it would be possible to have a farmstead that exhibits agricultural as well as architectural integrity. In this study, none of the farms met this classification, but Farm No. 15 perhaps comes close (Appendix A-4).

In addition to understanding the relationship between farm categories, it is also revealing to compare the farm categories with other factors. Upon examination, there appears to be no systematic relationship between the following pairs:

- Farmstead category and the date of farm establishment;
- Farmstead category and ethnic origin of original owner;
- Farm system and the date of farm establishment;
- Farm system and geographic region;
- Farm system and ethnic origin of original owner;
- Architectural significance and geographic region;
- Architectural significance and date of farm establishment;
- Architectural significance and architectural style;
- Farmsteads with integrity and geographic region;
- Farmsteads with integrity and length of time owned; and
- Farmsteads with integrity and patent ownership.

There are two comparisons that do exhibit a loose correlation—one associated with geographic region, and the other with time. The first correlation is evident when the state is divided into five geographic regions (Center, Thumb, South, West, and North/UP—consisting of groupings of regions defined by Hill *et al.* 1930). It is noted that the Center region has a larger number of farmsteads with agricultural integrity (five out of a total of eleven) than do the other areas. The North has the least number (none out of a total of four; Table 7.3). The number of remnant farmsteads in all regions is approximately half; with the exception in the north, where the number is 100 percent. The modern farmsteads identified in this survey are distributed throughout the State, as are those

farmsteads with integrity. These relationships are not as evident when Hill's individual regions are examined, perhaps because the number of samples (=farms surveyed) is simply too small.

The other systematic relationship that can be shown among the 32 farms surveyed is the link between system and time (Table 7.4). A scan of systems adopted by farms during the 19<sup>th</sup> century, early 20<sup>th</sup> century, mid-20<sup>th</sup> century, late 20<sup>th</sup> century, and today, shows that many farms operated with a mixed system, all presumably smaller in scale, during the 19<sup>th</sup> century and up until about World War II. The dairy and specialty farms began to appear during the early 20<sup>th</sup> century and continued to the late 20<sup>th</sup> century when dairy as a farm system becomes relatively uncommon. Only one farm surveyed continues as a dairy operation today. The diversity among the 32 farms surveyed decreases noticeably from the turn of the last century. Today, all but eight of the surveyed farms raise grain for cash.

It is important to realize that these observations are very tentative, given the small sample number covering a very large geographic area. As is also true for all observations made in this report, it is not known how farms that do not have long-term owners (*i.e.*, farms not eligible to be designated as a Centennial farm) might compare. However, the observations and conclusions made during the field survey for this project are consistent with what has been observed in the literature (Chapter III). This and logic suggest that non-Centennial Farms share a similar evolutionary history, but one that will be more difficult to document.

### **The Relationship between Farmstead Categories, Farm Systems, and Historic Context, Significance, and Integrity**

There are a number of concepts that must be taken into consideration when evaluating a property (National Register Bulletin No. 15, 1990 revised 1995; Christensen 2001: 51-57). These include historic context, historic integrity, and historic significance. The historic context for an agricultural property is defined by its geographic region, its period of significance, and the associated farm system(s) in operation. The historic integrity is determined by the number, condition, and setting of the historic resources existing today that were also present during the period of significance. The historic resources are artifacts that must provide a physical link to the time of significance and associated farm system. Finally, the historic significance is determined by comparing an agricultural property in its present state to how it appeared during the period of significance, and also by comparing it to others that share the same historic context. A favorable comparison would suggest that a property has historical significance. This can be done visually by determining in which farmstead category a property can be classified (Figure 7.02).

***FIGURES Chapter VII***

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- Figure 7.01 A diagram depicting the relationship between the farmstead categories.
- Figure 7.02 The relationship between the farmstead classification categories in Figure 7.01 and architectural significance.

***TABLES Chapter VII***

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- Table 7.1 Categories of Farmsteads, as observed on the Michigan Landscape today.
- Table 7.2 Categories of Farmsteads Surveyed for this Project.
- Table 7.3 Distribution of Farmsteads with Agricultural Integrity, by region.
- Table 7.4 Distribution of Farm Systems over Time, as observed on surveyed farms.

## CHAPTER VIII.

### ETHNIC INFLUENCE ON MICHIGAN FARMS

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#### Introduction

Beginning with French Canadians in the late eighteenth century and continuing into the early twentieth century, many European ethnic groups migrated to Michigan and took up farming. Particularly prominent among these were Germans, Canadians, Poles, Dutch, Finns and Scandinavians. Other distinct ethnic settlements existing during the early 20<sup>th</sup> century include those associated with Irish, Scotch, African-American, Belgian, Swiss, French, Czech, Austrian, Hungarian, Yugoslav, Russian, Lithuanian, Latvian, Italian, Mexican, and Native American cultures (Thaden 1945). Those who pioneered the land, as distinct from those who acquired pre-established farms, sometimes transferred house, barn, and outbuilding types, as well as agricultural practices from the “Old Country.” In doing so, they created, in some measure, farmscapes characteristic of their homelands. Over time these farms became integrated into the cultural landscape and farming systems representative of the majority American farmers. Nevertheless, here and there relict expressions of ethnic material culture survive. Frequently ethnic survivals bear witness to the use of building materials and construction techniques that are associated with the material culture of specific culture groups. Examples of such construction that are found in Michigan are analyzed in Appendix C.

In evaluating the prospects of finding relict “Old World” farm building transferals in areas of ethnic settlement in Michigan, one must differentiate between localities in which the immigrants were pioneers who established the first effective farms from areas where they acquired pre-established farms from earlier settlers.<sup>66</sup> It is the former situation in which material culture transferals and survivals are most likely to be found. Thus, farms pioneered by ethnic settlers have a high potential of possessing cultural and historic significance in terms both of their vernacular architecture and agricultural practices. Consequently considerable attention is given in this report to ethnic groups that established farms in Michigan. Unfortunately, no comprehensive survey and documentation of ethnic farmsteads and landscapes has yet been attempted in Michigan. Some local documentation of ethnic dwellings and barns in Michigan have been carried out, but with the exception of pioneer Finnish structures, this fieldwork has been of an exploratory nature and has not led to the identification of ethnically distinct farm types. Nevertheless, some cultural mannerisms, if not farm types, have been identified relating to the rural dwellings of Canadian, German, Polish, and Dutch settlers. Because of limited fieldwork devoted to ethnic folk architecture in Michigan, it is unknown at this time whether other ethnic folk-house types beyond those listed above exist in Michigan. If others are eventually to be discovered, Scandinavian types have the most potential.

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<sup>66</sup>This is one of the difficulties in working with the ethnic distributions mapped by J.F. Thaden (1945 and 1946). Many of the Central European ethnic groups who dominated farm ownership of particular townships in the 1940s originally came to work on pre-existing sugar-beet farms early in the twentieth century and eventually acquired many of these farms.



The existing literature from other Great Lakes states reveals that there are many similarities in the folk house and agricultural building idioms of the Finns, Norwegians, and Swedes, all of whom settled in parts of northern Michigan.

### **Ethnic Settlements in Michigan**

To provide some context for Michigan, a selective review of literature pertaining to ethnic settlement in the Great Lakes, the Ohio River Valley and the eastern Great Plains regions was undertaken. This literature, admittedly scattered and fragmented rather than comprehensive, suggests that in some localities settlers graduated from pioneering log or sod structures directly to American house types and barns. In other areas they did erect some examples of traditional house forms typical of the old country, or applied construction techniques or architectural mannerisms characteristic of their traditional material culture to American house forms. Just why perpetuation of tradition or acculturation to American habits varied from place to place is a question without easy resolution.<sup>67</sup>

To some extent the outcome may reflect whether there were early American settlers in place to provide successful examples of pioneering occupance strategies. Immigrants were frequently also anxious to fit quickly into the mainstream society. Another factor is that the prevailing agricultural system, even in its infancy, may require that immigrants pattern their agricultural activities in such a way as to maximize economic success. Conversely, when immigrant groups were the first pioneers in the area, they had the opportunity, at least initially, to imprint the landscape with familiar buildings, crops, and methods of farm and farmstead organization. Even so, immigrants in this situation found that they had to simplify and modify their material culture traditions so as to adapt to local environmental, agricultural and economic circumstances.

Geographers have developed a body of theory as to why, when immigrants attempt to maintain their traditional cultural habits, “a profound cultural simplification occurs.” Only fragments of an ethnic group's culture successfully take root (Harris 1977: 469-483).<sup>68</sup> In the process of coming to terms with their new home, some ethnic groups were ultimately completely absorbed into the emergent cultural mainstream within a generation or two. In other instances, their adaptations enabled them to preserve vestiges of their material culture. Surviving ethnic expressions are often subtle. Particularly in the case of dwellings, these expressions might manifest themselves as small architectural flourishes overlaid upon American forms, a combining of stylistic idioms incongruent with mainstream American taste, or a difference in structural massing (Gyrisco 2001: 29;

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<sup>67</sup>Many studies that analyze ethnic settlement in various states and discuss the consequent cultural landscape are included in the bibliography. The outcomes are varied. For still more examples, the reader should consult the extensive nationwide bibliography compiled by Peggy Lee Beedle and edited by, Geoffrey M. Gyrisco (1996). See also the chapter on ethnic geography in Jordan, Domosh, and Rowntree, *The Human Mosaic* (various editions) and the accompanying chapter bibliography. For an overview of perspectives of geographers concerning immigrant acculturation in America, with identification of relevant literature, see Zelinsky (1973): 20-28.

<sup>68</sup>The processes of cultural simplification and of acculturation are analyzed in some detail in Matti Kaups (1983): 2-26.

Gyrisco and Miller 1997: 75-83). Surviving ethnic landscape features, even ones comprising an amalgam of tradition and adaptation to local circumstances, enhance the cultural significance of the farm properties upon which they stand.

It must also be realized that in some instances immigrant populations were not actually pioneers, that is, the first occupants on the land, but simply acquired existing farms from earlier settlers. A prime example relates to the development of sugar beet farming in central and southeastern Michigan during the early decades of the twentieth century. Whether the innovators were Yankees or farmers of German stock has not been investigated, but for the most part working farms predated sugar beet cultivation. The change in agricultural system entailed the introduction of special cultivation techniques, and peasant farmers from Central Europe, particularly Czechs, Slovaks, and Hungarians who were familiar with this form of tillage, were recruited as farm laborers. Eventually many of these immigrants purchased farms with preexisting farmhouses and outbuildings. Consequently, their farm buildings reflect nothing of their European cultural heritage.<sup>69</sup> We have here an example of the Kniffen/Zelinsky “doctrine of first effective settlement” discussed in Chapter V.

When documenting cultural resources in areas of ethnic settlement in Michigan, surveyors should be sensitive to these alternative material culture outcomes in the landscape and attempt to account for them. In addition, windshield surveying may not be sufficient to make an accurate ethnic identification. It may be necessary to investigate property ownership records.

### **The Germans**

Among the many ethnic groups that settled in Michigan, Germans came in the largest numbers, beginning in the 1830s and 1840s (Russell 1927). Until the consolidation of a myriad of independent political units into modern Germany, there was no national German culture. Immigrants to Michigan shared a broad overall Germanic cultural base, but they brought with them a considerable regional diversity in their material culture. Germans of modern social and cultural attainment came from the western parts of the Germanic realm, while peasants fleeing the Prussian estates in the east still adhered to medieval customs and material culture.<sup>70</sup> Some came to Michigan as part of Catholic or Lutheran colonies. Others emigrated from the Old Country as individuals or as nuclear families.<sup>71</sup> The house types, outbuildings, construction techniques, agricultural and

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<sup>69</sup>It is reported that as early as the 1830s some of the Swabian immigrants who took up farming in Scio Township west of Ann Arbor purchased their farms from earlier Yankee settlers rather than from the U.S. government. Nevertheless, it is unclear whether they acquired uncleared land or working farms. Since settlement of the area had begun only a decade earlier it is likely that even on working farms the dwelling consisted of a log cabin, not a Yankee house type (Hanel-Gerdenich 1997: 6).

<sup>70</sup>Wisconsin, to a larger extent than Michigan, received peasant immigrants from Prussia and this, in part, explains why more traditional Germanic folk buildings were introduced in that state than in Michigan.

<sup>71</sup>Nevertheless, individual immigrants tended to write home to encourage relatives and neighbors to follow them; leading to what Wilber Zelinsky refers to as “chain migration” and an unsponsored ethnic clustering. See Zelinsky (1973: 28-33) for a discussion of territorial patterns among ethnic groups.

tenure systems, favored crops and food preferences of their immediate home localities embraced a spectrum of practices.

### German Houses

To what extent did this diversity of Germanic material culture take root in Michigan? Initial observations indicate that in Michigan German settlers quickly adopted Yankee house and barn types, suggesting that they also took up the prevailing agricultural systems. It is, of course, possible that future field investigation will find an occasional Old World building type.

Nevertheless, German immigrants to Michigan frequently took subtle liberties with local dwelling types and styles.<sup>72</sup> For those with the economic means, brick or other masonry construction was a favored building medium.<sup>73</sup> Subtle differences in massing and architectural details can also be observed.<sup>74</sup> Houses of German settlers, particularly those built in brick, employ dimensions that lend an appearance of greater solidity and indestructibility than those of their Yankee neighbors (Figure 8.01).<sup>75</sup> An interesting question, not yet investigated, is whether German settlers in Michigan made adjustments to typical American floor plans to better accommodate traditional patterns of spatial behavior.<sup>76</sup> For example, Charles Sawyer (1981: 9) provides an illustration of what is a New England One-and-a-Half Greek Revival Cottage in Frankenmuth, but he points out that the off-center doorway is characteristic of dwellings in German communities in the Saginaw Valley area. The specific example provided by Sawyer has been demolished, but a similar Frankenmuth dwelling is illustrated in Figure 8.02. While uninvestigated, the facade configuration of both houses is suggestive of the three-room “continental plan” introduced as early as the eighteenth century by German settlers in Pennsylvania and to the Moravian settlements of Carolina's piedmont area.<sup>77</sup>

Another clue that a farm dwelling may have a Germanic cultural affiliation, particularly if of masonry construction, is its use of *rundbogenstil* (round window style); that is, round arch or segmental window framing. Segmental arched windows are a German Romanesque feature which enjoyed a revival in Germany in the 1830s and from whence

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<sup>72</sup>Charles H. Sawyer (1981: 7).

<sup>73</sup>Carl O. Sauer (1925: 173) may have been the first to note that German immigrants had a tendency to use finished brick or stone for their preferred building materials. See also Gerlach (1976: 89), Martens (1990: 13), Brown (1988: 24-32), Wilhelm (1992: 67-69), and Peterson (1998), with repeated references to brick as a status building material.

<sup>74</sup>For example, in the Ozarks it was observed that German residences were more likely to be embellished with window shutters than the homes of their Anglo-American neighbors (Gerlach 1976: 92).

<sup>75</sup>Describing German dwellings in the Ozarks, Gerlach (1976: 83) observed that many of today's German houses were built by the first generation of settlers and that “the houses were originally well built, and by people who, from the beginning, settled with the intention of permanent residence...”

<sup>76</sup>Steve Martens (1990: 15-18) provides an instructive German example from Carver County, Minnesota, while Reidar Bakken (1994: 80-81) reports a Norwegian example from Minnesota. Both ethnic groups reformulated Upright-and-Wing houses to traditional interior spatial layouts. See also Lena A:son Palmqvist (1986: 155).

<sup>77</sup>Noble (1984b: 41-43), with illustrated floor plan.

it was carried to German areas of settlement in America (Oszusich 1987: 20).<sup>78</sup> A number of examples may be observed in German areas of settlement west of Ann Arbor (Figure 8.01, Figure 8.04, and Figure C.27) as well as in Westphalia Township, Ionia County.<sup>79</sup> Among many of these farmhouses, the owner did not go to the expense of having sashes and glass cut to fit the masonry arch. Instead, wood panels were cut to shape and rectangular windows were inserted into the panels. Still another mannerism found in a limited number of houses built by German settlers in Michigan is the inclusion of two entry doors in the facade (Domer 1994: 1-35; Au 1994: 15; Figure 8.03).<sup>80</sup> In Michigan another type of window, an oculus located in the gable, is also strongly indicative of German ethnic influence (Figure 8.01, Figure 8.04, and Figure C.27).

The Saxons of northwest Germany, like their Dutch neighbors, sometimes make use of polychrome brick patterning. Possibly polychromatic masonry is used in other localities in Germany as well. One such house has been documented on Junction Road, east of Frankenmuth (Figure 8.04).

### **German Barns**

In turning to agricultural buildings, the presence of only one Germanic barn type has been positively identified as present in Michigan. The *Forebay Barn* family derives from a Germanic-Swiss rather than an English cultural tradition and is closely associated with mixed farming agricultural practices introduced by Germanic settlers into Pennsylvania early in the eighteenth century.<sup>81</sup> Its distribution in Michigan is largely limited to localities pioneered by settlers from Pennsylvania. One cluster may be found in the tri-state corner of Michigan, Indiana and Ohio (Noble and Seymour 1982: 57). Another cluster of barns, in which the rock and mortar end walls extend to support a south-facing fore bay was built by German immigrants in the late 1800s north of Reed City in Osceola County (Hartman 1976: 81), and author Curtis Stadtfeld, whose forefathers also came directly from Germany to Mecosta County, makes reference to his father's forebay barn. Individual, geographically isolated examples are also encountered elsewhere.

In visual terms, the distinguishing feature of this family of barn types is the cantilevered fore bay that projects out from one wall of the barn at the second level (Figure 8.05). In other respects it looks similar to the Bank and Raised barns so common in the Midwest. Robert Ensminger has developed a typology of forebay barn types (1992: 51-105).

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<sup>78</sup>Round arched windows are not exclusive to German folk building and can be seen in eighteenth century Anglo-American buildings on the East Coast. However, with the exception of Italianate arched windows, they were not otherwise a popular configuration for nineteenth century Anglo-American structures in Michigan.

<sup>79</sup>See home illustrations in Weiland (1986).

<sup>80</sup>The two-door mannerism is scattered widely in areas of German settlement. Its history is complex and can ultimately be traced back to the German house barn; although it is not as such that it made its appearance in the U.S.

<sup>81</sup>For discussion of the origins in America of the Forebay Barn and its derivation from the Swiss Pratigau Barn, see Ensminger (1992: 1-50) and Ensminger (1980-81: 50-71). Hart (1998: 213) attributes the introduction to America of the idea of keeping animals and crops under the same roof to Swiss farmers. In support of this assertion, he points out that Pennsylvania farmers have always called their barns a *Schweitzerscheuer* (217).

Although no systematic survey and study of forebay barns has been made for Michigan, anecdotal information indicates they are uncommon in Michigan, therefore a detailed analysis of the full sweep of Ensminger's forebay barn types is not provided here.

At this time no examples of German (or Polish) "house barn," in which house and barn are combined in a single structure, have been discovered in Michigan, but rare examples have been found elsewhere in the Midwest.<sup>82</sup>

### **The Canadians**

The area of most extensive Canadian settlement in Michigan embraces the eastern rim of counties in the Lower Peninsula (Rose 1987b: 31-52). For example, there was a considerable Canadian migration into Huron, Sanilac and northeastern St. Clair counties around 1840 (Milostan 1977: 13). Two dwelling features reflect the Canadian origin of these settlers, rudimentary Gothic dormers and red and yellow polychrome brick patterning.

### **Canadian Houses**

Because of Loyalist emigration to Canada in the aftermath of the Revolutionary War, nineteenth century Anglo-Canadian house types are similar morphologically to those of New England and New York. Loyalty to the Crown, however, was expressed in a preference for Gothic stylistic architectural features at a time when the Greek Revival style ruled the day in the U.S. In farmhouses, use of the Gothic idiom was rudimentary and commonly characterized by the use of accentuated pointed arch dormers. In rectangular houses a single Gothic wall dormer was typically centered over the front entry (Figure 8.06). With an Upright-and-Wing house one or two Gothic dormers provided light into the attic of the side wing (Figure 8.07).

In Ontario many Canadian brick farmhouses are yellow. Moreover, many nineteenth century houses, both rural and urban, made use of a combination of yellow and red brick to create decorative exterior patterns. One kind of brick is used for the basic color, the other for the trim work around windows and doors and as quoin-like decoration at the corners. All of these characteristics diffused with Canadian settlers into the eastern counties of the Lower Peninsula. Examples are particularly common from Lapeer County northward into the Thumb region, but can also be found in the counties north of Saginaw Bay. (See Appendix C for further discussion of the use of polychrome brick in Michigan).

### **The Poles**

The first Polish (Polonian) rural settlement in Michigan, during the 1850s, was in Paris (now Parisville) Township in Huron County. The lumber industry drew more Polish settlers to Alpena and Presque Isle counties during the 1870s, where many of them soon

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<sup>82</sup>Tishler and Witmer (1984: 102-110); Perrin (1961: 199-202); Baker (1979: 133); Rippley (1981: 61); and Marshall (1986: 65-104).

took up farming. The village of Posen was established at this time. These early Posen immigrants came primarily from the Prussian part of Poland (Wloszczewski 1953: 37).

### **Polish Houses**

Farmhouses in Polish areas of settlement in the Thumb and in the northeastern counties of the Lower Peninsula have not been studied. A brief windshield excursion into these areas of settlement on the part of the writer suggests that the Polish settlers, like the Germans, adopted American house forms (in this case, those characteristic of the late nineteenth century), but there may be as yet unidentified ethnic reinterpretations of these American forms.<sup>83</sup> In fact in some areas of predominantly German and/or Polish settlement in northeastern parts of the Lower Peninsula, many of the farmhouses have decidedly Canadian mannerisms, such as Gothic wall dormers and polychrome brick designs. Only documentation of the histories of some of these houses will clarify whether all of them were Canadian built, whether acculturation occurred, or in the case of polychrome brick, whether such decorative patterning was used in the Old Country.

One source reports that the Polonian Americans followed the custom of placing the initials of the “three wise men” (K, M, and B) in the door lintel of their homes to safeguard the occupants from misfortune (Milostan: 61). One identified example is a log cabin built by a Polish settler in Huron County during the 1850s (Milostan: 102, illustration: 61; Figure 8.08).<sup>84</sup> The symbolic theme of the “three wise men bearing gifts to the savior” was also observed by the writer in the form of a folk painting in the gable of a barn near Posen (Figure 8.09).

### **Polish Outbuildings**

Literature about ethnic farm buildings in the Great Lakes region is silent about Polish agricultural buildings. During a reconnaissance survey in the vicinity of Posen in Presque Isle County, the writer observed several examples of a cow-hay barn sharing a common two unit morphology. One section is of log construction, the other of timber frame assembly covered with vertical oriented boards (Figure 8.10).

Identical cow-hay barns were first identified by Lena A:son-Palmqvist in Chisago County, Minnesota (1983, 1986), and subsequently have been observed in central Wisconsin and around Green Bay, Wisconsin (Noble and Cleek 1995: 111). In both locations they were associated with Swedish settlement, and consequently the literature calls them Swedish cow-hay barns in the literature. Since they appear to also be associated with Polish material culture, we suggest that they be renamed the *Baltic Cow-Hay Barn*.<sup>85</sup>

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<sup>83</sup>For Polish reinterpretations of American building stock in Wisconsin, see Gyrisco (2001) and Gyrisco and Miller (1997).

<sup>84</sup>In personal conversation, Ina Hanel-Gerdenich informed the writer that the Austrians also temporarily indulge in this practice during the Christmas holiday period. Further investigation might establish that this is a custom characteristic of Catholic areas of Central Europe.

<sup>85</sup> There is precedent for this label in the example of the “Baltic Three-Room House,” discussed later in the chapter.

A more extensive description of this outbuilding type is provided in the subsequent discussion of the Swedish cow-hay barn.

Outdoor root cellars, called *sklep*, are part of the material culture of Polish farm practice that was brought to Michigan by Polish settlers in the second half of the nineteenth century. They were usually located at the highest elevation available within about fifty yards of the pioneer's cabin.

A typical excavation was made ten by twenty feet in dimension, with the long axis oriented north-south to maximize protection from snowfalls that came from the north and northwest. The dugout floor and walls were then lined with planks. Above ground the *sklep* was finished off with horizontally-laid notched logs and covered with a layer of earth and then a covering of sod. The interior vertical height from floor to ceiling was about five feet. Customarily two north-facing wood slats were removed during a period in the spring when dry north winds prevailed.

Carrots, potatoes, cabbage, turnips, rutabagas and other vegetables were routinely stored in the *sklep*. In the fall, russet and Ben Davis apples were added, and during the spring and summer, the farmers also used the cellars for storing milk, cream and butter. At times they also used the cellar to cure dried meat like ham, bacon, and beef sausage. They also placed eggs in crocks between layers of salt (Natsolim 1977: 117-118).<sup>86</sup>

## **The Dutch**

Beginning in 1847 several religious colonies of Dutch immigrants began to settle in southwestern Michigan. With one possible exception, the Michigan Dutch did not build Old World Dutch house types. They did, however, favor polychrome brick construction for their houses. Many of the early settlers who arrived in Michigan beginning in 1847 emigrated from the northeastern provinces of the Netherlands where similar polychromatic designs can be found (Dutch-American Historical Commission 1996: 5). The use of patterned brick as gable decoration has been traced back to medieval France, where it diffused to England *via* Holland (Foley 1980: 38).

## **Dutch Houses**

For the most part the Michigan Dutch adopted American house forms, particularly the Upright-and-Wing type, and the majority of their dwellings were constructed of wood. Nevertheless, soon after settlement was initiated in Michigan the Veneklaasen family, emigrants from Overijssel, established brick manufactories in Zeeland and New Groningen, and produced not only red bricks, but ones of contrasting color variously referred to as tan, buff, or cream.<sup>87</sup> These bricks became locally known as “veneklaasen brick.” When building in brick the Dutch often opted to make use of decorative brick patterns (Figure 8.11). These seem to have been the prestige houses. For the most part

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<sup>86</sup>Natsolim observed cellars that were still in use in 1960. There is a photograph of part of a *sklep*, not including the roof, in Milostan (1977: 107).

<sup>87</sup>In Wisconsin, cream colored bricks are called Milwaukee brick.

yellow or cream brick has been used as the trim, but there are examples of the opposite as well. They employed traditional polychromatic patterns that distinguish their dwellings from Canadian and other groups who have also built polychromatic brick dwellings. These patterns have been analyzed by an enterprising photographer, Fred van Hartesveldt, who photographed 119 examples from Allegan and Ottawa counties.<sup>88</sup>

Unlike Canadian dwellings, Dutch houses don't use quoin-like decorative brick at the house corners. Instead, they use polychromatic patterns placed in three areas: the base, over doors and windows, and below the eave soffits and gable rakes. Applied at the base as string courses either at floor level or as a sill motif, the decorative bricks are combined in stretcher, header or soldier combinations one to several courses high. Combined in several contrasting courses over doors and windows, an arched eyebrow effect is achieved. Van Hartesveldt (1987) has identified at least six eyebrow designs. The most noticeable and distinctive patterns occur under the rooflines, where contrasting colored bricks are laid as headers and soldiers (Figure 8.12).

Apparently the building of polychromatic houses in southwestern Michigan ceased around the beginning of the twentieth century. Although the highest concentration of these houses is in Allegan and Ottawa counties, a few of them extend outward from the core region.

Although the Dutch settlers essentially adopted American house types, Allen Noble has identified a one story, square structure with a low pitched pyramid roof which he suggests might be a specifically Dutch form (Noble 1984b: 139). Further investigation of this house type is necessary to determine whether it is an expression of Dutch material culture or whether it should be categorized as belonging to the Pyramid Roof cottage category, a morphological house form more common in the grassland areas westward of Michigan (Figure 8.13).<sup>89</sup>

### **Dutch Barns**

The Dutch also introduced a ground-level, transverse-gable barn type to southwestern Michigan that is native to both Holland and Saxony in northwestern Germany (Ensminger 1992: 12; Wilhelm 1992: 70). Because of its ethnic affiliation it is referred to as a *Dutch barn* in this country (Figure 8.14). In Michigan it is most common in Ottawa and Allegan counties. Although Dutch Barns were diffused from Holland to New York and northern New Jersey some two-hundred years earlier, those in Michigan comprise a reintroduction of the barn type directly from the Old World.

One-and-a-half stories, with a three-aisle facade, the Dutch barn serves many of the same functions as the English Three-Bay Threshing barn. Nevertheless, morphologically, it differs in a number of significant ways. The wagon drive, or main aisle, runs through the structure from gable to gable. Consequently, the wagon drive passes at a right angle

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<sup>88</sup>Fred van Hartesveldt (1983: ms. and slides; and 1987: 32-37).

<sup>89</sup>At least one rural example of this house form is included in the van Hartesveldt (1983) slide collection in the Bentley Historical Library.



under the bents' anchor beams, rather than occupying one bay between bents, as is the case with the Yankee threshing barn. In New York the barn is square in shape, and, when not square, tends to be wider than deep to create an adequate draft across the threshing floor for winnowing (Hart 1998: 224), but in Michigan, the barn is lighter in framing, larger, and rectangular in shape (Noble 1984b: 20, 138; Noble 1996: 11-12; Noble and Cleek 1995: 108). Noble is explicit that Dutch barns in Michigan are larger than those built in the East during the colonial period. Michigan's nineteenth century Dutch barns often range up to 50 or 60 feet deep as compared with a width of 30 feet (Noble 1995: 11). One possible explanation is that Dutch settlers in Michigan may have made early use of mechanical threshing and winnowing equipment, which would have enabled them to dispense with a winnowing breezeway. Alternatively the internal spatial arrangement and the many small windows as well as the barns' dimensions suggest that most of them were built from inception to house dairy cows.

The roof of the Dutch barn is steeply pitched (although less so on the Michigan barns, because of their larger scale), always more than twice the height of the side walls,<sup>90</sup> with the gable facing the front. There is minimal if any extension of the eaves beyond the side walls. The wagon drive/threshing floor, served by a pair of large doors, runs from gable to gable through the central bay. Wagon doors, attached with strap hinges, swing outward (Hartman 1976: 83). This aisle is wider than the flanking bays and may range to twice as wide. Often a regular door nests within one of the wagon doors. Noble and Cleek observe that one of the wagon doors is frequently configured as a Dutch door, but whether this is as true of Michigan Dutch Barns as those of New York and New Jersey awaits further survey work. The loft area above the wagon drive serves for the storage of hay and straw, with part of it sometimes sectioned off as a granary. Single, smaller doors may be located at one, two or all four corners of the gable ends providing access for animals and farmer to the side bays where cows and horses are traditionally housed (Noble and Cleek 1995: 107).

Another way in which the Dutch barn in Michigan differs from its brethren in New York is that a shed often extends the entire length of one side of the barn to house additional livestock, giving the roof an asymmetrical, saltbox-like profile (Durand 1951: 181). The main part of the roof and the saltbox slope comprises a single pitch. Noble and Cleek (1995: 108) observe that the extension is most commonly on the north or west side of the barn, suggesting the influence of prevailing winds. In some instances there may be a balancing shed extension on the opposite side.

The Dutch barn is also characterized by several ethnically distinctive construction features.<sup>91</sup> One involves the way the bents are framed. The vertical posts of each bent are linked by a great anchor beam at loft level with a mortise and tenon joint. The rounded end of the anchor beam penetrates and extends right through each of the posts (Figure 8.15). Second, unlike most English bent designs, the bent posts extend beyond the anchor beam all the way to the roof purlin. The consequent configuration of the bent

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<sup>90</sup>East of Holland, Michigan, on rural 147th Street, a surviving Dutch barn has side walls of approximately five feet in height (Dutch-American Historical Commission 1996: 7).

<sup>91</sup>Barn construction is described in Van Koevering (1936: 471-473).

is an H-frame, also called an H-bent (Figure 8.16). The H-frame, and the penetration of the anchor beam's tenon through the post mortises, is characteristic of the lowland areas of Holland and northwestern Germany (Noble 1984b: 20, Wilhelm 1995: 76, fig. 4.9). It is reported, however, that the anchor beam, while it does occur in some of Michigan's Dutch barns, is not typical (Noble 1995: 14).

Loyal Durand states that the great era of constructing Dutch Barns in Michigan occurred between 1870 and 1880. This seems surprisingly constrictive, considering that the visual characteristics of the Dutch barn have locally taken on an iconographic symbolism of Dutch culture and regional pride. The writer's own observations indicate that even after post-and-beam construction techniques were supplanted by more recent forms of framing technology, the traditional profile of the Dutch Barn has been frequently utilized, including even with some pole barns. Durand's observation may be meant to apply only to barns constructed with the traditional H-frame using an anchor beam. That could then explain why Noble reports that the anchor beam is not found in the majority of Michigan's Dutch barns, which perhaps were built later than those referred to by Durand.

Since the Dutch barn, as it is called in Michigan, is not limited as a folk type to the Dutch, surveyors should be sensitive to its possible presence in areas of nineteenth-century German settlement in Michigan, particularly in areas where the German immigrants came from northwestern Germany. Our current state of knowledge indicates that German settlers in Michigan quickly adopted traditional American barn types, but exceptions may be found. Wilhelm, for instance, identified an example of a Saxon 114 barn of the Dutch type built by an immigrant from Lower Saxony in Mercer County in western Ohio (1992: 70), and Noble suggests that a somewhat similar barn found in Iowa may be derived from north German folk culture (Noble 1984b: 60).<sup>92</sup>

### **Dutch Water Storage Structure**

Another feature that is distinctive to the Dutch settlements in Michigan is a water storage structure. The base is of brick or stone construction on top of which sits the water tank. The tank, in turn, is enclosed in a timber frame that provides protection and insulation against freezing. These structures are approximately six to eight feet in plan and range from ten to fifteen feet in height, generally culminating in a gable roof (Noble 1996: 14).

### **The Finns**

Of the major ethnic groups that settled in Michigan, the Finns are the most recent arrivals, with the largest number coming between 1890 and 1910. Most settled in the western, and to a lesser extent, the central areas of the Upper Peninsula.<sup>93</sup> After working in the mines to finance a homestead acquisition and a milk cow or two,<sup>94</sup> they took up farming on land considered marginal for that purpose by American and most other

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<sup>92</sup>Information is currently becoming available through a Dutch Barn Internet discussion group indicating that Mercer County, Ohio, and certain localities in Iowa settled by Germans have several surviving barns of this type.

<sup>93</sup>Matti Enn Kaups (1992: 247) provides an excellent distribution map of Finnish settlement in the Great Lakes region.

<sup>94</sup>According to John Wargelin (1940: 183), the Finns were excellent dairymen.

farmers. Because of the short growing season, agriculture focused upon the production of hay, hardy grains (in small amounts), and root crops such as potatoes, all used primarily as cattle feed (Wilson 1933: 367). Agricultural endeavors were complemented by a semi-subsistence vegetable garden. By the second half of the twentieth century the turn-of-the-century homesteads had evolved into commercial dairy farms in which hay and pasture dominated the agricultural landscape (Kaups and Mather 1968: 61).

The nature of agriculture practiced in their homeland enabled the Finns to be successful pioneers in the Cutover areas of the Great Lakes. The idea of “cultural preadaptation” has deep scholarly roots, but it is Milton Newton who formalized the concept to explain why some culture groups are more successful than others in pioneering particular environments (Newton 1974: 146-150). In brief, cultural preadaptation comprises prior possession of “a set of traits possessed by a particular human society or part of that society, giving that group competitive advantage in occupying a new environment, usually specific parts of that environment.” Preadapted traits are brought with them by the newcomers and consist of any traits that predispose them to success, whether tools or other artifacts, clearance or tillage techniques, familiarity with crops suitable to the environment, useful forms of social organization, and the like. Michigan's Finns had already developed successful occupation strategies for short summer, cold winter, forested or even cutover environmental circumstances. They were, for the most part, landless peasants whose culture was tied to land that they could not own, and they were drawn to the opportunity to acquire their own homesteads in Michigan (Vidutis 1994: 38; Kaups 1992: 248).

Most of the Finns who migrated to Michigan, Wisconsin and Minnesota were from the west-central districts of Oulu Lni and Vaasan Lni, particularly southern Ostrobothnia (Kaups 1983: 5; Alanen and Tishler 1980: 75). The latter region had a long historical cultural connection with Sweden and, during the second half of the nineteenth century, exposure to industrial culture (Alanen and Tishler 1980: 67).

While interior and eastern regions of Finland were characterized by a scattered or dispersed pattern of farm buildings,<sup>95</sup> the early farmsteads of western Finland, where Swedish influence was strong, generally were organized to form a tightly enclosed courtyard (Alanen and Tishler 1980: 67). Some of the latter farmsteads contained a single internal space. Other courtyards were divided into two yard spaces, a household enclosure and an animal yard. “The basic buildings forming the household enclosure included the dwelling unit; *aittas* for grain and food storage; the *luhti aitta*, a two-story structure with storage below and summer sleeping quarters above; a woodshed; and a shed for storing implements. Grouped around the animal yard were stables, barns, sheep and pig sheds, and at least one *lato*, a building for the storage of hay or forage.” Other buildings that collectively comprised a fire hazard were located outside the enclosure area (Alanen and Tishler 1980: 68). These structures included the *sauna*, the blacksmith shop, the smokehouse, and the *riihi* (a building for drying, threshing and winnowing grain).

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<sup>95</sup>American geographers call this kind of farmstead organizational layout as “strewn.”

In the nineteenth century, land redistribution programs were implemented in western Finland, and the new farmstead units began to be grouped around a more open courtyard (Alanen and Tishler 1980: 69). It is this more open spatial arrangement of the farmstead in which each structure is associated with a separate function that Finnish pioneers transplanted to the Lake Superior region. In fact their spatial organization tended to be even more open and flexible, sometimes taking on more of a strewn organizational character than that of an open courtyard.

The development of Finnish farmsteads in Michigan unfolded slowly, acquiring additional buildings as the years passed and the process of clearing land continued.<sup>96</sup> Initially the courtyard structure of the farmstead was simply implied, and consisted “of little more than the open area located between two groupings of buildings, or the space formed by an L-shaped placement of structures” (Alanen and Tishler 1980: 76). Sometimes a ghostly echo of the old double enclosure system was reflected by the separation of the dwelling from buildings used to shelter and sustain livestock. Alanen and Tishler (1980: 75) report “While the house was often aligned with the township and range survey lines, landscape features such as the presence of hills, streams and water, marshes, and vegetation types quite often appeared to be the most important factors in determining the spatial configuration of the overall farmstead patterns.” Sometimes, in response to a road or some natural feature, the farmstead assumed a linear shape. Most, however, achieved a “loosely arranged open courtyard form.” Once mature, the farmstead generally contained fewer buildings than typical of the homeland, the most basic buildings being the dwelling, a cattle barn, one or two hay barns, a *sauna*, a privy, and a root cellar. On some farmsteads the cow barn, a hay barn, and the horse barn were linked together in linear fashion (Figures 8.17, 8.18, and 8.19).

### **Finnish Houses**

With the exception of Canadians, whose homes were in many respects similar to Yankee Michiganders, the Finns are the only ethnic group known to have introduced their traditional house forms into the state. These traditional folk forms were of log construction (Figure 8.20). Referring to the Cutover regional environment, Matti Kaups states that “by the time the Finns were settling the area selective logging had either removed, or was in the process of removing, stands of economically profitable trees. The region had not, however, been reduced to a treeless state, the numerous log structures built by the settlers argues to the contrary. In general, the setting provided a positive environment for the immigrants to implement *in toto* their traditional concepts of log architecture” (Kaups 1983: 5).

More modest in scale and simpler in architectural detail, Finnish-built log houses in Michigan are nevertheless similar to nineteenth-century rural houses in Finland. Two room houses of log construction were the most numerous. As families grew, a third room

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<sup>96</sup>According to Kaups (1992: 249), granaries initially were not needed as little grain was grown on the small acreage of cleared land. Even later, although a few grain drying, threshing, and winnowing barns were built, they were not really essential since weather conditions in the Lake Superior region are dryer at harvest time than in Finland.

was often added, extending the rectangular shape or reformulating the dwelling's footprint into an L or T shape (Figure 8.21, and Kaups 1986: 125). Except for dwellings subsequently covered by siding, the interior plan can be discerned from the outside by the exposed mortises of the interior partition walls (Noble 1984b: 147).

Matti Kaups identifies five kinds of Finnish immigrant houses (*tupa*, in Finnish) in the Great Lakes region, based on floor plans, number of rooms, and horizontal and vertical dimensions (Kaups 1983: 5; Figure 8.21).<sup>97</sup> They are the one-unit dwelling, the two-room house, one he calls the *Nordic Pair* dwelling (Figure 8.22), the one-and-a-half-story house, and the two-story house. These dwellings are composed of one to four square or near square shaped modular units measuring some 14 by 16 feet on the exterior (Kaups 1992: 254). Noble reports a range of dimensions of 12 to 16 feet by 16 to 20 feet (1984b: 147). Noble also asserts that the Finns, as well as Scandinavians and other north Europeans, built a pan-Baltic elongated, three-room plan house type that he calls the *Baltic Three-Room House* (1984a: 122-123; Figure 8.23).<sup>98</sup> Richard Perrin has called Wisconsin examples of the latter “Nordic Hearth Houses (1967: 22-23), while similar houses in Russia are called *izba* or *izbah* (Noble 1984a: 122). Conversely, Kaups treats the linear three-room plan simply as one of three additive options for expanding a two-room house (Figure 8.21). The apparent difference between the three unit Nordic-Pair dwelling identified by Kaups and the Baltic Three-Room House is the function of the central unit. In the former case, the central unit serves as a hallway (see the third “basic” floor plan in Figure 8.21). In the latter case, the unit serves as hearth and kitchen (Figure 8.23).

Kaups (1983) analyzes each of his five log types in detail. The most basic dwelling was a one-room structure with average dimensions of 14 by 16 feet, and, including an attic, about 12 feet in the vertical, dimensions similar to houses in Finland at the time of emigration. The room functioned as a kitchen, living room, and bedroom. The door might be located in either an eave or gable elevation, and as typical in Finland, sheltered by an enclosed porch of either log or frame-and-board construction. Such porches served as a mud room for outside clothing, and as a pantry (see the first illustration in Figure 8.20). The loft was accessed from the exterior through a door in one of the gables. Some one-room dwellings had a larger loft, with a height rising to as much as 18 feet. These taller dwellings contained an attic window and were reached by a narrow interior staircase tucked into one corner of the room (Kaups 1983: 14).

Constructed during the pioneer phase of settlement, the one-room cabins were undoubtedly meant to be expanded once the initial phase of homesteading had been achieved. Dwellings that were expanded to two or three rooms can be identified by their discontinuous sills, incongruent wall logs and notching techniques, somewhat uneven

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<sup>97</sup>Kaups' typology is based upon a survey of some 200 Finnish log dwellings in 21 counties within three Great Lakes states carried out between 1962 and 1980.

<sup>98</sup>Alanen (2000: 2-T15), provides the floor plan of another kind of one-and-a-half story, three room rectangular log farmhouse from Wisconsin, comprised of one normal-sized room extending from the front to the rear of the dwelling and a second smaller modular unit divided into two small bedrooms, one in front of the other.

roof lines, and windows of discordant dimensions. Kaups calls these dwellings “composite houses” (Kaups 1983: 14).

The most common dwelling was the one-story two-room house with bisected floor plan, which generally had a rectangular shape, though some were nearly square. These houses varied considerably in horizontal and vertical dimensions, ranging from 12 by 22 feet to 16 by 32 feet (Kaups 1983: 17). “In these houses, with two more-or-less equal-sized rooms, the entry door led into the kitchen, which also served as a combination living room and bedroom. The other room functioned as a parlor/visitors' room (*sali*, in Finnish). However, with an increasing number of children, the parlor was, in some instances, turned into additional bedroom/living room space. If more living space was desired, then a two-room house was enlarged by adding a more or less equal-sized room in either a longitudinal or lateral direction. Dwellings with a trisected floor plan took the form of an elongated rectangle or the shape of a T or an L (Figure 8.21). One-story square units with four rooms are unknown.”

The expansion of living space was not limited to the addition of rooms horizontally. Some one- and two-room houses were expanded vertically. This was accomplished by temporarily removing the roof, extending the walls and the gables upward, equipping one or both gables with a window, lengthening the chimney, flooring the upstairs, constructing a narrow and steep interior staircase, generally located in one of the kitchen corners, and then reattaching the roof. The vertical expansion of one-story one- and two-room houses thus resulted in one-and-one-half-story dwellings. The upstairs functioned as a permanent sleeping and storage area. Commonly it remained without partitions or a stove. Regardless of the materials used and the direction of the expansion, the additions represent remodeling activity and not initial architectural statements on the part of the builders, and must be considered separately from the basic types (Kaups 1992: 254-256).

Another house type identified by Kaups is the *Nordic Pair* dwelling. The plan consists of two rooms separated by a central hallway (*porstua*).<sup>99</sup> Kaups reports that they are not as common as the two and three room one-and-a-half story types. The three examples encountered by Kaups had a length in excess of 40 feet (Kaups 1992: 256).

Although one-story structures never have a square four-room plan, this plan is sometimes used for one-and-a-half story and two-story structures (Kaups 1992: 258). As in Finland, some Great Lakes Finnish houses that are one-and-a-half stories tall have one or more wall dormers. In some instances the wall dormers are so sizable that in effect the roof becomes a four-gable or cross-gable house.

Finally, a few two-story log houses with varied floor plans were built by the immigrants. Together with the one-and-a-half-story dwellings, they generally represent a second stage in house construction, built some years after initial settlement of the locality.

Kaups (1992: 258-259) provides further information concerning more nuanced aspects of Finnish American houses:

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<sup>99</sup>An essentially identical house type in Sweden is called a *Parstuga*.

*Regardless of variations in dimensions and form, the houses the immigrants erected had a number of basic elements in common. They were freestanding units of simple design without full basements or indoor plumbing. Generally, the structures rested on glacial boulder foundations, but some were supported by cedar blocks or piers and a few were built directly on the ground. To reduce the draft beneath the floor, any open space between the lowest tier of logs and the ground was filled with loose rocks, pebbles, and soil.... Wooden pegs or dowels were used about doors and windows and in gables to provide structural stability. Eventually the interior face of the log walls was covered with sheets of newsprint, pressed paper board, metal sheeting, or wallpaper. In some houses the lower three to four feet of the wall was wainscoted. In time, the exteriors were generally, but not always, covered with tar paper, shingles, or with boards and painted, especially in the case of large structures. Even galvanized metal sheeting was used on some exteriors.*

*Although brick was the most common material of chimney construction, some houses in the early years of settlement had chimneys of metal stove piping. In most houses, chimneys were more or less centrally located, but in some structures they were situated along a side or gable wall. The brick chimneys were commonly wall mounted, with a stovepipe leading from the chimney to the wood burning cooking stove, of a common manufactured variety, which was the only means of heating in the house. Manufactured double-hung windows and doors were already in general use in the early years of settlement. Usually the roof was supported by purlins and ridgepole, all notched into the gable logs. The saddle or gable roof was by far the most common type. Other varieties of roof built by the Finns were pyramid, hip, half-hip, and gambrel. Shingles were the dominant roofing material, followed by tar paper and overlapping boards placed in the direction of the roof slope. Also employed as roofing were hollowed logs (scoop roof) and birch bark kept in place with roof poles. Use of birch bark was more frequent in the early stages of settlement than later. Doorways were typically protected by enclosed porches of frame and board construction. These were built some years after the house and served also as storage areas for outdoor clothing and footwear.<sup>100</sup>*

By the 1920s many Finns began to build their domiciles with dimensioned lumber, but in many instances they continued to use the previously described folk floor plans.

### **Finnish Farm Buildings**

The Finnish settlers also carried with them a distinctive Fenno-Scandinavian folk complex of agricultural buildings. Early cattle barns were constructed of hewn and fitted logs. Given the severity of the winters they faced, the pioneers were as concerned to protect their livestock as they were to shelter themselves, consequently *Finnish Cattle Barns* were as carefully weather-fitted as the dwelling (Chase, Lew Allen 1922: 166, 169; Vidutis 1994: 41). A number of these pioneering structures may still be found in northern Michigan.

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<sup>100</sup>“Saddle roof” is another term for “gable roof.”

Finnish Cattle Barns (called *Navetta*) are rectangular, one-and-a-half story log structures with a gable-facing frontage. The ground level is used to provide winter shelter for cattle and may also provide storage for equipment and occasionally, grain. Frequently there is a calf pen, and sometimes a single horse stall. In the early years wooden stanchions for the cows were hand hewn (Vidutis 1994: 41). The loft accommodates hay.

On some farms the cattle barn was later expanded to become a combined *Finnish Cattle-Hay Barn*, or in other instances the multifunctional structure was built all of a piece. Much like an Appalachian double-pen barn, the Finnish (Log) Cattle and Hay Barn has two square or elongated bays separated by an open wagon drive-through all sheltered under a single roof. One bay (pen) houses cows; the other provides hay storage (Figure 8.19).

Another type of barn, of Swedish origin, which diffused to Finland's western districts during the six and a half century period when Finland was politically absorbed into the Swedish kingdom, was built in Wisconsin by both Swedish and Finnish immigrants.<sup>101</sup> Consequently, this type can appropriately be called the *Scandinavian Gambrel Cattle Barn*. It is a tall, narrow, gambrel-roofed structure with a hay hood projecting from the front gable. The two most extensively reported examples are the Swedish-built Pearson barn and the Finnish-built Pentilla barn both in Douglas County, Wisconsin (Perrin 1981: 19-20; Figure 8.24). They exemplify a ground-level barn type with a steeply pitched gambrel roof and the entry located in the gable end. The Pearson barn has shed-roofed wings on each flank, which employ palisaded walls. All of the walls of the Pentilla barn, which was built around the turn of the twentieth century, also are of palisade construction.<sup>102</sup> Palisaded construction has been utilized throughout Europe since Neolithic times. The Pentilla barn is also reported to have a "rare and unusual roof covering in the form of lapped boards...laid vertically rather than horizontally. This type of roof was rather common in the old country but not much favored in Wisconsin -- long cedar shakes and even bark being the preferred material" (Noble 1983: 19).

Another Finnish barn type is the *Meadow Hay Barn* or *Lato* (Figure 8.25). Because hay served as the primary fodder for farm animals, great importance was given to its drying and storage (Alanen 2000: 2-T19). Consequently Finnish farmers were likely to have several *Latos* located out in their fields in addition to a hay barn at the farmstead.

Surviving hay barns are rectangular, loosely fitted log structures with a front-oriented gable roof. In some respects they resemble a drive-through corncrib. Round, horizontal saddle-notched logs are intentionally set apart and remain unnogged, allowing air circulation to facilitate the drying of the hay before removal to the cattle barn. Occasionally round-log V-notching or half-hexagon notching has been used for hay barn construction (Vidutis 1994: 44). Sometimes the side walls are inclined slightly outward toward the eaves to offer additional weather protection to the hay (Noble 1984b: 148). Air circulation is further enhanced by laying a log or pole flooring on the sills a foot or

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<sup>101</sup>To date no attempt has been made to seek examples in Michigan.

<sup>102</sup>Other writers have referred to this palisaded construction as vertical plank construction (Noble 1983: 19).



more above the ground (Van Cleef 1918: 192). A shingle-covered roof of “ridge-and-purlin” construction is typical (Kaups 1995: 8).<sup>103</sup>

A type of bathhouse called a *Sauna* is associated with the various material cultures of Fenno-Scandinavia. Among the immigrants who came to the Great Lakes region, it has been particularly beloved of the Finns virtually to the point that it can be used as identifying a farm as Finnish (Kaups 1992: 261).

The sauna was one of the first buildings erected on a new homestead. Early saunas were one-room structures ranging in dimension from 8 by 10 feet to 12 by 14 feet, constructed of tightly fitting plank logs (Figure 8.26). They were called *savusauna*, meaning “smoke sauna” because there was no chimney to vent smoke from the unmortared stone fireplace (*kiuas*). Because of the potential of fire, the sauna was normally located some distance from the other farmstead buildings.

A larger two room sauna was also built (Figure 8.27). The additional room functioned as a dressing room and was smaller in size than the main chamber. Dimensions ranged from 12 to 14 feet in width and 16 to 20 feet in length (Kaups 1992: 261). During the late 1920s and early 1930s the smoke sauna was modified or abandoned for a sauna with chimney and stove fireplace in response to the refusal of insurance companies to issue fire insurance to farms with smoke saunas.<sup>104</sup>

One of the outstanding characteristics of the Finnish material landscape is the abundance of buildings constructed of horizontally stacked logs utilizing corner notches. They represent the diffusion of basic architectural concepts and techniques known for centuries in northern Europe (Kaups 1992: 248). “Not only tradition but also economic considerations influenced individual decisions in favor of building with logs rather than with more expensive processed construction materials, such as boards, two-by-fours, bricks, and sundries. Thus it follows that the kind and quality of standing timber were important in the selection of land for settlement....In general, the Cutover Area provided a positive environment for the implementation of known architectural practices. At work was preadaptation, for, unlike the Scots-Irish, the English, and certain other European populations, the Finns did not have to learn the rudiments of log construction after arriving in America” (Kaups 1992: 249).

The Finns who migrated to Michigan and, more broadly, the Great Lakes region in the late nineteenth and early twentieth centuries, however, came from Finland's western districts, and their log-building traditions were closely related to those in the rest of Scandinavia, particularly Sweden (Jordan and Kaups 1989: 38, 176-177).

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<sup>103</sup>“Ridge-and-purlin” roof construction is described in Appendix C in the subsection on log construction.

<sup>104</sup>For more extended discussion and context concerning the Finnish sauna in America, see Kaups (1976: 11-20, and 1992: 260-262). For a more brief, but informative overview see Noble (1983: 21-22). See also Mather and Kaups (1963: 494-504) and Yvonne R. Lockwood (1977).

The use of shaped logs for buildings in which heat retention was desired is a key defining construction feature of the Fenno-Scandinavian building tradition.<sup>105</sup> A more extensive treatment of Fenno-Scandinavian log-building techniques is provided in Appendix C. Conversely, log hay barns and woodsheds didn't need to be weather fitted, and were built with rounded logs, reflecting another aspect of Finnish construction traditions.

## **The Norwegians and Swedes**

### **Norwegian House Types**

The study of Norwegian-built structures in Wisconsin's Coon Valley provides some exemplary identifying clues as to what might be encountered in Michigan. During the period of most intense emigration, from 1825 to 1925, log construction was normative in Norway (Henning 1986: 149). Most local pioneer log structures reflected American construction influences rather than traditional Norwegian ones (see the subsection on log construction techniques in Appendix C). In the home country, Norwegians built with easily-worked, straight-and-true conifer logs which enabled them to tight-fit the logs. In the Coon Valley they had to resort to using hard-to-work oak logs, therefore they adopted the American method of chinking between logs (Tishler 1992: 234). Nevertheless, “one widely used feature of traditional Norwegian wood building that was retained...was the use of stabilizing pegs driven into vertical holes bored into the logs near door and window openings” (Tishler 1992: 237). Another traditional Norwegian practice in roof construction broadly common in Scandinavia is the use of horizontally placed logs which extend to the peak of the gable, supported by massive purlins (Tishler 1992: 237, and illustration: 238. Refer to the discussion of ridgepole-and-purlin roof construction in the subsection on log construction in Appendix C, and Figures C.12 and C.13). In Norway, logs are characteristically square trimmed and tightly fitted, but the majority of those inventoried in the Coon Valley, lacked carefully shaped and fitted logs, thereby reflecting expediency in construction (Tishler 1992: 234).

During the initial period of homesteading, a single room log structure of rather square dimensions with loft (*bod*) was typical and has direct ancestral roots in rural Norway. In the Old Country, this house type might also have a gable-end entry sheltered by an enclosed mud-room or *forstue*, and a projecting roof overhang (Figure 8.28). The single, all-purpose room (*stue*) is equivalent to the English and colonial-period American “hall.”

A second type of log house found in the Coon Valley had two pens, comprising a large, near square *stue*, and a second smaller space. William Tishler writes, “These rectangular houses are easily distinguished by a slightly off-center chimney constructed adjacent to the interior partition wall. They are symmetrical in outward appearance --the main entrance is usually centrally located in the axial wall, flanked by one or two windows, with the same window arrangement frequently repeated on the opposite side of the house. As in the one-room cabin, the staircase was usually placed against the wall and near the front entrance” (1992: 235).

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<sup>105</sup>Kaup (1983: 8) calls the practice of shaping logs a north European timber construction technique characteristic of Scandinavia and Eastern Europe.

The traditional Norwegian three-room plan resembles the latter dwelling except that the smaller room was divided into a small *forstue* (enclosed entry) and a *kleve* (storeroom). In eighteenth century Norway this three-room plan became more symmetrical, giving rise to the *Akershusick House* type (Figure 8.29), the most common Old World transferal to Norwegian farmsteads in America (Henning 1986: 150).<sup>106</sup> The functions of the two smaller rooms also evolved, with one of these rooms commonly serving as a kitchen, and the other space as a bedroom. The entry door shifted to the axial wall and might or might not be sheltered by an enclosed porch. In this reconfiguration, the facade shifted from the gable wall to an eave wall. The *Akershusick* varies in height from one-and-a-half to a full two stories in height.

Another house type that has diffused to America in limited numbers is the Norwegian *Laftehus* (Lloyd 1969: 33-48). In the U.S., it is called a *Norwegian Gallery House* or a *Sval House* (Tishler 1992: 236; Noble 1984b: 142). The distinguishing feature of this house type is the *sval*, a long, narrow enclosed gallery attached to the side, or, occasionally, the front elevation of the house at the second story level, from which the loft (*bod*) is accessed (Figures 8.30, 8.31, 8.32 and 8.33). An exterior staircase leads up to the *sval*. When both the gallery and the porch underneath are enclosed, or partly enclosed, as is typically the case with American examples, it is unheated and serves for storage space. The floor plan of the dwelling may be either a traditional two or three room layout as previously described.

Still another Norwegian house type that has been found in Wisconsin is the *Loft Cottage*, which features an overhanging front upper gable (Figure 8.34). In earlier times in Norway, the loft area was used as a sleeping chamber, while the smaller ground-level space was used for farm storage. In the case of the examples found in Wisconsin's Coon Valley, the ground level was used as living quarters, transforming them into full-fledged dwellings closely related to the *Sval House*. Tishler states "these rare buildings represent Americanized simplifications of the medieval loft cottages of Norway, which frequently incorporated overhangs on three or more sides" (Tishler 1992: 240).

Reidar Bakken has demonstrated how among later Norwegian-American farmers a visually American house type, the Upright-and-Wing House, could be created by linking two *akershusick* plans together (Figure 8.35).

### **Swedish House Types**

In many respects the traditional Swedish folk houses introduced into the Great Lakes region are similar to those of the Finns and Norwegians. The smallest type was the *Enklestuga*,<sup>107</sup> a one-story, one-room rectangular-shaped cabin sometimes partitioned to create a small entry hall, kitchen, or storeroom at one end (Figure 8.36). Another type may be the ancestor of the American Saddlebag Cabin. Like the Saddlebag, the Swedish

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<sup>106</sup>Another scholar, Reidar Bakken (1994: 76-77), calls it the *Akershus House* type, the most common folk form in Gudsbrandsdalen, from where most of the Coons Valley immigrants emigrated.

<sup>107</sup>The Swedish *stuga* or parlor equates with the Norwegian *stue* and the German *stube*.

two-room dwelling of approximately equal-sized cells had a central chimney, a shed porch and two front doors. A third traditional house type, the *Parstuga*, is identical to the Finnish Nordic Pair. It is a two-room cottage with a wide central hall, flanked by chimneys. An open porch frequently sheltered the central entry (Figure 8.37). As was the case with the Norwegians, later Swedish-American houses combined traditional floor arrangements in innovative interior combinations within American looking T- and L-shaped houses (Palmqvist 1986: 155). The two-story house in Figure 8.37 is an example.

### *Norwegian And Swedish Barn Types*

Although a great diversity of European ethnic groups settled in rural Michigan, the only Old World barn types that, to date, have been identified in Michigan are the aforementioned Dutch, Germanic-Swiss, and certain Finnish barn types. The failure to document other ethnic barns likely reflects the lack of focused material culture study in Michigan other than for the Finns and the Dutch as compared with other Great Lakes states like Wisconsin, Minnesota, and Ohio. Another possible explanation is that immigrants found that the most reliable way to achieve economic prosperity was to emulate the agricultural practices of their Yankee neighbors and integrate their farm enterprises as quickly as possible with the prevailing agricultural system of their locality. Alvar Carlson suggests as much for northwestern Ohio (Carlson 1978: 31). In such circumstances, early ethnic building types would quickly disappear, if they were built at all.

Nevertheless, the introduction and survival of other ethnic barns have been documented elsewhere.<sup>108</sup> In some cases the barns are not pure transplants, but innovations by the ethnic groups to new circumstances. Therefore, whether the ethnic barns built in other states will provide guidance in identifying heretofore undiscovered ethnic barns in Michigan is an unresolved question.

The most promising possibility is a type that has been called the *Swedish Cow-Hay Barn* (Figure 8.38).<sup>109</sup> The Swedish barn was first identified by Lena A:son-Palmqvist in Chisago County, Minnesota (1983, 1986), and subsequently in central Wisconsin and around Green Bay, Wisconsin (Noble and Cleek 1995: 111). Considerable Swedish settlement also occurred in parts of northwestern Michigan on both peninsulas, so the possibility of Swedish vernacular buildings coming to light remains viable.

The distinctive feature of the Minnesota Swedish Cow-Hay barn type is that it consists of two conjoined ground-level pens that differ in function and building material (Noble and Wilhelm 1995: 11-12). One section is the cow barn, which is typically constructed of tightly fitted hewn logs, much like the Finnish Cattle Barn, or occasionally of stone. The hay barn portion is typically of timber frame construction covered by vertical boards. A

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<sup>108</sup>Palmqvist (1983); Brown (1989: 47-54) on Welsh barns; William G. Laatsch and Charles F. Calkins (1992; 195-210); Rau (1992: 285-306); Henning (1986: 150-153); and Lane (1983: 170-178), are representative.

<sup>109</sup>As noted earlier in this chapter, Polish settlers in Michigan built a morphologically identical cow-hay barn, and we have suggested collectively calling the Swedish and Polish structures the *Baltic Cow-Hay Barn*.

unified timber frame gable roof extends across the entire structure. Originally the roofs of the Swedish Cow-Hay Barns in Minnesota were typically sheathed with wooden shakes, but today many of these roofs have been replaced by modern materials such as asphalt composition. Representative dimensions of the total structure are 27 to 28 feet deep and 60 to 62 feet long, with the hay barn component occupying somewhat more than half of the total area of the building. Both gables are sheathed with vertical boards. Each part of the structure has its own entry in the long side, with the hay barn entry being larger to accommodate access by a wagon. The cow barn section is divided into stalls and calving pens, and is connected with the hay barn through an interior partition by a single small door.

As we have already seen, once their homesteads were securely established, Finnish farmers also sometimes constructed a combined cattle and hay barn, possibly even adding a third unit, the horse stable (Kaups 1992: 250). One difference between the examples of the Swedish and Finnish versions of a Cattle-Hay Barn that are illustrated in the literature is that a wagon drive separates the two components of the Finnish version (Alanen 2000: Figures 2-183, 2-186, 2-187, 2-196 and 2-197; see also Figure 8.19 in this report). Nevertheless, the sampling is as yet too small to conclude conclusively that the presence or the lack of a wagon drive is diagnostic of a difference between the two ethnic groups, especially since the Finns who migrated to the Great Lakes region came from a part of Finland with a heavy overlay of Swedish material culture.

Another possibility is the Norwegian Ramp Barn (Figure 8.39). It is similar in form and function to the American Raised Barn. Two features stand out to differentiate it. First, it is designed to stand down-slope from a road or other access area, therefore the hayloft is entered by a ramp or bridge. Second, the loft entry has its own gable or shed roof, which projects outward at a right angle from the main structure to facilitate entry. Sometimes the roof and walls are extended to enclose the ramp (Henning 1986: 150-153).

### **The Danes**

Pioneer settlers of all ethnic backgrounds often expediently made do with brush or stump fences; however the Danish farms in Montcalm County remain famous for their stump fences (Figure 8.40). When settlers arrived in the mid-nineteenth century they found the area to be extensively wooded with white pine. These trees have a shallow root system that is much easier to dislodge than the deep-rooted hardwoods in Michigan's southern counties. When tipped over and placed close together, the roots were found to form an interlocking barrier that livestock could neither push aside nor jump over. As late as the 1970s, and likely later, stump fences, some over one-hundred years old, could still be observed when driving between Sidney, Gowen and Trufant (Graff 1974: 50). The small size of the original farm fields are not adaptable to today's mechanized farming; accordingly the fences have been rapidly disappearing. Nevertheless, in the areas of Danish settlement, local people continue to pay them iconographic reverence by using weathered stumps as yard sculpture art in the front yards of their town and farm houses.

## **Other Ethnic Features on the Landscape: Agricultural Villages**

Michigan's settlement landscape, like that of the United States in general, does not typically include agricultural villages.<sup>110</sup> There is evidence that some European settlers, particularly Germans and Poles, introduced linear or string villages such as the *Hufendorf* (a long-lot farm village), *Reihendorf* (a row village), and possibly, in some areas of Dutch settlement in localities with muck soils, *Marschhufendor* (a marsh farm village).<sup>111</sup> It is important to realize that a line of farms with long-lot-like frontages on a road does not constitute an agricultural village unless the local farm people think of themselves as a cohesive settlement. In such circumstances the settlement bears a name, official or unofficial. Often, agricultural villages in Michigan were associated with organized religious congregations. Frequently they were established by immigrants who arrived as a group.

One such example is Frankentrost, one of four Lutheran missionary colonies of Franconian Germans established in the Saginaw River Valley during the 1840s. In 1847 the colony purchased land as a single block and divided the land among the families according to their financial contribution. The settlement was laid out like a German *weiler* (hamlet) in a straight row with the main street running east-west. Log cabins were built about two rods back from the road on each side. The desire to provide neighborly proximity to each other required that the individual farms extend as long-lots back about a mile from the road. A *circa* 1850 map of Frankentrost verifies the written account that the settlement followed the pattern of a *Haufendorf* with agricultural land stretching away from the axial road in long lots (Miller 1947).<sup>112</sup> As is typical of many German and Polish Lutheran and Catholic villages in Michigan, a church and parsonage is located in the center of Frankentrost. Another of the Franconian colonies, Frankenhilf, is called Richmond today. Its original linear configuration is still clearly visible although another road now cuts across the village at a diagonal and has transverse development.

Frankenmuth, yet another Lutheran missionary settlement established in 1845, once had a similar pattern of spatial organization although a fundamental restructuring of the community as it evolved from an agricultural village into a town obscures the original pattern (Robinson 1994). The original intent was to establish the settlement like a traditional German village with the dwellings all clustered together, and with the cultivated fields lying outside the village. Faced with the need to clear the land, however, immigrants found it convenient for each farm family to live directly on the land they were developing (Maves 1995: 16).

Posen, a settlement established in Presque Isle County in the 1870s, is an interesting case. A Yankee originally filed a town plat using a grid pattern for the streets, and built a hotel around which a town was intended to crystallize, but the first purchasers were Polish

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<sup>110</sup>Agricultural villages are clustered rural settlements in which the resident population is almost wholly occupied in agricultural pursuits.

<sup>111</sup>Gerlach (1976: 66-67) states that "The German village, from the beginning, has shown a tendency to elongate, regardless of topographic or other physical conditions."

<sup>112</sup>A copy of this centennial publication is available in the Bentley Historical Library, University of Michigan.

immigrants who turned it into a linear agricultural village. Functionally a small town today, its linearity along a main axis, although somewhat compromised, remains apparent, and on one side of the main street, farm fields still extend to the backs of the house lots.

The extent to which agricultural villages once existed in Michigan, particularly among ethnic settlers, the fate of these settlements, and their influence upon the spatial layout of surviving settlements calls for scholarly investigation.

Figures 8.01 a-b

The solid massing and brick construction of these Washtenaw County Upright-and-Wing farmhouses reflect a German interpretation of the Yankee Upright-and-Wing house type, as do the oculus and *rundbogenstil* window treatments (Marshall McLennan).

Figure 8.02    German-built Greek Revival New England One-and-a-Half Cottage in Frankenmuth. The off-center doorway is characteristic of houses in German settlements (M. McLennan).

Figure 8.03a    An illustration of a German-built Italianate house in Genesee County with two front doors (Charlene Kull).

Figure 8.03b    A massive brick farmhouse with two front doors in Freedom Township, Washtenaw County (M. McLennan).

Figure 8.04    A German-built polychromatic brick I-house near Frankenmuth in Bay County. Note also the oculus window (M. McLennan).

Figure 8.05    Forebay barn in Osceola County (M. McLennan).

Figure 8.06    This farmhouse in Sanilac County represents the Canadian equivalent of the New England One-and-a-Half Cottage type. The sharply pointed Gothic central gable is a common architectural feature in Ontario and its use diffused with Canadian settlers into Michigan's eastern counties (M. McLennan).

Figure 8.07    An Upright-and-Wing house in Sanilac County. The use of a Gothic wall dormer in the side wing is a characteristic Canadian feature (M. McLennan).

Figure 8.08    Log cabin built in the 1850s in Huron County by a Polish settler. It exemplifies the custom of placing the initials of the “Three Wise Men” in the door lintel (Milostan 1977).

Figure 8.09    A folk-art rendition of the “three wise men” theme in the gable of a barn in the vicinity of Posen, Presque Isle County (M. McLennan).

Figures 8.10 a-d

Four examples of the *Baltic Cow-Hay Barn* near Posen in Presque Isle County. It is interesting to compare these examples with the so-called *Swedish Cow-Hay Barn* depicted in Figure 8.38 (M. McLennan).



- Figure 8.11 A Dutch polychrome brick house in Ottawa County (M. McLennan).
- Figure 8.12 Representative Dutch lintel patterning (Fred Van Hartesveldt 1987).
- Figure 8.13 An example in Holland, Michigan, of a one-story square-like dwelling with a low-pitched pyramid roof that may represent an Old World Dutch house type (M. McLennan).
- Figures 8.14 a-b  
Two Dutch Barns in Ottawa County (M. McLennan).
- Figure 8.15 A close up view of an “anchor beam” tenon and mortise joint (New World Dutch Barns Internet Group). Note how the anchor beam, with its rounded ends, protrudes through the mortises in the bent posts.
- Figure 8.16 The Dutch and Saxon H-frame (Noble 1984b: 21).
- Figure 8.17 Finnish three-part animal and hay barn in Minnesota (Kaups 1986).
- Figure 8.18 An example of a three-part Finnish log outbuilding on Drummond Island, Michigan (M. McLennan).
- Figure 8.19 A Finnish Cattle and Hay Barn on Drummond Island. The roof of the Hay Barn has collapsed. A roofed-over breezeway between functional units is common (M. McLennan).
- Figures 8.20 a-c  
One, two, and three room Finnish log houses representative of the upper Great Lakes region (M. Geib, in Noble 1984b: 148).
- Figure 8.21 Typical floor plans of Finnish houses (Kaups 1992).
- Figure 8.22 A Finnish Nordic Pair house and floor plan from Minnesota (Kaups 1986). This house type has also been found in Wisconsin. Because northern Michigan was settled by the same Scandinavian immigrant groups as Minnesota and Wisconsin, it is possible that examples of this house type also exist in rural Michigan.
- Figure 8.23 A representative plan of a Baltic Three-Room house (Noble 1984a). This dwelling form has been called a Baltic Three-Room house because it is common to the folk material culture of several peoples occupying countries around the Baltic Sea. A defining element of this house type is that the hearth and kitchen are located in the middle unit. The other structural bays may be subdivided by partitions, as seen in this example. As is the case with the similar Nordic Pair dwelling, immigrants from the

Baltic Sea region may have introduced this house type to northern Michigan.

Figures 8.24 a-b

The Pearson and Pentilla barns, examples of the Scandinavian Gambrel Cattle Barn type built by a Swedish and a Finnish settler, respectively (Perrin 1967: 12; 1981: 20).

Figure 8.25 Prototypical Finnish log Meadow Hay barn (M. Geib, in A. Noble 1984b).

Figure 8.26 Floor plan of a typical one-room sauna (Perrin 1981).

Figure 8.27 A two-room Sauna, Drummond Island (M. McLennan).

Figures 8.28 a-b

Traditional Old World Norwegian single-room log dwellings. Figure 8.28a is a Medieval example; Figure 8.28b is a mid-nineteenth-century workingman's house with a frame *forstue* (mudroom; Henning 1986).

Figure 8.29 Generic three-room plan of the Norwegian Akershusick house type, which immigrants introduced to the Coons Valley in Wisconsin (Bakken 1994).

Figure 8.30 Prototype plan of the Norwegian Gallery or *Sval* House. The distinguishing morphological feature is the enclosed or semi-enclosed exterior porch from which stairs ascend to the gallery (*sval*). The gallery provides access to the upper level interior, either a second story or a loft (Noble 1984b).

Figure 8.31 An example of a Norwegian Gallery House at the Old World Wisconsin Outdoor Museum. The porch and gallery are located along one side wall of the dwelling (Noble 1984b).

Figure 8.32 A Norwegian Gallery or *Sval* house type in Wisconsin. The enclosed gallery or *sval* is located on the lateral wall. Exterior stairs leading to the upper level have been enclosed (Tishler 1992).

Figure 8.33 In the case of the John Bergen log *Sval* House, the *sval* extended across the entire front of the house. This structure was lost by fire to vandals in 1968 (Perrin).

Figure 8.34 A Wisconsin example of a Norwegian Loft Cottage (Tishler 1992).

Figure 8.35 Some Norwegian immigrants combined the plans of two *akershusick* houses to camouflage traditional room arrangements within an American house type, the Upright-and-Wing house. The example depicted here is from Wisconsin (Bakken 1994).

Figures 8.36 a-c

The Swedish *Enklestuga*, a one room folk house. It may be elaborated with a side entry hall, middle illustration, or even with a small room with entry at the opposite end, giving rise to the *Framkammerstuga* plan. These associated forms were introduced into the Upper Midwest (Palmqvist 1983).

Figures 8.37 a-c

One and two story examples of the two-room with central hall Parstuga House. The two-story example has a rear kitchen ell visible on the left (Palmqvist 1983).

Figure 8.38 Prototypical Swedish Cow-Hay Barn. It consists of two pens that differ in function and building material. One section is the cow barn, constructed of weather-fitted logs; the other section comprises a timber-frame pen for hay storage (M. Geib in Noble and Cleek 1995: 110).

Figures 8.39 a-b

Photograph (Iowa) and section drawing (Norway) of two Norwegian type Ramp Barns (Henning 1986).

Figure 8.40 Danish stump fence in Montcalm County (Noble and Cleek 1995: 167).

## **APPENDIX A.**

### **FARMSTEAD SURVEY MATERIAL**

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Thirty-two designated Centennial Farms scattered throughout the Lower Peninsula of Michigan were surveyed for this project (Figure 6.1). In this appendix, the farms are briefly described and accompanying site maps and photographs are provided. A sample of intensive-level survey reports is provided at the end of this section.

The farms are identified by their unique identification number and the county in which they are located. In order to protect the privacy of the property owners, a list identifying each farm by address has been provided to MDOT under separate cover, but is not included in this report.

#### **A-1. Brief Descriptions of Farms Surveyed**

#### **A-2. Site Maps of Farms Surveyed**

#### **A-3. Photographs of Farms Surveyed**

#### **A-4. Sample of Intensive Level Reports**

## **APPENDIX A-1.**

### **BRIEF DESCRIPTIONS OF FARMS SURVEYED**

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A brief description of the thirty-two farms surveyed for this study is provided below. Accompanying site plans and photographs are included in Appendices A-2 and A-3, respectively. A selection of the farms is further described in the Intensive-Level surveys included in Appendix A-4. In order to protect the privacy of the farm owners, the farms are only identified by a unique number and the township and county in which they are located. A list of correlating farm addresses is submitted under separate cover to MDOT.

**Farm No. 1:** **Coldwater Township, Branch County**

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**Date of Establishment:** 1880 (eastern portion), 1891 (western portion)

**No. of Acres:** 106

**No. of Generations:** 4

**Extant Resources:** Farmhouse, *c.* 1905  
Barn, late 19<sup>th</sup> century; addition before 1936  
Pole Barn, 1980  
Corn crib/hog pen foundation

**Lost Resources:** Old farmhouse, before 1891, removed early 1960s  
Corn crib/hog pen, before 1936, removed late 1990s  
Chicken coop, before 1936, destroyed 1940s  
Well house, removed early 1940s  
Corn crib, 1940s, removed late 1950s or early 1960s

**Farm Systems:** General, 1880-1960s  
Grain (cash), 1960s-*c.* 1990  
Land is now rented for pasture and in a conservation reserve program, *c.* 1989 to present

**Farmstead Categories:** [7] Remnant, [5] Architecture (barn)

**Photos:** 01: 1-13

**Site Plan:** SP-01

**Description:**

The property consists of a two parcels of land: the rectangular, western 80 acre portion is oriented north-south. The farmstead, including house and outbuildings, is situated west of center on the southern boundary of this parcel. The buildings on the farmstead are scattered around the outer perimeter of the “U”-shaped drive, and include the farmhouse, a 19<sup>th</sup> century barn with interior granary, and a newer garage/workshop pole structure that also houses an apartment. Several large trees are located in the center of the “U,” and a row of mature maple trees line the property edge along the public road. The land surrounding the farmstead is primarily open pasture and fields, bisected by a fence-lined farm lane leading from the farmstead north. A series of wood lots are located along western perimeter of property. The pasture is rented and stocked with beef cattle. The smaller, eastern portion of land forms a rectangle oriented east-west, and is situated immediately to the east of the western parcel described above. Four acres of its southeast corner, including an older farmhouse, are no longer part of the farm.

**Statement of Significance (Agriculture):** None. The farm does have a beautiful, late 19<sup>th</sup> century barn that is in very good condition. It is unusual in that its upper level is accessed by a ramp on a gable end rather than along a side elevation.

**Farm No. 2:** **Ogden Township, Lenawee County**

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**Date of Establishment:** 1852

**No. of Acres:** 172.5

**No. of Generations:** 6

**Extant Resources:** Farmhouse, *c.* 1861, additions *c.* 1900, 1990s  
Outhouse, early 20<sup>th</sup> century  
Lawn Mower Garage, late 19<sup>th</sup> century (?), modified 1940s  
Garage, *c.* 1949  
Tool Shed, late 19<sup>th</sup> century  
Chicken Coop, between 1949 and 1954  
Barn, 1899  
Lean, before 1940  
Silo, before 1951  
Pole Barn, 1959  
Wind mill and trough, probably early to mid-20<sup>th</sup> century

**Lost Resources:** Original log house, built 1852, removed *c.* 1861 (?)  
Wood Shed, built 19<sup>th</sup> century, removed across street in 1930s  
Original Barn, burned 1899  
Brooder coops (2), removed 1940s  
Wood silo, removed before 1951  
Sugar bush structure, removed by late 1930s  
Corn crib, built early 20<sup>th</sup> century, removed 1970s

**Farm Systems:** General, 1852-*c.* 1945  
Livestock, 1930s/1940s-1990  
Grain (cash), *c.* 1980-present

**Farmstead Categories:** [1] Early to Mid-20<sup>th</sup> century Farm

**Photos:** 2: 1-16

**Site Plan:** SP-02

**Description:**

The farmstead is nestled between a grove of trees and a meandering creek to the east and north, and the public road to the west. The farmhouse, which is the southernmost building on the farmstead, rests on a slight rise, as is typical for many farmhouses in the area. South and west of the house the land is relatively flat and is maintained as open fields surrounded by drainage ditches and some wood lots. The farmstead itself consists of the collection of buildings in a grassy area with little landscaping, a U-shaped drive, scattered older and relatively tall trees, and a pair of metal posts holding up the laundry line. The latter is also seen adjacent to the ranch house across the street. The remaining two buildings on the west side of the street are positioned adjacent to each other and the ranch house. They all face the street and the farmstead to the east.

**Statement of Significance (Agriculture):**

The farm is a fine example of a farmstead reflecting the early to mid-20<sup>th</sup> century period, when the farm specialized in raising livestock. Historic resources from this time period remain extant, primarily in the form of buildings. The period of significance begins in 1900, when the transition from a subsistence farm to an income-producing one in the form of a livestock farm begins. The transition period is reflected on the landscape by the construction of several new outbuildings and the completion of a large barn. The farm and its infrastructure were modified during the 1940s and 1950s during the final stages of transformation from a subsistence farm a livestock farm. The period ends about 1980, when the farm sells off livestock and begins to emphasize cash grain. The existing buildings all contribute to the understanding of the evolution of the farm through the early to mid-20<sup>th</sup> century.

*Refer to Appendix A-4 for additional information.*

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**Farm No. 3: Bedford Township, Monroe County**


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**Date of Establishment:** 1836

**No. of Acres:** 21.5 (part of a larger farm operation)

**No. of Generations:** 6

**Extant Resources:** Farmhouse, c. 1923  
 Front Machine Shed, 1966 (northeast addition 1967 or 1968)  
 Back Machine Shed, 1977  
 Old Grain Bin, 1966  
 Newer Grain Bins (2), 1977  
 Modified Grain Bin, 1977, modified  
 Green House, 1997  
 New House, 1992  
 Portable school house, purchased 1930s, sold with ½ acre in 1960

**Lost Resources:** Farmhouses (2), removed 1890s and 1920s, respectively  
 Cow Barn, built before 1893, demolished before c. 1975  
 Horse Barn, built mid-19<sup>th</sup> century(?), demolished mid-1970s  
 Silo, moved from Sterns farm in 1920s, blew down c. 1944  
 Milk House, built 1920s, demolished 1972  
 Corn Crib, removed by late 1950s  
 Pig Pen, converted to migrant housing 1950s, removed c. 1973  
 Garage, built 1977, burned 2000

**Farm Systems:** General, 1836-early 20<sup>th</sup> century  
 Dairy, 1920s-1934  
 Specialty, 1910s-1974  
 Grain (cash), 1974 to present



**Farmstead Categories:** [6] Modern

**Photos:** 3: 1-14

**Site Plan:** SP-03

**Description:**

The farm includes the farmstead surrounded by tilled fields, pasture land, and additional farm acreage. There is only one historic resource on the property today. It is the bungalow farmhouse located facing the road, surrounded on its sides and rear by the U-shaped driveway. A newer, second house is situated at the rear of the building complex scattered around the outer perimeter of the driveway. The remaining buildings within the complex were constructed after 1965 and support the current agricultural operation on the property: two pole sheds, four grain bins, and one green house.

**Statement of Significance (Agriculture):** None. The family established the farm at a time when the region was first being settled. The family is French-Canadian in origin. However, no resources associated with a early agriculture or early settlement setting remain.

*Refer to Appendix A-4 for additional information.*

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**Farm No. 4: Summerfield Township, Monroe County**

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**Date of Establishment:** 1889

**No. of Acres:** 98

**No. of Generations:** 3

**Extant Resources:** Farmhouse: Upright, c. 1890s. Wing, after 1905  
Granary, early 1900s  
Granary Lean, 1950s  
Milk House, possibly 1920s  
Barn, early 1900s  
Barn Lean, possibly 1920s  
Ceramic tile Silo, 1920s  
Corn Crib (Garage), between 1958 and 1962

**Lost Resources:** Chicken coop, removed 1950s  
Corn crib, replaced by existing corn crib  
Outhouse, removed 1950s  
Apple orchard  
Fences, removed 1956 or 1957

**Farm Systems:** General, 1889-early 20<sup>th</sup> century  
Dairy, 1910s?-mid 1930s  
Specialty Crop (potatoes), 1910s or earlier-mid 1950s

Livestock, mid 1940s-mid 1950s  
Grain (cash), 1950s-present

**Farmstead Categories:** [7] Remnant, [5] Architecture (granary)

**Photos:** 4: 1-15

**Site Plan:** SP-04

**Description:**

The rectangular parcel is bordered on the east by a meandering creek, and on the north by the public road. To the south and west are tilled fields. The farmstead, which includes the house and outbuildings, is situated along the northern boundary. The buildings are located on both sides of a linear drive. To the west of the main drive stand the house, facing the road, and the granary. The barn, with the milk house situated in front of it and the silo attached behind it, is located at the end of the main drive. A large corn crib is located to the east. A secondary drive runs along the eastern boundary of the farmstead (behind the corn crib), and is parallel to the main drive. The two drives are connected in the middle and near the rear of the farmstead, creating a loop around the corn crib.

**Statement of Significance (Agriculture):** None. The farm does have an older granary that served many purposes beyond storing grain. The two story building has a plastered ceiling and chimney. It once had a working stove to keep stored potatoes from freezing. Potatoes were also stored in the main house, a neighboring house, and, if necessary, in pits dug in the field. The family also used the granary to butcher beef and pork.

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**Farm No. 5:** Flowerfield Township, St. Joseph County

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**Date of Establishment:** 1887

**No. of Acres:** 128

**No. of Generations:** 3

**Extant Resources:** Farmhouse, before 1887  
Wood shed, before 1930s  
Garage, 1940s  
Pole Barn, mid- to late 1970s  
Tool Shed, mid-1940s or earlier

**Lost Resources:** Dairy barn, lean added 1958, all removed 2002  
Silo, c. 1947, removed 2002  
Milk house, 1939/1940, removed 2002  
Milk house (w/ bulk tank), 1958  
Cattle shelter, 1960s, removed 2002  
Granary, removed 2002  
Corn crib (possibly built after barns and granary)  
Horse Barn

Corn crib, metal, 1980s, removed 2002  
Chicken coop, removed late 1970s  
Outhouse, removed 1940s  
Hog pen (very old), removed 1998  
Hen house, *c.* 1910  
Smoke house, removed 1940s  
Also possible hen house (*c.* 1910), Tool shed (*c.* 1880), and  
Corn crib (*c.* 1880)

**Farm Systems:** General (including pigs, chickens), 1887-1940s  
Dairy, 1920s (?) to 1972  
Livestock (beef cattle), 1968-1995  
Lease land out [Grain (cash)], 1997-present

**Farmstead Categories:** [7] Remnant

**Photos:** 5: 1-10  
**Site Plan:** SP-05

**Description:**

The farm consists of two rectangular parcels separated by the public road. The western parcel has 78 acres, and the eastern parcel has 50 acres. The farmstead is located in the northeastern corner of the western parcel. The farmstead consists of the domestic portion at the northern end, which includes a stately, two-story Upright and Wing house with a wood shed attached to its rear, and a two-car garage to its south and west. The non-domestic portion of the farmstead consists of a relatively large, new pole barn built adjacent to the garage to the south, and a tool shed. The tool shed is open to the east and is currently serving as shelter to a few livestock. It is separated from the pole barn by a fenced-in enclosure. The area adjacent and in front of the farmhouse serves as a yard, with several flower beds containing shrubs, peonies, roses, and a Rose of Sharon bush. Behind the garage and pole barn is a small orchard, consisting of a grove of trees (one is a cherry tree) and a grape vine. A wooded parcel is located immediately south of the tool shed. The remaining area of the farmstead is a flat, bare open area. Surrounding the farmstead are open, tilled fields.

**Statement of Significance (Agriculture):** None. With the exception of the farmhouse and the tool shed, all the barns and outbuildings were removed in 2002. A garage and pole barn, as well as a newer house next door, are present.

**Farm No. 6: Bloomingdale Township, Van Buren County**

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**Date of Establishment:** 1876

**No. of Acres:** 60

**No. of Generations:** 4

**Extant Resources:** Farmhouse, *c.* 1860s  
Chicken coop, moved on site during 1910s  
Garage, constructed after chicken coop installation  
Barn, *c.* 1880; additions between 1903 and 1989  
Silo, *c.* 1917  
Bull Pen, 1995  
Machine Shop, early 1980s  
Tool Shed, 1930s  
Grain Bins (3), *c.* 1942, 1960, and 1994  
Milk/Ice House, 1920s  
Pesticide Shed, *c.* 1989

**Lost Resources:** Buggy Shed, probably built in 1880s, removed 1930s

**Farm Systems:** General, 1876-*c.* 1910s  
Dairy, *c.* 1910s-mid 1950s  
Livestock, mid 1950s-present  
Fruit, mid 1950s-present

**Farmstead Categories:** [4] Farm system layers, [5] architecture (barn, milk house)

**Photos:** 6: 1-25

**Site Plan:** SP-06

**Description:**

The historic farmstead is situated near the middle of a collection of loosely grouped parcels, all now owned by the same family. The parcels include three resource complexes: the original farmstead; a scattered collection of modern buildings supporting the blueberry processing operation; and older, neighboring farmsteads, which now also support the blueberry operation. The original farmstead consists of buildings tightly grouped together: the farmhouse, a large, elongated barn with enclosed silo, a chicken coop/garage, a newer bull pen, and a stone building which housed the milk at one end, and ice at the other. Remaining buildings include a machine shed, a tool shed, three metal grain bins, and a pesticide shed. The agricultural buildings are grouped around the end of the U-shaped drive, and the farmhouse is located in the center. The farmstead is surrounded by wooded areas and fenced pasture.

**Statement of Significance (Agriculture):**

Although not in the best condition, the farm is historically significant as it represents a 20<sup>th</sup> century dairy farm that has evolved from a 19<sup>th</sup> century subsistence farm. Its period of significance begins about 1903 when the owner took over the farming duties from his

father. Its period ends in 1955 with the elimination of the dairy herd. The dairy farm was one of the few, fully operational and successful ones in the township. In addition, the farmer/owner served as the director of the Kalamazoo Milk Producers Association. The farm's infrastructure reflects the evolution of the farmstead from the 19<sup>th</sup> century, general subsistence operation, when a small house and a barn were sufficient, to that of the modern dairy farm of the first half of the 20<sup>th</sup> century. During this time, the old farmhouse was enlarged to accommodate the growing family. The barn was also enlarged in stages to accommodate new policies in handling dairy products. A machine shop was added to the barn as well. The farmstead received a unique milk house of stone that housed ice in an adjoining room, a silo, and a tool shop—all to support the dairy operation. The barn was eventually enlarged around the silo so that the silo has become an interior feature. The farmstead has survived intact. The few changes that have been made to the farmstead in the last fifty years—the addition of two metal grain storage bins, a pesticide shed, a machine shed, and a barn addition-- are all natural changes to a farm that do not detract from its setting and sense of place as a dairy operation despite its location in the middle of a large, blueberry operation of the late 20<sup>th</sup> and early 21<sup>st</sup> centuries.

**Farm No. 7: Allegan Township, Allegan County**

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**Date of Establishment:** 1857

**No. of Acres:** 52

**No. of Generations:** 4

**Extant Resources:** Farmhouse, 1881 or earlier  
Garage, 1954; tall extension, 1995  
Barn, before 1895  
Silo, 1947  
Milk house, 1947  
Old milk house, late 19<sup>th</sup> century  
Granary, 19<sup>th</sup> century  
Chicken coop, 1920s, roof reconfigured 1992  
Corn crib, 19<sup>th</sup> century

**Lost Resources:** Old garage, replaced by current garage  
Corn crib, demolished c. 1958  
Metal corn crib, removed after 1979  
Outhouse, removed around 1960  
Apple orchard, removed 1951  
Wood shed, attached to east end of house  
Boat house (separate from farmstead), removed 1951

**Farm Systems:** General, 1857-c. 1900  
Dairy, c. 1892-1960; accompanied by poultry to early 1980s  
Livestock (beef cattle), 1960-1984

Land leased out, 1984-present (at first pasture for beef cattle,  
now tilled fields for cash grain)

**Farmstead Categories:** [1] Early to Mid-20<sup>th</sup> century agriculture

**Photos:** 7: 1-17

**Site Plan:** SP-07

**Description:**

The farmstead is clustered around the end of a relatively long, linear driveway. On the north side of the driveway is the vernacular, side-gable T-shaped farmhouse and the old milk house. Slightly farther to the east stands a combination hog pen/granary. Several scattered mature trees are located to the front and side (west and south) of the house. On the south side of the driveway is a large garage, the main barn, an older corn crib and the chicken coop. The farmstead is surrounded by open, tilled fields. To the distant east lies a large lake.

**Statement of Significance (Agriculture):**

This farm is historically significant as it represents two stages in the evolution of a 20<sup>th</sup> century dairy farm. The first stage begins about 1892 when the current owner's grandfather and great-uncle took over the farming operation from their mother. They guided the growth of the farm from a 19<sup>th</sup> century general one into a 20<sup>th</sup> century one specializing in dairy production. Buildings on the property during this time reflect the general farm system as well as the fledgling dairy system. They include the large barn with gambrel roof, a milk house water tank adjacent to the well near the house, a corn crib, and a combination hog pen (lower level)/granary (upper level). The barn was one of four in the area built by the same person in the late 19<sup>th</sup> century. Over the next several decades the grandfather added a chicken coop to accommodate the growing poultry enterprise that complemented the dairy operation, and a garage. The second stage begins in 1947, when changes in milk production standards required an improvement to the existing infrastructure. The current owner's father added a silo; a new milk house attached to the barn and equipped with a cooling tank, sinks, and heater; and interior changes to the barn. These include whitewashing the interior, adding concrete gutters, and removing horse stalls to add additional stanchions and replace old ones. The period of significance ends in 1960 with the sale of the dairy herd. Relatively few resources have been lost from this time period, and their respective functions continue to be represented in the existing structures. Only the setting of the barn yard, which now consists of a mown lawn, has lost its original, worn appearance.

**Farm No. 8: Casco Township, Allegan County**

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**Date of Establishment:** 1868

**No. of Acres:** 37

**No. of Generations:** 4

**Extant Resources:** Farmhouse, 1870, w/ changes and additions in 1942, 1979, 1981, 1991  
East Barn, c. 1870, loading dock added during early 1940s  
West Barn, c. 1870  
Tenant House #2/#6, 1943, joined with #6 (built early 1940s)  
Tenant House #3, 1943, side wing added 1980  
Tenant House #5, early 1940s  
Tenant House #6, former Brooder House, moved on site in 1982  
Tenant House #7, between 1950 and 1955  
Outhouse, 19<sup>th</sup> century, moved on site in ?  
New House, 1973, sold in 1991 with 3 acres of land

**Lost Resources:** Corn crib, removed mid-1930s  
Wood shed, built 1870s or 1880s, removed in 1991  
Chicken coop  
Smoke house, removed mid-1930s  
Windmill/Well house, built before 1920, removed mid-1950s  
Original outhouse, removed by mid-1930s  
Tenant House #4, burned, former well house  
Tenant House #8, trailer, removed  
“Old House,” moved onto property c. 1920; burned, 1973

**Farm Systems:** General, 1864-1920s  
Fruit, 1900s or 1910s-1970  
Grain (land leased), 1970-present

**Farmstead Categories:** [4] Farm system layers

**Photos:** 8: 1-26

**Site Plan:** SP-08

**Description:**

The farmstead is situated approximately in the middle of the eastern boundary of the rectangular parcel. It consists of a V-shaped driveway pointing westward from the road. The farmhouse is located along the northern branch of the driveway. Two large 19<sup>th</sup> century barns are clustered along the southern branch, and five gable-roofed structures from the mid-20<sup>th</sup> century that served as shelter for migrant workers are situated in linear fashion to the west behind the barn complex and the house. There are no new structures, although the house has received additions in 1981 and 1991, and a house was constructed in 1973 on three acres that were once part of the original 40-acre farm. The landscape is graced with scattered trees, including one large oak tree and two old mulberry trees. A

large garden is located in the open area surrounded by the buildings. The hilly farmland is covered by open tilled fields leased to a nearby farmer. Wood lots are visible along the western (rear) and northern boundaries of the property.

**Statement of Significance (Agriculture):**

The property is a fine example of a farmstead that was converted from a subsistence farm typical of the late 19<sup>th</sup> century to a small fruit operation by World War II. Many farms in the area underwent a similar change in agricultural focus. Buildings from both periods of this farm’s history remain. The period of significance begins in 1870, when the current owner’s grandfather constructed the house and two large barns on the property. Fruit farming began slowly during the early 20<sup>th</sup> century, but was actively pursued by the late 1930s and early 1940s. The shift in farming operation resulted in the construction of migrant worker housing and the modification of both barns. The period ends in 1970, with the cessation of fruit farming. The existing buildings and landscape all contribute significantly to the understanding of the evolution of the farm from a subsistence operation to one specializing in fruit production.

*Refer to Appendix A-4 for additional information.*

<b>Farm No. 9:</b>	<b>Ada Township, Kent County</b>
<b>Date of Establishment:</b>	1844
<b>No. of Acres:</b>	88, plus 3-acre farmstead
<b>No. of Generations:</b>	4
<b>Extant Resources:</b>	Farmhouse, second half of 19 <sup>th</sup> century Garage, 1997 Barn, mid-19 <sup>th</sup> century Silo, first half of 20 <sup>th</sup> century Hog Pen, 19 <sup>th</sup> century Wind mill, first half of 20 <sup>th</sup> century Horse Shelter, first half of 20 <sup>th</sup> century
<b>Lost Resources:</b>	Chicken coop, collapsed during 1960s Granary 1-car garage
<b>Farm Systems:</b>	General, 1844-early 20 <sup>th</sup> century Dairy (small), early 20 <sup>th</sup> century to c. 1960 Leased (cash grain), 1960s -present
<b>Farmstead Categories:</b>	[7] Remnant, [5] Architecture (barn)
<b>Photos:</b>	9: 1-22
<b>Site Plan:</b>	SP-09



**Description:**

The farmstead consists of a few buildings separated by overgrown undergrowth and trees from the tilled fields to the east and south. The northern boundary is marked by the public road. To the west is a mown lawn with additional trees and the neighboring property. The house, with its relatively new garage and adjacent windmill, is located on a small hill back from the public road. To its east and part way down the hill stands the former pig pen. The relatively large barn stands at the bottom of the driveway by the road, and is located well away from the house.

**Statement of Significance (Agriculture):** None. However, the farmstead may possess historic significance under Criterion B. It was first owned and developed by Michael Farrell, one of the early settlers in the area who received the farm as payment for work completed for the railroad in 1844. Michael Farrell (b. 1810 or 1811, d. 1896) was an Irish immigrant who played a significant role in the early settlement of the region. He actively recruited other Irish families to settle in a four-township area around the farm. He hosted families until they could get settled on their own. He loaned money to those in need so that they could buy land and build buildings. He was one of the founding members of the Catholic Church in Grattan (1844) and of the town of Ada. He served as the local Highway Commissioner. In the latter capacity, he designed and built public roads at his own expense. Family legend has it that he also made all the improvements on his farm. Prior to this, he worked for the Michigan Central Railroad as a civil engineer and contractor, where he helped construct railroads all over the state of Michigan. He also assisted with the construction of the Erie Canal in New York.

Unfortunately, there are few tangible connections to Michael Farrell left on the farm. The one significant exception is the large barn. The barn most likely dates from the mid-19<sup>th</sup> century, at a time when Farrell was comfortably operating his 720 acre farm. The gable-roofed barn is constructed of hand-hewn timbers, logs, and some very wide boards. Its doors are hinged rather than mounted on rollers. These features all suggest a 19<sup>th</sup> century construction date. In addition, the barn has a cut-out “owl hole” in its north gable end, resembling a hammer and adze—perhaps the mark of a contractor and engineer. The south gable cut-out is partially missing, but includes a star. Decorative gable cut-outs are generally only found on mid-19<sup>th</sup> century barns. It is not known whether there is another property in the region that better portrays the work of Michael Farrell. However, although the barn is in poor condition and its basement level has been modified to accommodate a 20<sup>th</sup> century dairy operation, its architecture and association with a master engineer/builder and prosperous farmer makes it a significant historic resource on its own.

**Farm No. 10: Olive Township, Ottawa County**

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**Date of Establishment:** 1893

**No. of Acres:** 60

**No. of Generations:** 3

**Extant Resources:** Farmhouse, 1894 or 1896 w/ attached garage, 1989

Barn, *c.* 1900

Silo, *c.* 1948

Granary, *c.* 1952

Milk House, 1947-1948

**Lost Resources:** Chicken coop, built *c.* 1918; removed before 1989

Big chicken coop, built 1931; removed 1980s

Brooder coop, built late 1939 or 1940; removed after 1957

Tool shed, 1920s; removed *c.* 1990

Pig coop, moved on site *c.* 1933; removed 1948

Pig coop/broiler, arrived from Holland 1930s; removed *c.* 1990

Corn crib, drive-through, built *c.* 1940; removed late 1980s

Corn crib, keystone (2); removed *c.* 1942

Corn crib, pole construction, built *c.* 1948; removed *c.* 1958

Corn crib, 1950s; removed early 1990s

Corn crib, metal, built before 1975 (possibly late 1950s);  
removed mid-1980s

Silo, original, removed *c.* 1948

Outhouse, removed 1950s or 1960s

Outhouse/Smoke house, removed 1950s or 1960s

Tenant buildings (2)

Pear trees around house

**Farm Systems:** General, 1893 to *c.* 1940

Specialty/Truck, Dairy, and Livestock, 1930s-1970s

Land leased to nursery, then to farmer growing grain, 1965-  
present

**Farmstead Categories:** [7] Remnant, [5] Architecture (barn)

**Photos:** 10: 1-12

**Site Plan:** SP-10

**Description:**

The neat and orderly farmstead today consists of the farmhouse with newer attached garage; a large, front-facing barn with attached milk house and silo; and a metal grain bin serving as a garden shed. The house and garage are located on the west side of the straight driveway. The barn is located at the end of the driveway, and the milk house, silo, and grain bin are located on the east side of the barn. The farmstead is built on

relatively flat land. Mature trees grow in scattered fashion on the lawn to the west of the house. Tilled fields surround the farm property on all sides.

**Statement of Significance (Agriculture):** None, due to the extensive loss of outbuildings. The barn is an example of a Dutch barn. Its diagnostic features include the relatively wide front elevation and its gable-front orientation. The family is of Dutch descent, having emigrated in 1873. In addition, the second generation married into a family that emigrated from Holland in 1904.

**Farm No. 11: Ovid Township, Clinton County**

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**Date of Establishment:** 1856

**No. of Acres:** 33.5

**No. of Generations:** 3

**Extant Resources:** Farmhouse, 1887; porch alteration 1930  
Barn, 1900  
Barn addition (including milk house), possibly 1940s/1950s  
Granary, late 19<sup>th</sup> century  
Brooder House, early 20<sup>th</sup> century  
Chicken Coop, early 20<sup>th</sup> century

**Lost Resources:** Corn crib, mid-20<sup>th</sup> century, removed before 2001  
Log cabin (original house), built in mid-19<sup>th</sup> century  
Barn, built during 19<sup>th</sup> century  
Corn crib/hog house, built during 19<sup>th</sup> century

**Farm Systems:** General, 1856-first half of 20<sup>th</sup> century  
Dairy, mid-20<sup>th</sup> century (possibly c. 1930-c. 1989)  
Land is leased (Grain/cash operation), late 20<sup>th</sup> century-present

**Farmstead Categories:** [7] Remnant

**Photos:** 11: 1-14

**Site Plan:** SP-11

**Description:**

In general, the farm buildings are placed approximately parallel to the road. The house, which is located closest to the road and at the west end of the complex, is a mid-19<sup>th</sup> century, 1.5-story side gable structure with a one-story shed-roofed rear wing that gives the house a saltbox profile. The barn is situated at the east end of the complex. It is a small to medium-sized, 1.5-story, gambrel roof barn that was originally three bays wide with large, front and rear center openings. The barn has no bank associated with it. A newer addition (including milk house) wraps around the east end of the barn. Between the house and barn are three smaller outbuildings: a granary, a chicken coop, and a

brooder house. The granary is a tall, one-story gable front structure on stone posts. The chicken coop has an elongated (50 feet long), rectangular footprint with a shed roof. The brooder house is small, front gable structure of wood, containing several window openings. The property is delineated along the road by a row of mature maple trees, and is surrounded on the east and north sides by tilled fields, and by a fence along the western boundary. A cluster of older lilac bushes can be found to the east of the house, and a circular concrete pad (former corn crib?) is situated to the north of the barn.

**Statement of Significance (Agriculture):** None. The family was not available to be interviewed. Additional information regarding the farm's history would need to be obtained before a complete assessment of the farm's potential historical significance can be made. The farm's potential period of significance would be during the mid-20<sup>th</sup> century, when it operated as a dairy farm.

**Farm No. 12: Brookfield Township, Eaton County**

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**Date of Establishment:** 1874  
**No. of Acres:** 120 (farmstead on approximately 5 acres has been sold out of the family)  
**No. of Generations:** 4

**Extant Resources:** Farmhouse, c. 1904  
 Corn Crib, 1953  
 Granary, 1880s or earlier (original house)  
 Tractor Shed, c. 1920  
 Barn, 1925

**Lost Resources:** Large Barn, c. 1905 to 1920, destroyed in fire  
 Hog House, c. 1880 (or 1912?) to c. 1995  
 Hen House, 1910 to 1980s?  
 Tool Barn, c. 1920 to c. 1990  
 Outhouse, possibly 1910s to 1960s

**Farm Systems:** General, 1874-1910s  
 Dairy, 1910s-early 1960s  
 Livestock (hogs), 1920s-1980s  
 Grain (cash), late 1980s-present

**Farmstead Categories:** [7] Remnant, [5] Architecture (house)

**Photos:** 12: 1-17  
**Site Plan:** SP-12

**Description:**

The farmstead is a neat and orderly property located on the northeast corner of an intersection. It has an “L”-shaped driveway that connects to both public roads. Along the driveway is the brick farmhouse, the tractor shed (garage), and the granary (former house that was relocated and modified during the 1920s). The buildings are connected by a well-kept lawn. Set off in the field to the north is the drive-through corn crib. The farmstead is marked on its southern boundary by the public road and a row of mature walnut trees (hence the former name of the farm, “Walnut Lane”). Well to the east and on the south side of the public road stands the gambrel-roofed dairy barn. It is set on a slight rise, and is surrounded by tilled fields.

**Statement of Significance (Agriculture):** None. Although this farmstead is beautiful and very well kept, there are many historic resources that are no longer extant from the mid-20<sup>th</sup> century when the farm was an active dairy and hog operation. The buildings that do remain, in particular the house and granary, are excellent examples of styles from the early 20<sup>th</sup> century. Similarly, the corn crib is typical of its mid-20<sup>th</sup> century origin.

**Farm No. 13: Chester Township, Eaton County**

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**Date of Establishment:** 1873

**No. of Acres:** 80

**No. of Generations:** 4

**Extant Resources:** Farmhouse, 1876  
Garage, 1982

**Lost Resources:** Barn, built 1880s, removed late 1930s  
Corn Crib, built 1880s, removed late 1930s  
Chicken coop, built 1880s, removed late 1930s  
Wood shed, built before 1873, removed late 1920s or 1930s  
Garage, built 1880s (?), removed late 1930s  
Smokehouse, built 1880s, removed late 1920s or 1930s

**Farm Systems:** General, 1873 to 1900s  
Dairy, 1900s to late 1930s  
Land leased for Grains (cash), late 1940s to present  
*Also part of adjacent farm, 1900s to late 1940s*

**Farmstead Categories:** [7] Remnant, [5] Architecture (house)

**Photos:** 13: 1-6

**Site Plan:** SP-13

**Description:**

The farmstead is situated approximately in the middle of the east side of the rectangular parcel. The parcel is bordered at this end by the public road. The farmstead is surrounded primarily by open, tilled fields. Wood lots are located along the rear (western) end of the property. The farmstead consists of a short, circular driveway leading to the house and garage. To the north of the house stand several mature trees on a grassy field, and the land dips down to where a pond once existed. The plowed fields are situated to the west of the house and garage, and the neighbor farm is located to the south of the farmstead.

**Statement of Significance (Agriculture):** None. Because of the removal of all buildings associated with farming by 1940 when the family removed to East Lansing, this property retains little integrity with respect to agriculture. However, the farmhouse, which stands today in very good condition, is an excellent example portraying the Italianate architectural style. The wide frieze board decorated with dental molding, the arched window openings, the relatively flat hip roof, and the use of brick in an area where most houses are of wood, are all typical features of the style. The house also maintains a front porch consisting of turned columns and additional decorative trim typical of the Queen Anne style. It was constructed by William Phelps, who settled in the area in 1866.

*Refer to Appendix A-4 for additional information.*

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**Farm No. 14:                      Oneida Township, Eaton County**


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**Date of Establishment:** 1877

**No. of Acres:** 221

**No. of Generations:** 4

**Extant Resources:** Farmhouse, 1882; front porch 1920s, remodeled 1959/1960  
Garage, c. 1952  
Shop, c. 1988  
Implement Barn, c. 1956  
Cattle Barn, c. 1957; extended late 1960s  
Main Barn, before 1890; southern end raised to two-story height before 1929  
Milk House, 1956  
Silo #1, built ?, later raised  
Silo #2, 1957 or 1958  
Corn Crib, built after c. 1956

**Lost Resources:** Wood shed, built in late 19<sup>th</sup> century  
Buggy Shed, moved onto farm, removed after 1970  
Granary, 1870s or older, removed between 1979 and 1988  
Old Milk House, removed 1950s  
Corn Crib, keystone-shape, removed by 1950?

Corn cribs (2), installed after *c.* 1956, and removed after 1978  
Old Silo (w/ gambrel roof), built possibly 1910  
Hog House  
Windmill, 1890s or earlier, removed 1930s or later  
Outhouse  
Hen House, removed late 1950s  
Tractor Garage, removed early to mid-1950s  
Apple Orchard, removed 1950s or earlier  
Cider press building, removed before 1950s

**Farm Systems:** General, 1877-1950s (including poultry, beans)  
Dairy, 1940s-1978  
Livestock (beef), 1978-1997  
Grains (cash), 1978-present

**Farmstead Categories:** [2] Mid-20<sup>th</sup> century

**Photos:** 14: 1-28

**Site Plan:** SP-14

**Description:**

The farmstead is situated mid-way along the western boundary of the rectangular parcel. It is accessed by a gravel drive that meanders between the farmhouse in front and remaining buildings to the rear before continuing out into the fields. To the rear of the farmhouse and north of the drive are the garage and shop. The implement barn is located further north behind the shop. On the south side of the drive are the corn crib and the main barn. The barn has an attached milk house. To the rear (east) of the main barn are two silos and the cattle barn. The entire farmstead is situated on relatively flat land, surrounded by tilled fields. A few large trees, including a horse chestnut, are clustered on the south side of the house. Mature maples are uniformly spaced along the front yard parallel to the public road, and a cluster of lilacs is located on the northern boundary of the side yard of the house.

**Statement of Significance (Agriculture):** None. Although many of the resources from the 19<sup>th</sup> and early 20<sup>th</sup> century have been lost, this farm maintains its appearance as a modern dairy operation from the 1950s. It has the dairy barn with attached milk house, the barnyard with silos, several pole barns for cattle, equipment, and shops, metal corn cribs, and a garage, all dating from that period or earlier. Even the Italianate-style house, which dates to 1882, has its mark from the 1950s: a large picture window facing south to the drive. As such, the farmstead should be re-evaluated for historical significance (context: agriculture, period of significance: 1950s) in the year 2010.

**Farm No. 15:** **Richfield Township, Genesee County**

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**Date of Establishment:** 1866

**No. of Acres:** 124.5

**No. of Generations:** 4

**Extant Resources:** Farmhouse, 1878, with modifications in 1880s, 1907, 1954  
Garage, *c.* 1918, enlarged *c.* 1936  
Granary, old, 1860s or 1870s, rear rebuilt *c.* 1932 after 1925 fire  
Granary, new, *c.* 1942  
Large Silo, 1963  
Barn Extension/lean, 1959, feed bunk added 1963  
Barn, 1925  
Milk House, 1958  
Silo (east), *c.* 1948  
Silo (west), 1925  
Equipment Garage, 1964  
Old Milk House, *c.* 1920 as well house, converted to milk house *c.* 1945  
Tool/Equipment Shed, 1964 (west end), 1966 (east end)  
Brooder House, 1958, moved to current location 1964  
Corn Crib, 1965  
Mature trees: Maples (3) in front of house, walnuts (5) along drive

**Lost Resources:** Log cabin, built mid-19<sup>th</sup> century, removed before 1925  
Original L-shaped barn, built mid to late 19<sup>th</sup> century,  
Destroyed by fire in 1925  
Chicken House, built *c.* 1925, removed *c.* 1964  
Tool Shed, built before 1900, removed 1966 or 1967  
Corn crib, built 1965, removed after 1992  
Corn crib, old, built 1946 or 1947, removed 1965

**Farm Systems:** General, 1866-1920s  
Dairy, 1890s- *c.* 1980  
Livestock (beef), *c.* 1980-1996  
Grain, 1996-present)

**Farmstead Categories:** [3] 100+ Years

**Photos:** 15: 1-23

**Site Plan:** SP-15

**Description:**

The property consists mostly of gently rolling tilled fields outlined by fence rows and wood lots visible at the perimeter of the property. The farmstead itself lies relatively far back from the road, near the center of the parcel. The building complex is situated on a slight rise at the end of a straight, relatively long driveway. The cluster of buildings consists of the Upright and Wing farmhouse, a large barn and numerous outbuildings



scattered behind and to the side of the linear drive, and a pole barn tucked behind the house on its other side. The house is shaded by old, large maple trees; and the drive is lined by mature walnut trees.

**Statement of Significance (Agriculture):**

The farmstead today provides an excellent example of a Michigan farm as it evolved over the course of the 20th century. It displays agricultural significance because of the relatively high percentage (80%) of extant outbuildings associated with agriculture during the period of significance (1925-1980). In addition, much can be learned from the numerous pairs of old and newer buildings that have had similar functions, such as an old and newer house, an old and newer granary, an old and newer barn, an old and newer milk house, and an old and newer garage. A number of resources from before the period of significance, including some from the 19<sup>th</sup> century, also remain. Finally, despite its proximity to an urban area, the farm's setting has maintained a high level of integrity. Its buildings and their respective locations provide a physical link to the decisions and actions made by four generations of the family over the course of the 20<sup>th</sup> century.

*Refer to Appendix A-4 for additional information.*

**Farm No. 16:                      Alaiedon Township, Ingham County**

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**Date of Establishment:** 1874  
**No. of Acres:** 78.8  
**No. of Generations:** 4

**Extant Resources:** Farmhouse, c. 1890  
Barn, c. 1870  
Silo, built late 1920s  
Buggy Shed/Garage, built before mid-1890s  
Milk House, moved from original location behind house  
Wood shed  
Pole Barn, 1993

**Lost Resources:** Pig sty  
Outhouse, built before c. 1895  
Corn crib, keystone  
Chicken coop, removed 1970s  
Apple orchard, removed by 1950  
Garden

**Farm Systems:** General, 1874-1911  
Dairy, 1910s-1950s?  
Livestock (sheep), 1980s  
Grains (cash), 1980s-present  
Mixed, 30 acres leased (nursery), remainder forage/pasture

**Farmstead Categories:** [7] Remnant

**Photos:** 16: 1-8, DCP 00690, DCP 00691  
**Site Plan:** SP-16

**Description:**

The property is a rectangular parcel lying perpendicular to the public road. The land is maintained as open fields with a wood lot at the rear. The land is bisected by a dirt farm lane. The gently rolling fields are a mix of pasture, tilled fields, and fields planted with nursery products. The farm buildings are scattered along both sides of the farm lane. The house is near the front of the parcel, and faces the road. It is shaded by a series of mature maple trees in the front yard. Other maple trees line the east side of the drive as it passes between the house and a modern pole barn. The barn is located on the east side of the drive. Well to the north of the house stands the buggy shed/garage. Across from it on the east side of the drive is the wood shed. Still further north stand the barn with adjacent silo on the west, and the old, partly dismantled milk house on the east side of the drive.

**Statement of Significance (Agriculture):** None. The wood lot at the rear of the property has never been tilled.

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**Farm No. 17: Leroy Township, Ingham County**

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**Date of Establishment:** 1881  
**No. of Acres:** 105.4  
**No. of Generations:** 3

**Extant Resources:** Farmhouse, 1903  
"Old" Milk house, c. 1920  
Granary, late 19<sup>th</sup> century  
Corn cribs, 1950s  
Tractor/Tool Shed, mid-1950s  
Hay Bunker, 1950s  
Shop/Tool Shed  
Horse (Pole) Barn, 1970s  
"New" Milk house, mid-1950s  
Mature maples along road, planted by owner during early 20<sup>th</sup> century  
Old Chicken coop (foundation only)

**Lost Resources:** Old House/granary, late 19<sup>th</sup> century, moved on site, removed 1978  
Main barn, 1897, burned 1970  
Old Tool Shed, c. 1895, removed before 1950s  
Sheep shed c. 1920, removed by 1960s?

Cow shed *c.* 1893  
Hog house, *c.* 1897, removed between 1936 and 1940  
Grain barn and two hen houses, *c.* 1897 to 1960s?  
Hen houses (2) and coop, built late 19<sup>th</sup> and early 20<sup>th</sup> century,  
removed in late 1920s or early 1930s  
Outhouse  
Wood shed  
Old Milk House, *c.* 1920, removed before mid-1950s  
Windmill  
Orchard (pears, apples, peaches), grapes

**Farm Systems:** General, 1881 to mid-1940s  
Dairy, mid-1940s to 1969  
Livestock (hogs and cattle), 1969 to 1985  
Grains (cash), 1985 to present; boarding horses

**Farmstead Categories:** [2] mid-20<sup>th</sup> century Farm, possibly Remnant [7]

**Photos:** 17: 1-16  
**Site Plan:** SP-17

**Description:**

The property is a rectangular parcel lying perpendicular to the public road. The land is maintained as open fields with scattered trees, and with a wooded area and a pasture to the rear (south). A portion of the farm's wood lot has been lost to a highway right-of-way. The farm buildings are scattered along both sides of a linear driveway, leading south from the center of the northern boundary of the property. The house is near the front of the parcel, and faces the road. It is connected to the driveway by a small loop. The old milk house stands in the center of the loop. The former windmill location is marked adjacent to the milk house. Behind the house and milk house, on the east side of the linear drive, stands the old wood shed. Continuing on the east side of the drive as one heads south, the next building is a corn crib, followed by a tractor/tool shed, and a second corn crib. All three buildings now have small horse shelters built onto their rear (east) ends. On the west side of the drive is the dairy complex: the new milk house, a second tool shed, and the "new" milk house. Behind the milk house is a newer pole barn. Large, mature trees line the front of the property along the public road. A concrete foundation to a former chicken coop is still visible on the southeast side of the house. All buildings, including pole barns, are built of wood from property.

**Statement of Significance (Agriculture):** None. Because of the removal and loss of many buildings associated with the farming operation of fifty or more years ago, this property retains little integrity with respect to agriculture. However, the farm does retain some features associated with the dairy operation expanded during the 1950s. The most interesting one is the hay bunker. The structure is one of the first such bunkers to be built in the area. It consists of a concrete floor bordered on the east by a wood post fence and on the west by a wood storage shelter. The current owner served on the Watkins

commission (Farmers Home Administration), and therefore had the opportunity to examine a similar bunker in Wisconsin during the 1950s. He returned to build his own, pouring the concrete by hand.

**Farm No. 18: Leslie Township, Ingham County**

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**Date of Establishment:** 1854

**No. of Acres:** 80

**No. of Generations:** 4

**Extant Resources:** Farmhouse, formerly granary, built by 1850s; addition before 1963

Garage, 1915 or 1919

Barn, 1935

Pole Barns (3): 1965, 1986, 1999

Grain/corn bin #1, 1940s

Grain/corn bin #2, 1966 or 1967

**Lost Resources:** Old Barn with Silo, burned before 1935

Chicken coop, built before 1931, removed early 1960s

Granary/corn crib, removed after 1955

Milk house, built before 1950, removed, c. 1975

“Shanty” (housing, storage)

Outhouse

Windmill

**Farm Systems:** General, 1850s to 1910s

Dairy, possibly 1910s to 1971

Poultry and Eggs, and Fruit (raspberries), 1920s to 1960s

Grains, 1971-present

**Farmstead Categories:** [7] Remnant

**Photos:** 18: 1-12

**Site Plan:** SP-18

**Description:**

The farmstead is situated on relatively flat, open land, and is accessed by a “h”-shaped driveway. The vernacular, one-story Upright and Wing house stands on the inside of the “U” portion of the drive. The garage and collection of pole barns (equipment storage) are lined up on the northern, linear portion of the drive. The barn and milk house foundation are located well south and east of the house, beyond the outer perimeter of the driveway. In between stand two metal corn bins. The farmyard resembles that of a lawn, with scattered maple trees, and a row of pine trees planted along the southern leg of the driveway.

**Statement of Significance (Agriculture):** None. Although the house quite old, it has been altered sufficiently on the exterior so that it no longer possesses integrity from that period or from any time up to about 1960.

**Farm No. 19: Waterloo Township, Jackson County**

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**Date of Establishment:** 1891

**No. of Acres:** 130

**No. of Generations:** 3

**Extant Resources:** Farmhouse, 1941  
Old milk house, built before 1901?  
Windmill  
Machine shop, 1985  
Chicken coop  
Corn cribs, approx. 1992  
Corn crib/Equipment shed, 1978  
Grain bin, metal, 1991  
Old Machine shed, 1901  
Milking parlor, 1998  
Barn, 1853 or 1854, rebuilt 1901; extension, 1987  
Milk House, c. 1960  
Silo #1, 1960, extended 1987  
Silo #2, 1987  
Calf shed/pole barn, 1975  
Garage (calf barn), moved on site c. 1986  
Loafing shed, 1992

**Lost Resources:** Original farmhouse (Italianate w/ pyramid roof), burned 1939  
Silo, ceramic tile, built after 1913, removed 1998  
Corn cribs, wood, late 19<sup>th</sup> century  
Hog barn/pig house, removed c. 1998  
Tool shed, late 19<sup>th</sup> century, removed after 1994  
Hen house, late 19<sup>th</sup> century  
Storage shed, removed after 1994  
Outhouse, removed after c. 1976

**Farm Systems:** General, 1891-1950s?  
Dairy, late 1950s?-1972; 1974 or 1975 -present

**Farmstead Categories:** [6] Modern

**Photos:** 19: 1-20

**Site Plan:** SP-19

**Description:**

The farmstead is located near the center of the eastern boundary of the approximately rectangular-shaped property. The farmstead consists of a few scattered late 19<sup>th</sup>/early 20<sup>th</sup> century buildings (barn, old machine shop, old milk house) surrounded by numerous mid- to late 20<sup>th</sup> century buildings. The buildings are grouped back from the public road, to the west and northwest of the house. They are accessed by several spurs off the main, linear driveway leading in from the road. The house itself faces the road, although its utilitarian side also faces the driveway. A few large trees and shrubs are scattered around the farmstead, but little formal landscaping is evident. The bulk of the current farming activity takes place around the old barn due northwest of the house.

**Statement of Significance (Agriculture):** None. With the exception of the barn, many of the historic resources are either removed or in very poor condition. The majority of the farm's resources date from the mid- to late 20<sup>th</sup> century.

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**Farm No. 20:                      New Haven Township, Shiawassee County**


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**Date of Establishment:** 1861

**No. of Acres:** 70

**No. of Generations:** 5

**Extant Resources:** Farmhouse, *c.* 1912 (Upright and Wing), *c.* 1907 (rear wing)  
 Garage/Granary, possibly early 1910s, garage lean early 1950s  
 Granary/Corn Crib, moved onto farm 1940, tool shed added 1950s  
 Milk House, 1951  
 Barn, 1902, lean between 1912 and 1940s, addition 1995  
 Garage/shelter, moved onto farm 1995  
 Shelter

**Lost Resources:** Chicken Coop, *c.* 1920, enlarged late 1940s, burned 1992-93  
 Delco Shed, built by 1939  
 Outhouse, dates not known  
 Wood Shed, dates not known

**Farm Systems:** General, 1890s to 1990  
 Dairy, 1910s to 1950s  
 Grain *c.* 1958 to present; also board horses (1990s-present)

**Farmstead Categories:** [1] Early to mid-20<sup>th</sup> century farm

**Photos:** 20: 1-17

**Site Plan:** SP-20

**Description:**

The farm property today consists of an approximately rectangular parcel of flat, open farmland that is oriented north-south. The western boundary of the property is delineated by the public road. The remaining property edges are marked by field boundaries. The farmstead is identified by a cluster of buildings located near the middle of the western boundary of the property. The buildings are situated on both sides of an approximately linear driveway that runs perpendicular to the main road. The buildings include a farmhouse, two outbuildings (garage/granary and granary/corn crib/tool shed), the main barn with its own lean and additions, the milk house, and a couple of miscellaneous structures serving as shelters for livestock. The foundation of a chicken coop also remains. Those buildings affiliated with domestic activities are situated near the front (western end) of the complex and face the main road, and those associated with activities dedicated to agriculture are located further to the rear of the complex, and face the private drive. The farmstead is dotted with several larger trees. The surrounding tilled fields are outlined by modern post and wire fences.

**Statement of Significance (Agriculture):**

The property is an excellent example of a small, family-operated dairy farm as it evolved during the first half of the 20<sup>th</sup> century. Notable features are the large barn, the milk house, and the complementary buildings such as garage, granary, and corn crib. Notably absent from this small operation is the silo. The period of significance begins about 1910, ten years after the farmstead was first settled. By this time the owner had constructed a house and a barn. During the next several decades, the family raised a variety of livestock, including chickens, pigs, and a small dairy herd. Buildings added include the remaining extant buildings, with the exception of the milk house, which was added in 1951. In the late 1940s, the barn was remodeled to accommodate additional stanchions, concrete gutters, and running water. The dairy herd was increased to 16 cows. The entire family assisted with the milking operation. The milk was processed on the farm until about 1950. The period of significance ends in the late 1950s, when the dairy operation ended.

**Farm No. 21:                      Pittsfield Township, Washtenaw County**

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**Date of Establishment:** 1827  
**No. of Acres:** 85  
**No. of Generations:** 4

**Extant Resources:** Farmhouse, 1845, modified: 1914, 1967, 1970, and 1975  
Milking Parlor, 1960  
Silage Bunker, late 1950s or early 1960s  
Hay Storage Barn, 1967  
Cow Watering Tank, c. 1940  
Loafing Barn, 1963 or 1964  
Dry Cows Loafing Shed, 1966

**Lost Resources:** Shop  
Quonset hut, 1970  
Barn, burned 1966  
Tool shed/shop, burned 1966  
Windmill, removed before 1943  
Silo, built before 1943, removed late 1950s or early 1960s  
Corn crib, keystone-shape, burned 1966  
Outhouse, removed 1969  
Corn cribs, built early 1970s, removed c. 1990  
Hen house, built 1930s, removed c. 1995  
Outhouse, removed c. 1969

**Farm Systems:** General, 1845 to 1930s/1940s  
Dairy, eggs, 1930s to 1989  
Grain, 1989-present

**Farmstead Categories:** [2] Mid-20<sup>th</sup> century (1960s)

**Photos:** 21: 1-12  
**Site Plan:** SP-21

**Description:**

The farmstead is located in the middle of an approximately rectangular parcel that is oriented north-south. The land surrounding the farmstead is pasture and tilled fields. Wood lots are located to the south and west of the farmstead and surrounding fields. The farmstead itself is accessed by a long, straight driveway lined with large, mature trees. The farm resources are organized in four parallel rows perpendicular to, and on the south side of, the driveway. The house is situated on the north side of the drive. To its immediate north and west are an orchard and garden, respectively.

**Statement of Significance (Agriculture):** None.

The property currently has no historic significance. A preliminary evaluation of its history suggested that the property potentially had significance with respect to settlement and agriculture. While it is associated with one of the early settlers of the Ann Arbor area, there is nothing that remains intact from that period. The house, the only structure on the site dating to the early 19<sup>th</sup> century, has been extensively modified and no longer maintains historic integrity. Due to a catastrophic fire in 1966, all the remaining structures dating from before the mid-20<sup>th</sup> century no longer exist, eliminating the possibility for establishing agricultural significance. The property, as it stands today, reflects a dairy operation from the 1960s. As such, it should be re-evaluated for historic significance in about the year 2020.



**Farm No. 22: Metamora Township, Lapeer County**

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**Date of Establishment:** 1836  
**No. of Acres:** Approximately 13, remainder in a Trust  
**No. of Generations:** 5

**Extant Resources:** Farmhouse, *c.* 1895  
Machine Shop/Corn Crib, 1920s/30s, addition 1960s/1980s  
Granary/Horse Barn, *c.* 1890  
Dairy barn foundation, 1901  
Silo, 1920s  
Shed, 1970s, extended east in 1980s  
Apple trees

**Lost Resources:** Dairy Barn, 1901, removed 1972 or 1973  
Hog House, *c.* 1910  
Milk House, *c.* 1934, removed early 1970s  
Hen House, removed mid-1970s  
Log cabin, constructed 1836

**Farm Systems:** General, 1836 to 1920s  
Dairy, 1920s-1940s, small herd kept until 1971 or 1972  
Land leased, farmed for grain (cash), 1960s-present

**Farmstead Categories:** [7] Remnant, [5] Architecture (house, silo, granary)

**Photos:** 22: 1-12  
**Site Plan:** SP-22

**Description:**

The farmstead is located near the public road that defines the western boundary of the property. It is surrounded by tilled fields to the north, pasture and wooded areas to the east, and overgrown pasture and tilled fields to the south. The buildings on the farmstead itself are distributed around the outer perimeter of the U-shaped drive. The house is located at the northern end of the drive, the outbuildings are located in the middle, and the barn foundation with existing silo is located at the southern end. One outbuilding is situated well east of the farmstead, and is accessed by a farm lane.

**Statement of Significance (Agriculture):** None, due to the loss of the dairy barn and several outbuildings. The buildings that remain on this farmstead are of individual interest. The house could have architectural significance if restored to its original, high-style Queen Anne appearance. The house also exhibits stylish trim and detailing on the interior. The granary/horse barn is an excellent example of a late 19<sup>th</sup> century/early 20<sup>th</sup> century outbuilding that supported multiple functions (house horses and machinery, store grain). The barn continues to house machinery (even an old buggy) today. Finally, the massive stone silo is unusual as well as impressive. Unfortunately, it has lost its roof, its companion stone milk house, the attached dairy barn, and the dairy setting. Nonetheless,

its size, uniqueness of construction material, and location adjacent to the public road, have each contributed to making this feature a local landmark over the years.

**Farm No. 23:** Armada Township, Macomb County

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**Date of Establishment:** 1883

**No. of Acres:** 40

**No. of Generations:** 4

**Extant Resources:** Farmhouse, c. 1900; addition 1927  
Milk House, 1920s  
Shed, unknown, rear rebuilt 1975  
Barn, unknown, addition 1927  
Chicken Coop, before mid-1930s  
Oil House, before mid-1930s  
Bell, moved from Barringer School in 1952  
Apple Orchard, planted in early 20<sup>th</sup> century

**Lost Resources:** Ice House (formerly located in Barn), removed 1940s  
Silo  
Wood silo, blown down in 1934  
Sheep barn (on adjacent property)  
Brooder houses (2)  
Corn crib, removed in 1970s or 1980s

**Farm Systems:** General, 1883-1975  
Dairy, 1920s  
Livestock (sheep and/or cows, 1950s-1975)  
Land in soil bank, 1965-present; or leased, 1975-present

**Farmstead Categories:** [7] Remnant

**Photos:** 23: 1-16

**Site Plan:** SP-23

**Description:**

The farmstead is located on the south side of the road. It is accessed by a driveway that leads passed the house to the complex of buildings at the rear. Large, mature oak, maple, and pine trees are scattered around the lawn of the house. The dominant resource in the back is the barn, which is oriented north-south. A shed, partially dismantled, defines the western boundary of the farmyard. Smaller outbuildings, including the milk house, a chicken coop, and a small dog-sized “oil house” are scattered around the yard. The land to the south, east, and west of the barn (including where the orchard is located) has become overgrown.

**Statement of Significance (Agriculture):** None.

**Farm No. 24:** Washington Township, Macomb County

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**Date of Establishment:** 1836

**No. of Acres:** 200

**No. of Generations:** 8

**Extant Resources:** Farmhouse, *c.* 1913  
Fruit Stand, mid-1920s  
Storage Barn, 1983, cold storage early 1940s  
Gazebo, 2000,  
“Pony Barn”  
School House, 1869, moved on site 1922; moved again 1991-94  
Milk House, 1920s  
Block Bldg./Petting Barn, late 1930s or early 1940s, modified 1991  
Picnic Shelter, 2000  
Chicken Coop, *c.* 1925  
Restroom, early 1940s, wing added *c.* 1970  
Cider Barn, *c.* 1850s; gambrel roof added 1930s  
Silo, 1940s  
Metal Corn Bin, 1960s  
Corn Crib, 1950s or older  
Bill’s Office,  
Equipment Storage Bldg., 1936  
Sheet Metal Bldg., 1961  
Brooder Coop, *c.* 1925, moved 1991 and again in or after 1996  
Tool Shed, early 1900s, moved mid-1990s (in or after 1996)  
Drencher, 1983  
Chemical Barn, *c.* 1984-1985  
Pump Shed, 1980s

**Lost Resources:** Log Cabin, early to mid-19<sup>th</sup> century  
19<sup>th</sup> century Farmhouse, 1880s, removed 1981  
Dairy parlor, removed 1994-1995

**Farm Systems:** General, 1836-early 20<sup>th</sup> century  
Dairy, 1910s to early 1960s  
Livestock (cattle and chickens), 1960s to early 1980s  
Fruit, mid-19<sup>th</sup> century to present

**Farmstead Categories:** [6] Modern

**Photos:** 24: 1-28

**Site Plan:** SP-24

**Description:**

Resources on the farm can be grouped into three clusters of structures, a large orchard divided into sections by fences and farm lanes, and an irrigation pond. The main parcel is

a commercial operation with a collection of buildings of various ages and mixed uses, newer landscaping, and a paved parking lot. It is situated at the historic center of the sesquicentennial farmstead along the southeastern boundary of the property. Buildings there include the farmhouse, adjacent fruit stand, a number of older outbuildings (dairy barn, milk house, chicken hatchery, block building, tool shed, brooder shed, silo, corn bins), a group of newer buildings (pole barns, offices, storage barns, gazebo, picnic shelter, rest rooms), and a 19<sup>th</sup> century school house. The older buildings served the dairy business that operated on the farm during the first part of the 20<sup>th</sup> century. They are scattered between the newer buildings, and a number of them have been moved from their original location and/or modified to serve a new function. The newer buildings support the orchard industry that has been on-going on the farm since the mid-19<sup>th</sup> century, but has expanded into a full-scale commercial and entertainment operation during the late 20<sup>th</sup> century. A smaller cluster of structures is situated adjacent to an irrigation pond and within the orchard to the northwest of the main cluster. These structures include an old and new pump house, chemical storage barn, and “drencher.” Narrow lanes cutting through the orchard connect the clusters of buildings to each other.

Superimposed on this infrastructure is a layer of resources supporting an entertainment theme for school children. A 19<sup>th</sup> century school house was moved onto the property during the early 20<sup>th</sup> century. It was initially used as a storage facility for the dairy business, but like many of the older buildings, it has since been remodeled to support the entertainment business. The farm operation is supported by two additional properties: a 1940s farmstead to the north includes a house, garage, barn, silo, pump house, lean, and storage barn; and the 1922 school house building to the east. These two properties are used to house employees of the farm operation.

**Statement of Significance (Agriculture):** None, due to loss of historic setting, layout, and resources. Currently, the farm represents a modern, commercial fruit operation and entertainment “park” from the late 20<sup>th</sup> and early 21<sup>st</sup> centuries.

**Farm No. 25:** **Brandon Township, Oakland County**

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**Date of Establishment:** 1892

**No. of Acres:** 17

**No. of Generations:** 4

**Extant Resources:** Farmhouse, 1898; rear addition, 1977  
 Pump House, late 19<sup>th</sup> century  
 Barn, 1917  
 Milk House, c. 1952  
 South Lean, built late 1950s  
 Barn, c. 1918  
 North Lean, built 1910s?  
 Silo, 1950

- Lost Resources:** Corn crib, 1948; moved onto property 1950  
Pole Barn, after 1963  
New House, 1953; addition, 1960  
Corn cribs, moved to farm 1958, burned 1963  
Tool shed, built 1958, burned 1963  
Pig shelter  
Small coop
- Farm Systems:** General, 1892-1950s  
Specialty farming (potatoes, vegetables, fruit), 1920s  
Dairy, 1950s-1964  
Livestock, 1950s-1983  
Land leased for grains (cash) operation, 1978-*c.* 1995  
Forage (hay), *c.* 1995-present
- Farmstead Categories:** [1] Early to mid- 20<sup>th</sup> century farm
- Photos:** 25: 1-22  
**Site Plan:** SP-25

**Description:**

The farmstead is located at the eastern end of the rectangular property, which is defined by the public road. The remaining boundaries are marked by neighboring forested areas to the south and west, and by an irregular wood lot approximately parallel to the northern boundary. The farms historic resources are located on either side of a U-shaped drive connected to the public road. The vernacular, Upright and Wing farmhouse with Gothic-like cross gable and large rear addition is located on the inside of the drive and faces the road. Around the perimeter are the pump house, the barn complex, the corn crib, and a pole barn that functions as an equipment shed. On the north side of the drive is a newer, ranch-style house, also facing the road. The barn complex consists of two barns, two leans, one milk house, and one silo. The buildings are all connected to one another. The land to the west and south of the farmstead is open fields.

**Statement of Significance (Agriculture):**

The property is a very good example of a mid-20<sup>th</sup> century family-operated dairy farm that evolved from a general one at the turn of the century. The period of significance begins around 1920, when the basic infrastructure was established. It ends in the 1960s when the family ended the dairy operation. In between, the family used, modified, and added buildings as necessary to meet requirements associated with the dairy business. Notable features are the collection of buildings: two barns, the milk house, leans, and silo, all connected into one building; and a corn crib. With the exception of the farmhouse, the buildings maintain a high level of integrity and are in good condition.

**Farm No. 26:** Argyle Township, Sanilac County

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**Date of Establishment:** 1890

**No. of Acres:** 80

**No. of Generations:** 4

**Extant Resources:** Farmhouse, *c.* 1898, with rear addition added early 1950s  
Tool Shed, 1930s  
Granary, 1930s  
Pole Barn, 2000  
Brooder house, 1930s

**Lost Resources:** Chicken Coop, late 19<sup>th</sup> century; removed during the 1960s  
Main barn, built late 19<sup>th</sup> century; destroyed by wind in 1999  
South wing to barn, built in 1931; destroyed by wind in 1999

**Farm Systems:** General, *c.* 1890 to *c.* 1982  
Grain (cash), *c.* 1982-present

**Farmstead Categories:** [7] Remnant

**Photos:** 26: 1-7

**Site Plan:** SP-26

**Description:**

The property consists mostly of gently rolling and flat tilled fields outlined by fence rows. The farmstead is situated near the southwest corner of the property, consisting of an open lawn with buildings. The lawn is bounded on the west by a strip of tall pine trees, on the north by tilled fields, and on the east by tilled fields and two parallel driveways (one for the house, one for the remaining outbuildings). The southern end of the lawn (front yard) is defined by the road, and a series of large and small trees. The largest tree is a maple, estimated to be at least 100 years old by the owner. A hand-pump is located between the two driveways immediately east of the house.

There are five buildings remaining on the farm. The house is located near the front of the lawn, facing the road. It is accessed by a short, straight driveway located on its east side. A second straight drive runs parallel, but east of the first drive, and leads approximately 200 to 250 feet back to the outbuildings. The buildings include (from east to west), the tool shed, the granary, and a pole barn. The tool shed is oriented east-west, and faces west to the other buildings. The granary and pole barn are situated next to one another and face south. They are located near the top of a rise in the ground, which was formerly the raised bank that led to the second level of the old barn. The old barn, destroyed during a wind storm, was located between the pole barn and granary to the north and the house and its back yard to the south. Also no longer standing is the chicken coop, which was built on the south side of and parallel to the tool shed. Surviving today are a brooder shed and a fuel tank located to the northwest of the house.

**Statement of Significance (Agriculture):** None.

**Farm No. 27: Bloomfield Township, Huron County**

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**Date of Establishment:** 1882

**No. of Acres:** 120

**No. of Generations:** 5

**Extant Resources:** Farmhouse, Upright, *c.* 1882, Wing and brick cladding by 1901  
Garage, 1941 or 1942  
Well House  
Livestock Barn, *c.* 1883 (north end), mid-1880s (south end)  
Grain Barn, mid-1880s to 1890s  
Granary, *c.* 1915-1918  
Brooder House  
Machine Shed, moved on site in 1922  
Chicken Coop, *c.* 1928  
Woodshed/Garage  
Orchard, late 19<sup>th</sup> or early 20<sup>th</sup> century

**Lost Resources:** Wood shed, built 1882  
Smoke House  
Old Chicken Coop/Pig Pen, removed 1930s  
Outhouses (2), removed by 1947 or 1948  
Log stable attached to north end of livestock barn

**Farm Systems:** General, *c.* 1882-1954  
Specialty (first peas, then beans, later beets), 1918-early 1960s;  
1997-present  
Grains, 1918-present

**Farmstead Categories:** [3] 100+ years

**Photos:** 27: 1-26

**Site Plan:** SP-27

**Description:**

The Farmstead consists of buildings scattered in a grassy area with little landscaping, a linear drive that curves at its southern end, an apple orchard on the east side and a stand of tall trees on the west side. The brick farmhouse, which is the northernmost building on the farmstead, is situated immediately adjacent to the orchard and driveway, and is therefore partially hidden from the road. The outbuildings are scattered behind the farm house, connected by the longer, curved driveway. The outbuildings include a workshop, machine shed, granary, milk house, two hen houses, and two barns. One of the two barns is partially constructed of logs. The land surrounding the farmstead is relatively flat and maintained as tilled fields with scattered wood lots.

**Statement of Significance (Agriculture):**

This farm is a collection of buildings from the late 19<sup>th</sup> and early 20<sup>th</sup> centuries, all built or adapted by a family of ethnic German background. The buildings exhibit a variety of construction techniques: log, timber-frame, stick-frame, and brick. They supported the agricultural operation conducted by the family during the span of the 20<sup>th</sup> century: raising grain, livestock, and specialty crops (primarily beans and sugar beets). With the exception of a hog/chicken shelter, all the significant buildings on the farmstead remain intact, and no newer buildings have been added to the farmstead. In addition, the orchard and the overall setting of the farmstead also remain intact. The setting is influenced by a relatively high level of integrity of the individual resources, the fact that the farm is located in an area settled by additional Germans at the end of the 19<sup>th</sup> century, and the fact that the farm is situated in one of the most prosperous agricultural regions of the state. The period of significance is from 1901, when the first long-term farming generation of the family took possession of the farm operation, to 1966, when the specialty and livestock systems were no longer in operation and the same generation retired.

**Farm No. 28:**                      **Grant Township, Huron County**

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**Date of Establishment:** 1871

**No. of Acres:** 40

**No. of Generations:** 5

**Extant Resources:** Farmhouse, c. 1890, with a one-story kitchen addition  
“Near” Garage, 1975  
“Far” Garage (former granary), late 19<sup>th</sup> century  
Pump House, early 20<sup>th</sup> century  
Barn, 1978, rear extension 1990  
Equipment Shed, west half 1992, east half 1997  
Fuel Pump, early 20<sup>th</sup> century  
Orchard remnant, early 20<sup>th</sup> century

**Lost Resources:** Old garage, removed before 1975  
Barn, collapsed late 1950s  
Tool shed, demolished 1962 or 1963  
Silo, removed before 1963  
Outhouse, removed after 1940s

**Farm Systems:** General, early 1870s to 1950s  
Dairy, 1910-1942  
Land leased (grains/cash), 1942-present  
Livestock, 1978-present

**Farmstead Categories:** [7] Remnant



**Photos:** 28: 1-13  
**Site Plan:** SP-28

**Description:**

The property today consists of the northern portion of the original 80 acre farm purchased in 1871. The farm yard is defined by a large, circular driveway with the buildings, fences, and plantings scattered around its perimeter. The Queen Anne-style farmhouse is the prominent feature on the farmstead. It is surrounded by a number of older landscape features: large maple trees, a tall evergreen tree (from the late 19<sup>th</sup> or early 20<sup>th</sup> centuries), lilac bushes, outhouse foundation, mature trumpet vines (2), and an older split-rail snake fence. Additional buildings from the turn of the 20<sup>th</sup> century include a tall, one-car garage that formerly served as a granary, and a side-gable outbuilding (pump house). The remaining resources are pole buildings constructed after 1975. Their functions reveal the residential and agricultural nature of the property as it is used today: garage, barn, and equipment shed. The farmstead is connected to the surrounding open, tilled fields by a lane.

**Statement of Significance (Agriculture):** None.

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**Farm No. 29:** Chippewa Township, Mecosta County

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**Date of Establishment:** 1876  
**No. of Acres:** 100  
**No. of Generations:** 4

**Extant Resources:** Farmhouse, late 1870s to early 1880s  
Woodshed, late 19<sup>th</sup> century  
Well House (w/ ice house), late 19<sup>th</sup> century  
Garden Shed, 1940s?  
Chicken coop foundation  
Barn, early 20<sup>th</sup> century  
Granary/Corn Crib, early 20<sup>th</sup> century, crib added in 1940s?  
Pole Barn, 1967  
Silo (concrete), 1959

**Lost Resources:** Log house  
Horse Barn, 1876 or 1878  
Main (East) Barn, burned 1967  
Silo (wood), removed by 1959  
Chicken Coop, moved on site 1940s  
Corn crib, installed 1960s, removed c. 1980  
Outhouse, removed 1930s or later  
Apple orchard

**Farm Systems:** General, 1876-early 1960s  
Dairy (small), 1900s-1910s  
Specialty crops (potatoes), 1930s-1970s  
Livestock (sheep, cattle), 1910s- mid-1980s  
Forage, mid-1980s-present

**Farmstead Categories:** [7] Remnant

**Photos:** 29: 1-16

**Site Plan:** SP-29

**Description:**

The farmstead is located on a slight rise on the north side of a small lake and the public road. The farmstead is accessed by a long, linear drive. The resources on the farm include buildings and one foundation. The buildings are scattered along the west side of the drive and at the end of the drive. Those buildings associated with domestic activities are located along the west side of the drive. They include the relatively prominent Upright-and-Double Wing farmhouse with attached woodshed, the well house (used for processing milk, keeping ice, and providing water), and a more recent garden shed. The agriculture-related buildings are located at the end of the drive. They include, from west to east, the corn crib foundation, the barn, the granary/corn crib, and a newer pole barn with silo. The farmstead is surrounded by pasture and wood lots.

**Statement of Significance (Agriculture):** None. The farm was established by a family of Canadian (ultimately Scot) descent, and was a very prosperous one during the early 20<sup>th</sup> century. The family adopted numerous farming systems and built the accompanying barns and outbuildings. Unfortunately, a devastating fire in 1967 removed many of these buildings, leaving the farm with remnants of the early 20<sup>th</sup> century, and a very large, dominant new barn.

**Farm No. 30:** Pine Township, Montcalm County

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**Date of Establishment:** 1880

**No. of Acres:** 160

**No. of Generations:** 3

**Extant Resources:** Farmhouse, built soon after 1880; moved to current location from rear of property  
Pole Barn, 1967  
Milking Barn, c. 1900  
Silo, early 1950s  
Horse/Watering trough  
Windmill pad

**Lost Resources:** Garage, built before 1949  
Welding shop, burned 1967  
Corn crib, *c.* 1900, burned 1967  
Granary w/ potato cellar, *c.* 1900, burned 1967  
Hay Barn, *c.* 1900, burned 1967  
Tool Shed, *c.* 1900, burned 1967  
Hen House, 1914, burned 1967  
Windmill, removed late 1950s or early 1960s

**Farm Systems:** General, 1880-1940s  
Dairy, 1940s-before 1967  
Land leased (Grain/cash), *c.* 1970 -present

**Farmstead Categories:** [7] Remnant

**Photos:** 30: 1-9  
**Site Plan:** SP-30

**Description:**

The farmstead is located on a slight rise on the south side of the public road. It is accessed by a circular drive. The farmhouse is situated closest to the road and faces it. It is an Upright-and-Wing house with rear addition. Several large trees stand around its front and sides, but there is no other landscaping present. At the rear of the driveway stands a prominent pole barn. Behind it is a small, older corn crib. An older barn is located to the east of the driveway loop. It has a few smaller structures standing adjacent to it: a silo to the east, and a covered trough and concrete pad for the former windmill to the south and southwest, respectively. The surrounding land consists of pasture and tilled fields, with wood lots nearby.

**Statement of Significance (Agriculture):** None. The farmstead was greatly modified after a devastating fire in 1967.

**Farm No. 31:** Long Lake Township, Grand Traverse County

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**Date of Establishment:** 1873  
**No. of Acres:** 50  
**No. of Generations:** 3

**Extant Resources:** House, 1957-1958  
Garage, *c.* 1972  
Well House  
Shop, 1959 or 1960  
Barn, 1946; lean added 1960s  
Pole Garage, 1978

House, 1974  
Orchard, planted before 1930s, remnant remains  
Corn crib foundation

**Lost Resources:** Farmhouse, removed between 1958 and 1960  
Corn crib, 1948, removed early 1980s  
Livestock shelter, removed by 1946  
Pig shed, removed after *c.* 1958  
Chicken coop, built 1950s(?), removed 1960s  
Granary, built after 1946, removed early 1980s  
Garage by road, *c.* 1950, removed by 1955  
Silo pit, early 1950s

**Farm Systems:** General, 1873-1950s, some potatoes  
Livestock, 1936 or earlier-1976  
Land in soil bank program, 1950s-1960s  
Specialty (Christmas trees, pumpkins, Indian corn), 1970s – present

**Farmstead Categories:** [7] Remnant

**Photos:** 31: 1-14  
**Site Plan:** SP-31

**Description:**

The farmstead is divided by distance into three sub-sections. The eastern-most grouping of buildings stand near where the historic farmstead once stood. The old farmhouse, with a shelter-like garage by the public road, was replaced in the late 1950s with the current one-story house and a shop. The complex later received a garage. It is surrounded by open unplowed fields, scattered trees, and some shrubbery. The center cluster of buildings is dominated by the 1946 barn. The barn has a shallow-pitched bank on both side elevations. It once had a silage pit added to its western end, but this has now been filled. A pig shed, granary, and chicken coop located south and east of the barn have also been removed. A few apple trees, a remnant of a larger orchard in that location, remain. The third cluster of buildings was developed in the 1970s. It consists of a house and pole garage, and is located near the trees at the western end of the parcel.

**Statement of Significance (Agriculture):** None. The barn is the only structure old enough to be evaluated, and it is the only remaining structure connected with the general and livestock farming systems once conducted on the farm. However, given that the remaining setting and buildings have changed, the setting of the early to mid-20<sup>th</sup> century period and the corresponding context of the barn have been lost.

**Farm No. 32: Grayling Township, Crawford County**

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**Date of Establishment:** 1891

**No. of Acres:** 40

**No. of Generations:** 3

**Extant Resources:** Farmhouse, early 1920s  
Outhouse #1, late 20<sup>th</sup> century  
Chicken coop  
Milk House, 1934  
Barn, *c.* 1926 or 1927

**Lost Resources:** Old house, burned *c.* 1921  
Garage, removed 1960s (?)  
Old Barn, burned *c.* 1926  
Ice house, removed about 1940  
Delco plant, 1935  
Windmill  
Pig sty, removed during or after mid-1940s  
Chicken coops  
Corn crib, keystone-shaped

**Farm Systems:** General, 1891-1905  
Dairy, *c.* 1905-*c.* 1940  
Grain and hay, off and on, to present

**Farmstead Categories:** [7] Remnant, [5] Architecture

**Photos:** 32: 1-19

**Site Plan:** SP-32

**Description:**

The farmstead is scattered around a large U-shaped driveway and beyond. The historic core of the farmstead is located on the western perimeter of the drive. It is identified by the presence of the house and several outbuildings, including the milk house. The barn is located further back from the road, where the driveway turns east. It stands alone in the untilled field. The bank-elevation faces the rear, so that the barnyard would have been visible from the road. A newer residential area is located along the eastern leg of the driveway where a trailer and pole garage are built. Well behind the barn are a collection of scattered resources: a picnic shelter, an outhouse, a small-scale windmill standing by the water pump, and numerous meandering lanes that lead north into open fields and wooded areas. The land has been divided into four equal parcels, all owned by family members of the original purchaser.

**Statement of Significance (Agriculture):** None. The property has lost its overall agricultural setting from the Dairy period. However, it does have two beautiful buildings that are remnants of the dairy operation: the barn and the milk house, and associated with the owner/farmer of the time: Charles Corwin, Sr. Mr. Corwin was the town milkman

for twenty years in Grayling. He delivered door-to-door, sometimes without payment, and became known in the community as “Pa Corwin.” He and his wife were members of the Grange, and hosted many barn dances in their barn. Mr. Corwin named his dairy operation “Oak Grove Dairy,” and tall oaks still stand today in the grove where a picnic shelter was recently constructed behind the house. The Dairy’s name was permanently recorded in the south wall of the milk house when it was constructed in 1934 from blocks made on the property. Clearly by then, twenty or so years after he began farming, Mr. Corwin took great pride in his farm’s production. While little else is known about Mr. Corwin and his activities with the community, it is possible that the milk house, despite its loss of context and setting, may have significance in its association with Mr. Corwin.

## **APPENDIX A-2.**

### **SITE MAPS OF FARMS SURVEYED**

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A site map for each of the thirty-two farms surveyed for this study is provided below. The maps include only the farmstead (collection of buildings) area, and not necessarily the entire property. Although the buildings and their relationship to one another are drawn to scale, the location of the driveways, the distance to the public roads, and other identifying landscape features is approximate. In order to protect the privacy of the farm owners, the farms are identified by a unique number and the township and county in which they are located. A list of correlating farm addresses is submitted under separate cover to MDOT.

## **APPENDIX A-3.**

### **PHOTOGRAPHS OF FARMS SURVEYED**

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A collection of photographs for each farmstead surveyed is attached. The photographs were taken during the time of survey, and are included here for reference purposes only.

The photographs are identified by address. The addresses provided are of farms and properties that are under private ownership. Individuals doing rural studies need to be cognizant and respectful of this fact.



**APPENDIX A-4.**

**SAMPLE INTENSIVE-LEVEL SURVEY REPORTS  
OF SELECTED FARMS**

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The following reports are included to provide an example of the kind of historical analysis to include in an intensive-level survey report.

The survey reports are of farms and properties that are under private ownership. Because of this, references to the name and address of the current owner (except where documentation is public) have been eliminated from these reports. Individuals doing rural studies need to be cognizant and respectful of this fact. Specific information that readily identifies the address of a property has been removed from these reports.

**Farm No. 2: Early 20<sup>th</sup> to Mid-20<sup>th</sup> Century Farmstead.....** page 173

**Farm No. 3: Modern Farmstead.....** page 188

**Farm No. 8: Farm exhibiting more than one System.....** page 197

**Farm No. 13: Remnant Farmstead.....** page 204

**Farm No. 15: Farm spanning a Century.....** page 209

## INTENSIVE LEVEL SURVEY ENTRY FORM

**HISTORIC NAME:** Perley H. Sheldon Farm  
**OTHER NAMES:** Black Creek Stock Farm  
*Current owners name here*

**ADDRESS:** *Address here*

### RESOURCES ON PROPERTY:

There are ten historic resources remaining on the property today, all situated on the east side of the road. These include the farmhouse with newer attached garage, two older garages, tool shed, chicken coop, barn with silo, pole barn, outhouse, and windmill. Two additional houses located along the west side of the highway were added over the years to accommodate additional Sheldon generations. Their addresses are xxx1, and xxx2, respectively. Recently, a pole barn was added on the west side of the road as well. It is situated to the north of the latter house. The structures on the west side of the highway were not examined for this survey.

<b>FUNCTION:</b>	<b>HISTORIC</b>	<b>CURRENT</b>
<i>Farmstead east of highway:</i>		
• Farmhouse:	Domestic/Single dwelling	Domestic/Single dwelling
• Outhouse:	Domestic/Secondary structure	Domestic/Secondary structure
• Lawn Mower Garage:	Agriculture/Animal facility	Domestic/Secondary structure
• Garage:	Domestic/Secondary structure	Domestic/Secondary structure
• Tool Shed:	Agriculture/Outbuilding	Agriculture/Outbuilding
• Chicken Coop:	Agriculture/Animal facility	Agriculture/Outbuilding
• Barn:	Agriculture/Animal facility	Agriculture/Outbuilding
• Barn Lean:	Agriculture/Animal facility	Agriculture/Outbuilding
• Silo:	Agriculture/Storage	Agriculture/Storage
• Pole Barn:	N/A	Agriculture/Outbuilding
• Windmill/Trough:	Agriculture	Vacant
<i>Resources west of highway:</i>		
• House (xxx1):	N/A	Domestic/Single dwelling
• House (xxx2):	Domestic/Single dwelling	Domestic/Single dwelling
• New Pole Barn:	N/A	Agriculture/Outbuilding

**OWNERSHIP:** Private

## ARCHITECTURAL CLASSIFICATION:

### Farmhouse:

- **Style and Massing:** Vernacular, two-story Upright and one-story Wing with gable roofs. Additions include a projecting, shed-roofed “lean” along the south side of the Upright, and a two-car, gable-roofed garage wing attached to the rear of the main Wing.
- **Materials:** *Foundation:* limestone (Upright), brick (lean addition), concrete block (sun room), poured concrete; *Walls:* vinyl siding; *Roof:* asphalt shingles.
- **Other:** Shed-roofed, one-story Sun Room located in front of Upright. Wing is surrounded by a wrap-around porch.

### Outhouse:

- **Style and Massing:** Small, vernacular, one-story, gable-roofed structure with front-gable orientation and rectangular footprint.
- **Materials:** *Foundation:* brick; *Walls:* vertical, tongue-and-groove boards, approx. eight inches wide; *Roof:* asphalt.
- **Other:** Simple trim around door and window openings. Door of vertical boards on west (front) elevation, single-sash window on south elevation. Small, wood ventilation stack on roof ridge.

### Lawn Mower Garage:

- **Style and Massing:** Vernacular, one-story, gable-roofed structure, with front table orientation.
- **Materials:** *Foundation:* mostly brick, some poured concrete on north elevation; *Walls:* vertical boards, tongue-and groove; *Roof:* standing seam metal over wood shingles.
- **Other:** One car, overhead fiberglass garage door on front (west) elevation, 2/2 double hung windows along south elevation. Single sash window in east gable and along north elevation.

### Garage:

- **Style and Massing:** Vernacular, one-story, gable-roofed structure with front-gable orientation.
- **Materials:** *Foundation:* none visible; *Walls:* cinder block; *Roof:* asphalt.
- **Other:** Single-car overhead garage door on east elevation. Opening for second door filled in and replaced by pedestrian door. Six-light, steel casement window on south and north elevations.

### Tool Shed:

- **Style and Massing:** Vernacular, 3-bay rectangular structure with gable roof. Side-gable orientation.
- **Materials:** *Foundation:* concrete posts; *Walls:* vertical boards, approx. 7 ½ inches in width; *Roof:* standing seam metal over spaced nailer boards.
- **Other:** Sliding doors over openings along west elevation.

### **Chicken Coop:**

- **Style and Massing:** Vernacular, rectangular structure with gable roof, front-gable orientation. Six bays long.
- **Materials:** *Foundation:* not visible; *Walls:* concrete block, horizontal tongue-and-groove boards in gables; *Roof:* corrugated metal.
- **Other:** Wide opening covered by sliding doors on west (front) elevation. Metal casement windows along south and north (side) elevations, and also on east (rear) elevation. Four-panel wood door on east and south elevations. Newer metal stove pipe projecting out of wall on south elevation.

### **Barn:**

- **Style and Massing:** Vernacular, 1 ½-story side gable structure with gambrel roof. Approximately three bays wide.
- **Materials:** *Foundation:* fieldstone (limestone); *Walls:* vertical tongue-and-groove boards; *Roof:* sheet metal.
- **Other:** Bank on west elevation leading to central door opening with sliding doors. Other openings along south foundation. Small, recessed, 3-light windows framed in wood along basement level and single sash, rectangular windows on main level in random locations.

### **Barn Lean:**

- **Style and Massing:** Vernacular, two-story lean with shed roof along full length of rear barn.
- **Materials:** *Foundation:* molded concrete block; *Walls:* vertical boards; *Roof:* sheet metal.
- **Other:** Three- and two-light windows on main and basement levels. Door openings in north, east, and south elevations. Regular concrete blocks near center of east elevation mark location where a ramp was to lead to the upper level.

### **Silo:**

- **Style and Massing:** Vernacular, tall cylinder, with dome cap.
- **Materials:** *Foundation:* concrete (?); *Walls:* concrete blocks stacked vertically; *Roof:* metal.
- **Other:** “The Smith Silo, Oxford”

### **Pole Barn:**

- **Style and Massing:** Vernacular, one-story structure with shallow-pitched gable roof, front gable orientation, square footprint.
- **Materials:** *Foundation:* squared timbers placed horizontally on rubble and wood posts; *Walls:* corrugated metal placed vertically; *Roof:* corrugated metal.
- **Other:** Boxed eaves with fascia but no soffit. No eaves at gable ends. Wide door openings at west and east (front and rear, respectively) ends and smaller, pedestrian-scale opening along south (side) elevation. Openings covered by sliding doors in matching corrugated metal.

### **Windmill and Trough:**

- **Style and Massing:** Vernacular, rusted structure adjacent to concrete trough.
- **Materials:** concrete, metal.
- **Other:** Windmill consists only of four-legged base, and is missing wheel at top.

### **House (xxx1):**

- **Style and Massing:** Vernacular, one-story ranch house, side-gable orientation with two-car front-gable garage attached at north end.
- **Materials:** Not surveyed (aluminum siding [?] and asphalt roof visible from road).
- **Other:** Recessed porch along front elevation. Small gambrel-roofed shed located to immediate northwest of house.

### **House (xxx2):**

- **Style and Massing:** Vernacular, 1 ½-story front-gable structure with gable roof. Shed-roofed “lean” addition along south (side) elevation.
- **Materials:** Not surveyed (brick foundation, vinyl siding, and metal roof visible from road).
- **Other:** Enclosed front porch, 1/1 double-hung windows.

### **New Pole Barn:**

- **Style and Massing:** Vernacular, two-story, asymmetric, front-gable structure with gable roof, one-story side-gable wing attached on south side elevation.
- **Materials:** Not surveyed.
- **Other:** Tall garage door openings and pedestrian-scale door on east (front) elevation, double hung windows on front elevation of wing.

## **DESCRIPTION OF PROPERTY:**

Legal Description: *legal description of the entire farm.*

### **Site Description:**

The Sheldon Farmstead is nestled between a grove of trees and the meandering Black Creek to the east and north, and the public road to the west. The farmhouse, which is the southernmost building on the farmstead, rests on a slight rise, as is typical for many farmhouses in the area. South and west of the house the land is relatively flat and is maintained as open fields surrounded by drainage ditches and some wood lots. The farmstead itself consists of the collection of buildings in a grassy area with little landscaping, a U-shaped drive, scattered older and relatively tall trees, and a pair of metal posts holding up the laundry line. The latter is also seen adjacent to the ranch house across the street. The remaining two buildings on the west side of the street are positioned adjacent to each other and the ranch house. They all face the street and the farmstead to the east.

## HISTORY:

### Dates of Construction:

#### *Farmstead east of highway:*

- Farmhouse: c. 1861, with addition in c. 1900, and other modifications
- Outhouse: early 20<sup>th</sup> century
- Lawn Mower Garage: early 20<sup>th</sup> century, converted to garage during 1940s
- Garage: c. 1949
- Tool Shed: 1899, possibly early 20<sup>th</sup> century
- Chicken Coop: between 1949 and 1954
- Barn: 1899 (foundation is that of an earlier barn)
- Lean: between 1899 and 1938
- Silo: between 1938 and 1951
- Pole Barn: 1959
- Windmill/Trough: probably early to mid-20<sup>th</sup> century

#### *Resources west of highway:*

- House (xxx1): 1954
- House (xxx2): late 19<sup>th</sup> century (?), moved to current site c. 1928
- New Pole Barn: 2001

### Dates of Construction and Demolition:

- Log House built 1852, removed c. 1861
- Wood Shed built mid-19<sup>th</sup> century, moved across the road during the 1930s to serve as garage
- Original Barn destroyed by fire in 1899
- Brooder Coops (2) one located behind barn burned in early 1940s; other one replaced by cinder block garage in 1949
- Wood Silo built after 1938 (?), knocked over by wind before 1951
- Sugar bush structure built after 1880; removed by the late 1930s
- Corn Crib built early 20<sup>th</sup> century, removed in mid-1970s

### Original Family Owner:

Truman and Susanna Knapp Sheldon (sic) (1852-1861) - 113.36 acres. Purchased from Edward D. and Elizabeth L. Miner (Liber 47: 96).<sup>113</sup>

### Subsequent Owners:

Harvey and Mary Ann Crockett Sheldon (1861-c. 1900) – up to 205 acres.

Perley H. and Della F. Warner Sheldon (1900-1944) – 172.7 acres.

Hal H. and Esther A. Shafer Sheldon (1944-1979) -

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<sup>113</sup>The family name was originally spelled Shelden.

farmed approximately 200 acres with brother Hugh

Current owners (1979-present) -  
172.5 acres

**Architect/Contractor:** None/family members with the help of neighbors and laborers

### **History of Property:**

#### *Truman Sheldon Era (1852-1861)*

The Sheldon Farm history begins in 1852 when Truman (1797-1881) and Susanna Knapp (1803-1864) Sheldon purchased approximately 114 acres of land in Section 3 of Ogden Township from Edward D. and Elizabeth L. Miner *via* their attorney, Peter R. Campbell, Jr. (Lenawee County Register of Deeds, Liber 47, folio 96). The Trumans cleared 25 acres, and constructed a log house that same year (Chapman 1881: 993). It is not clear whether the log house was built on the current farm, or on land owned by Truman that is now south of the current farm. However, the fact that the land had to be cleared, a house needed to be constructed, and that the property was purchased through a third party, suggests that the property was probably not occupied at the time of sale and had not been farmed to date. This conclusion is further supported by Bonner (1909: 399) who describes that the eastern part of Ogden Township was not actively settled until after ditches were installed in order to drain the existing swamps. This situation happened well after the western portion of the township was settled, beginning in the 1830s.

The Sheldon family was one of many New England families that traveled to Michigan *via* Canada during the 19<sup>th</sup> century. Truman Sheldon was born in Canada, but his father was a native of Pittsford, Vermont. By the time they immigrated to Michigan, the family included Truman, wife Susanna, children, Truman's mother Sarah Patterson, half-brother James Harrington, and two additional brothers with families. They emigrated from Bastard, Leeds County, Ontario to Ogden Township in 1837, one year before the township was officially established.<sup>114</sup> The Truman Sheldens settled on land purchased in Section 22 of the township before purchasing the current farm in 1852.

Little else is known about the farm's history during Truman's time of ownership. Descriptions of other Ogden Township pioneering settlers and their farming activities give an indication of what most of the early settlers like the Sheldens were experiencing:

*"Meanwhile he [Mr. Volentine] continued his labors as a farmer. Up to this time he had chopped and cleared about fifty-five acres of his land, erecting thereon good, substantial frame buildings."* (Bonner 1909: 395);

*"A considerable time before his [Mr. Brockway's] death, he put up a frame residence for the comfort of his family, and good barns and other out-buildings"*

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<sup>114</sup>Date provided by family. Chapman (1881) and Everts and Stewart (1874) state that the year was 1838.

*for the domestic animals, with which he stocked the farm.” (Bonner 1909: 397); and*

*“It was some time before anything except corn and potatoes could be raised, and they would often drown out during the ‘June freshets,’ which then occurred almost annually. Wheat was a failure until the timber was considerably cleared off, and the ditch system was inaugurated.” (Bonner 1909: 399).*

It seems probable that Truman was also able to erect buildings in addition to his cabin. It is also known within the family that Truman’s children helped with the farm work and attended school. Truman was apparently successful, because he was able to provide or enable the purchase of farms, all within the vicinity of the Sheldon homestead, for each of his eight children during the next two decades. After Susanna’s death 1864, he married Sarah (1837-1894) and moved to Missouri about 1870.

#### Harvey Sheldon Era (1861-1900)

Harvey Sheldon (1832-1899) was the fifth child of Truman and Susanna. He obtained the farm, consisting of 108 acres, from his father in 1861, shortly after marrying Mary Ann Crockett (1836-1911). The latter was a native of New York, but moved with her parents to Ogden Township as an infant. The Crocketts were also a pioneering family, owning a farm in Section 35. Crockett descendants purchased farms situated south of the current Sheldon farmstead.

During the 1870s, Harvey and Mary Ann proceeded to purchase additional parcels of land, mostly adjacent to the farm or in neighboring Palmyra Township to the north (see table below). By the time of the 1880 Agricultural census, the Sheldons were owners of a 200 acre farm: 110 acres of tilled and rotating grass fields, 10 acres of permanent pasture, and 80 acres of woodland.

#### Land purchases and acreage owned by Harvey and Mary Ann Crockett Sheldon:

- 1861: Purchased 12.17 acres, Section 2, from Truman and Susanna Shelden (*sic*), \$240 (Liber 59: 595).
- c. 1858: Received 108 acres from father (Chapman 1881: 993), Section 3.
- 1870: Purchased 38 ½ acres of land from Thaddeus Tooley in Section 34, Palmyra Township, \$1200 (Liber 89: 734).
- 1870: Purchased three parcels from Amanda Rider equaling at least 4 acres in Section 34, Palmyra Township, \$140 (Liber 90: 467; Liber 104: 294; Liber 190: 15).
- 1874: Purchased adjacent 38 ½ acre parcel from Amanda Rider in Section 34 of Palmyra Township, \$1000 (Liber 104: 412).
- 1876: Purchased 5-acre parcel south of farmstead in Section 2, Ogden Township, from Thomas and Adela Sheldon, \$475 (Liber 110: 617).



Livestock reported living on the farm in 1880 included cattle (20), milk cows (4), sheep (16), and poultry (80).<sup>115</sup> The animals were used for food as well as cash income. During 1879, one cow was slaughtered for meat and seven were sold; and 25 sheep were sold. The family made 400 pounds of butter but no cheese, and sold no milk, suggesting that the milk cows produced primarily for the family. In addition, the poultry supplied 60 dozen eggs. It is not clear whether any chickens or eggs were sold. Grains raised on the farm during the census period include corn (12 acres), oats (10 acres), and wheat (22 acres). In addition, the family grew Irish potatoes (1/2 acre) and apples (4 acres), harvested honey and forest products (lumber). The small quantities of these items again suggest that much of what was grown was for family consumption, with only a small amount sold for cash income.

During this time, Lenawee County was one of the leading counties in Michigan in agriculture production. Its nearest competitor was Oakland County. Lenawee County had factories that produced cheese, butter and sugar. There were also creameries and skimming stations. By the end of the 19<sup>th</sup> century, Ogden Township had become one of the leading sugar producers. The Continental Sugar Company constructed a processing plant in nearby Blissfield (Bonner 1909: 672). There is no indication that the Sheldon family grew sugar beets, but there is also no entry in the 1880 agricultural census for that kind of information. In comparison to the general agricultural statistics of Ogden Township, the Sheldon Farm of the second half of the 19<sup>th</sup> century appears typical—with the exception of the lack of horses and/or oxen.

It is not known exactly what infrastructure the Sheldon farm had during the late 19<sup>th</sup> century. It is known that the current farmhouse and a livestock barn were present. Sheldon family history states that the farmhouse was probably constructed shortly after the Harvey Sheldons took possession of the farm. The house was built as an Upright and Wing structure, as was typical of the period and area. It had a wide frieze board decorated with raised molding, and clapboard siding framed with wide corner boards. The windows were 2/2 double hung. The wing was one story in height, and was surrounded by a wrap-around porch on the front and side elevations, and the wood shed along its rear elevation. Less typical were the relatively elaborate architectural details that embellished the home: elongated dentil moldings at the top of the corner boards, and pronounced vertical bands (chamfers?) running along the edge of the porch columns. These are depicted on the house as seen in a small collection of photographs from the 19<sup>th</sup> century and dated 1904 in the possession of the current owner.

The original barn on the property stood on a fieldstone foundation. It burned in August of 1899, as noted in Mary Ann Sheldon's diary (p. 87), and was immediately replaced by a new one using the same foundation. Mary Ann also writes that masons and carpenters worked to rebuild the barn in September. Nails and lumber were purchased in Blissfield, but the logs were cut on the farm. The barn was painted, included horse stalls, and was completed at the end of November. She also mentions that timber was hauled for a tool shed on April 1, 1899 (p. 82); and that a windmill pump was removed in October (p. 89). Finally, a 1904 photograph of the barn shows a one-story, gable-roof structure situated to

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<sup>115</sup>The number under the entry 'horses' is not legible, although it resembles a '0.'

the east of the barn near its southern end. The building sheathed with wide, vertical boards has simple projecting eaves and a pedestrian doorway on its west elevation. It is possible that this structure served as a tool shed. The origin and history of the building are not known to the current owners.

Between 1890 and 1900, when the farm was passed on to the next generation, the farm acreage was reduced in size to approximately 175 acres. The 1893 plat map depicts the farm with 80 acres in Section 34, Palmyra Township, and 125 acres in Sections 2 and 3 in Ogden Township. In 1899, the Harvey Sheldon estate included 172.7 acres. The inventory was listed as 17.17 acres of land in Section 2, 113 acres in Section 3, and 42.5 acres of land in Section 34. A 38.5 acre parcel in Section 34 is not included on this list, although the parcel is apparently purchased and sold several times by son Perley, beginning in 1894 (Liber 171: 143). The Harvey Sheldon estate was inherited by his wife and two children. In 1900, daughter Minnie J. Sheldon Ross sold her share of the farm to brother Perley in a land contract deal (Liber 186: 368),<sup>116</sup> bringing the Harvey Sheldon era to a close.

#### *Perley H. Sheldon Era (1900-1943)*

Perley H. Sheldon (1869-1944) was Harvey and Mary Ann Sheldon's son. He inherited half of the farm after his father's death. He purchased his sister's half of the farm in 1900, making him the sole owner of the approximately 173 acre farm. Perley married Della F. Warner (1871-1935) in 1891, and by the time they became owners of the farm, the couple had twin sons: Hal H. and Hugh, born in 1899. A third child died at a young age. Perley's sister, Minnie (b. 1865) lived in nearby Blissfield.

The farm under Perley's supervision continued to operate as a general farm with an emphasis on subsistence. Perley hired men to most of the physical labor, and spent winters in Texas. Family history, building types, and the Rural Property Inventory undertaken in 1938 all suggest a farm that included cattle, pigs, chickens and miscellaneous other animals, 65-70 acres of crop land, 26 acres of untilled pasture, 30-35 acres of wood lots consisting of mixed hard woods, a sugar bush, and an orchard.

The appearance of the farmstead during Perley's time reflected this general nature of the farming operation. The farm consisted of numerous outbuildings, each serving a purpose, built from lumber obtained from the wood lots on the farm as the need arose and finances permitted. At the beginning of the century, it is known that the farm had at least one new barn, the farmhouse, and a tool shed. An interview with the current owner, observations from the field, and data included in the Rural Property Inventory taken in 1938 indicate that several buildings were added to the infrastructure. One change came soon after Harvey's death, when Perley added a lean-to addition to the south side of the house to provide living quarters for Perley's widowed mother, Mary Ann Sheldon. Perley and his family remained in the rest of the house.

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<sup>116</sup>Quit Claim deed issued 1911 (Liber 229: 341).

Field observations confirm that the existing Tool Shed and the current “Lawn Mower Shed” (former chicken coop/garage) were probably constructed by the first part of the 20<sup>th</sup> century. The tool shed is constructed of squared timbers and sided with approximately 7 ½”-wide vertical boards that are not tongue and groove boards. These features suggest late 19<sup>th</sup> or early 20<sup>th</sup> century. On the other hand, the open eaves and widely spaced 2x4” rafters, and the poured concrete footers are more typical of the 20<sup>th</sup> century.<sup>117</sup>

The former chicken coop has 2/2 double hung windows, a brick foundation, and boxed-in eaves that resemble those of the outhouse. These features are found elsewhere on the farm, and may suggest an early 20<sup>th</sup> century construction date of the chicken coop for the following reasons: the brick foundation resembles that of the lean on the house, which was built about 1900; the 2/2 double hung windows resemble those that were once part of the farmhouse (which now has 1/1 windows) and could have been removed from the house when the lean was added; and the current owner believes that the outhouse, which has a similar eave to that of the former chicken coop, was constructed by his grandfather, Perley. It was no longer in use as early as he can remember (late 1930s), suggesting that it (and presumably the chicken coop), were constructed well before then. Finally, the Rural Property Inventory lists the “hen house” as having been constructed in 1900.<sup>118</sup> The structure was adapted into a garage in the early 1940s.

Sometime during the early 20<sup>th</sup> century, Perley also expanded the barn. He added a full-width lean, which runs along the rear of the barn and replaced a covered barnyard that served to feed cattle. The Rural Property Inventory lists dimensions of the barn as nearly square, suggesting that the lean was added by 1938. The inventory also indicates the presence of a garage. While no construction date is given, it is observed from a comparison of rural property inventories from around the state by the author that most, if not all, garages were built after the turn of the 20<sup>th</sup> century. It is not clear where this garage stood. Family history also states that there were two brooder sheds present: one was located to the north of the house where the present garage stands, and one was situated to the east of the barn where it burned in the early 1940s.

Perley also oversaw the development of the farmstead across the road. Sometime during the 1930s (before a Rural Property Inventory was completed in 1938), the original wood shed adjacent to the house was moved across the road and converted into a garage; and an old house situated to the north by the creek was moved to its current location at 7252 Crockett Highway. It served as Perley’s retirement home. Also located on this side of the road was a full farmstead, including a house, barn, lean, and two additional outbuildings (Rural Property Inventory 1938 [names of buildings not legible]).

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<sup>117</sup>The 1938 Rural Property Inventory lists buildings and their construction dates, as supplied by the owner to the surveyor. A tool shed is listed as having been built in 1926, although the dimensions of the building provided do not match that of the existing tool shed. Comparison of the inventory lists with family history reveals a number of incorrect dates and other inconsistencies, a situation which is also true for other Centennial Farms surveyed.

<sup>118</sup>See previous footnote regarding RPI dates. This date should be considered as approximate.

The Rural Property Inventory does not list a sugar bush, which was described by Hal H. Sheldon (b. 1899) to his son, Lloyd, the current owner, as being located to the north and west of the farmstead, on the north bank of the Black Creek. There is no data entry for maple syrup in the 1880 Agriculture census, suggesting that the structure existed some time between 1880 and 1938. Hal also told stories about slaughtering hogs and cattle, and cutting ice from the Black Creek. Other family memories include the presence of an orchard across the road from the main farm house, and the presence of several chicken coops.

The farm size during Perley's time is modified over the years. For example, the parcels of land formerly owned by Perley's father in Section 34 of Palmyra Township are transferred back and forth between Perley and other parties in 1894 and again in 1902, according to the Abstract of Deeds. Plat maps and other sources also show variation in farm size: the 1921 plat map shows the farm consisting of 138 acres; and the 1938 Rural Property Inventory records a farm size of 130 acres, with son Hal already owning his own 40 acre parcel. It is not recorded why the farm size changed over the years, but the property exchanges would have provided a method of raising cash and/or establishing an investment, depending on the status of Perley's finances. The farm was finally sold to son Hal in 1943 (Liber 385: 229).

#### Hal H. Sheldon Era (1943-1979)

Hal and Hugh Sheldon were the twin sons of Perley and Della Sheldon. The boys were raised on the farm, and began assisting with the farm work long before they became land owners. Hal purchased a farm in Palmyra Township (Section 35) in 1936, and also owned 40 acres of land in Section 2 by 1938 that was separate from the Sheldon Farm. He married Esther A. Schafer (1908-1992) in 1930. They had two boys and two girls. Hugh married Elsie Schaefer Hewens (b. *circa* 1901) but had no children. Hal and Hugh worked the farm together with their father during the early 1930s, farming 200 acres. However, by the mid 1930s, the brothers separated operations, and Hugh worked primarily on a farm in Palmyra Township. Other land exchanges made later during Hal's tenure were minor, including 1.7 acres sold to County Road Commission in 1973 and another 3.3 acres sold to County Road Commission in 1977 (Liber 835: 432).

Soon after Hal Sheldon took over the farm operations, several physical changes began to take place. A silo was constructed between 1938 (it is not listed on the Rural Property inventory of that year) and 1951, replacing the previous wooden one that had been knocked down by wind. A new cinder block garage was added in 1949, and a new cinder block chicken house was added before 1954, replacing one that was removed with the construction of the garage. The old chicken coop was altered with the addition of an overhead garage door. It housed a Delco electric generator until electricity was provided to the area. The formerly red barn was painted white. The current owner also describes a corn crib that was built either by Perley or Hal, which was removed during the 1970s. In 1954 the orchard and a chicken coop were replaced by yet another house to accommodate Hal while the next generation occupied the farm house. A large pole barn was constructed in 1959 to serve as a tool shed. Finally, the farmhouse itself received a large

picture window and an enclosed front porch. Several exterior doors, of which there were many, were sealed. The modifications were made in the early 1960s by Lloyd and Shirlee Sheldon.

All the changes on the farmstead, perhaps including the construction of the large lean on the main barn (sometime before 1938), directly and indirectly reflect a change in farm system from one that was primarily subsistence in nature, to one emphasizing the raising of livestock for profit. This transition was begun under Perley's leadership, but it expresses itself on the landscape at the end of Perley's time and during the first half of Hal's tenure. By this time, the name of the farm, "Black Creek Stock Farm," was painted across the front elevation of the barn. The barn itself had cow stanchions in its northern half, and a granary in the southern end of the building. In addition, horse stables were situated on the south side. The livestock on the farm during Hal's tenure included milk cows (15 to 18), chickens, beef cattle, hogs, sheep, and horses (4). The grain raised on the farm was used for feed rather than cash, and included oats, wheat, barley, corn, and hay. In addition, potatoes were grown and hickory nuts harvested. The potatoes were stored in the cellar of the house. The farm operation made its money by selling Grade B milk to Adrian, eggs, beef cattle, lambs, and wool.

#### *Current Owners Era (1979-1999)*

Once again, the next generation of the Sheldon Farm became active in the operations and decision making process of the farm long before they received official ownership of the land. Hal was succeeded by two sons. The younger one married in 1954, and the couple raised three children on the historic farm. The older settled on the farm purchased by his parents in 1936 and situated a few miles north.

The brothers worked with their father beginning in the 1950s until 1965, when Hal retired. From then until 1979, the brothers rented the farm land. In 1979, Hal passed away, and ownership of the farmland passed on to his sons. The younger son recalls that during the mid-20<sup>th</sup> century, the farm livestock included milk cows (for Grade B milk), approximately 200 feeder cattle (Herefords, Angus, and cross breeds), sheep (lambs and wool) and chickens (eggs). The Sheldon brothers also raised pigs one year. In addition to animals, they grew hay, wheat (straw), oats, corn, barley, potatoes, and hickory nuts. In about 1980, the farm sold its cattle, and in about 1990, it sold its sheep.

By 1990, the farm had shifted emphasis from a stock farm to a cash crop farm, growing corn, soybeans, and wheat, all for profit (Sheldon Centennial Farm application, 1989 and update, 1999; interview with the current owner, 2002). The farm participated in government programs that paid farmers to leave a portion of their land idle. The current owner also worked off the farm, working in construction and in a factory during the winter months. The partnership maintained by the brothers enabled them to farm 585 acres, of which the current owner owns 172.5 acres and the original farmstead. The brothers worked as partners in the farming business until the older brother retired in 1994. The younger brother retired in 1999, and has been succeeded by his son, who now operates the farm.

The current owners of the farmstead have made relatively few changes to the farm buildings. The buildings and landscape reflect the farm as it was at the end of the stock raising period during the mid-20<sup>th</sup> century, with the exception of the removal of a corn crib in the 1970s, a brooder shed after 1981, and the loss of a prominent maple tree in the 1990s. The farmhouse was also remodeled in the 1990s: the original wing to the house was razed and rebuilt on its original footprint. The remodeling included the addition of vinyl siding, a wrap-around porch (as it once had in the 19<sup>th</sup> century), and an attached two-car garage where the wood shed originally once stood.

### The present

The Farm continues to slowly metamorphose itself into a 200-acre cash crop (grain) farm under the direction of the current farm operator. The farm now grows corn and soybeans, having eliminated wheat from the crop rotation in 2000 due to the sandy soil and consequent poor production. In 2001 the operator constructed a large pole barn across the street from the farmstead to house a workshop and modern farming equipment. The buildings on the historic farmstead itself are used for storage. The land is still owned by the owners, who live in the farmhouse. The other houses are occupied by tenants.

## **SIGNIFICANCE OF PROPERTY:**

**Areas of Significance:** Agriculture

**Significant Dates:** 1900-1980

**Significant Persons:**

**Architect/Builder:**

**Significance Statement:**

The Perley H. Sheldon Farm, also known as the Black Creek Stock Farm, is a fine example of a farmstead reflecting the early to mid-20<sup>th</sup> century period, when the farm specialized in raising livestock. Historic resources from this time period remain extant, primarily in the form of buildings. The period of significance begins in 1900, when Perley Sheldon formally retains ownership of the farm, and begins to make the transition from a subsistence farm to an income-producing one in the form of a livestock farm. The transition period is reflected on the landscape by the construction of several new outbuildings and the completion of a large barn. The farm and its infrastructure were modified during the 1940s and 1950s under the direction of Hal Sheldon, Perley's son. Hal oversaw the final stages of transformation from a subsistence farm a livestock farm. The period ends about 1980, when the farm sells off livestock and begins to emphasize cash grain. The existing buildings all contribute to the understanding of the evolution of the farm through the early to mid-20<sup>th</sup> century.

## SELECTED REFERENCES:

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1909 Ogden Township and Agriculture and Allied Interests. In *Memoirs of Lenawee County, Vol. 1, Chapter XXV*, pp. 393-400 and pp. 667-675. Western Historical Association, Madison, Wisconsin.

Cadwell, George B.

1893 *Atlas of Lenawee County, Michigan*. Chicago. Reprinted by Unigraphics, Inc., Evansville, Indiana, 1978, p. 92.

Chapman Brothers, Publishers

1881 *Portrait and Biographical Album of Lenawee County*. Chapman Brothers, Chicago.

Current owners

2002 Owners of the Sheldon Farm, (address). Interview by the author, 6 February 2002, Ogden Township. Also in their possession are photographs, the diary of Mary Ann C. Sheldon, and the Abstract of Title.

Everts and Stewart, Publishers

1874 *New Historical Atlas of Lenawee County, Michigan*. Everts and Stewart, Chicago.

Kenyon Company (Des Moines, IA)

1921 *Atlas and Plat Book of Lenawee County*, p. 47. Adrian Daily Telegram, Adrian.

Lenawee County Register of Deeds

Libers 47 (folio 96); 59 (595); 89 (734); 90 (467); 104 (294); 104 (412); 110 (617); 171 (143); 186 (368), 190 (15); 385 (229); 835 (432). All quoted from Abstract, in the possession of the current owner.

Rockford Map Publications, Inc.

1957 *Plat Maps of Ogden Township, Lenawee County, Michigan*. Rockford Map Publications, Inc., Rockford, Illinois. Also for the years 1988 and 1997.

Rural Property Inventory

1938 Rural Property Inventory Sheets for P. H. Sheldon Farm, Sections 2 and 3, Ogden Township, Lenawee County.

Sheldon, Lloyd H. and Shirlee A.

1989 *Lloyd Hal Sheldon Centennial Farm Application*, Ogden Township, Lenawee County. August 30, 1989. Updated October 25, 1999.

United States Bureau of the Census

1880 *Federal Census: Agricultural Schedule for Ogden Township, Lenawee County*, page 3.

Whitney, W. A. and R. I. Bonner  
1879 *History and Biographic Record of Lenawee County, Michigan*. Volumes 1 (1879)  
and 2 (1880). W. Stearns and Co., Printers, Adrian, Michigan.

**DATE OF SURVEY:** February 6, 2002  
**PHOTOGRAPH NOS.:** 2: 1-16  
**SITE PLAN NO.:** SP-02



## INTENSIVE LEVEL SURVEY ENTRY FORM

**HISTORIC NAME:** Louis Basile Cousino (III) Farm  
**OTHER NAMES:** Carolton Cousino Farm  
*Current owner here*

**ADDRESS:** *Address here*

### RESOURCES ON PROPERTY:

There is only one historic resource on the property today. It is the bungalow farmhouse located facing the road, surrounded on its sides and rear by the U-shaped driveway. A newer, second house is situated at the rear of the building complex scattered around the outer perimeter of the driveway. The remaining buildings within the complex were constructed after 1965 and support the agricultural function of the property: two pole sheds, four grain bins, and one green house.

<b>FUNCTION:</b>	<b>HISTORIC</b>	<b>CURRENT</b>
• Farmhouse:	Domestic/Single dwelling	Domestic/Single dwelling
• Front Machine Shed:	N/A	Agriculture/Outbuilding
• Back Machine Shed:	N/A	Agriculture/Outbuilding
• Old Grain Bin:	N/A	Agriculture/Storage
• Newer Grain Bins (2):	N/A	Agriculture/Storage
• Modified Grain Bin:	N/A	Agriculture/Storage
• Green House:	N/A	Agriculture/Horticultural facility
• New House:	N/A	Domestic/Single dwelling

**OWNERSHIP:** Private

### ARCHITECTURAL CLASSIFICATION:

#### Farmhouse:

- **Style and Massing:** Rectangular, deep, 1 ½-story, side-gable Bungalow with one-story, gable-roofed addition on east (rear) elevation. Two large gable-roofed dormers located on front and rear, respectively, of main portion of the house. Small-scale Craftsman-style detailing include large fascia board, open eaves, and small, but decorative, exposed rafter extensions.
- **Materials:** *Foundation:* original section= molded concrete block; addition= cinder block; *Walls:* aluminum siding; *Roof:* asphalt shingles.
- **Other:** Concrete block chimney on rear dormer, brick chimney on east elevation of addition. Small bay window on south elevation; small, inset porch on northeast corner.

### **Front Machine Shed:**

- **Style and Massing:** Pole barn, with asymmetric gable (saltbox-profile) roof line. Extension is along north elevation.
- **Materials:** *Foundation:* poured concrete slab, older concrete block in northeast corner; *Walls:* corrugated steel resting on two to three rows of squared timbers; *Roof:* corrugated metal.
- **Other:** Large, overhead garage doors on west and south elevations, along with pedestrian door and windows. North elevation has small windows. Open lean on east elevation, small enclosed shed-roof addition behind lean in northeast corner.

### **Back Machine Shed:**

- **Style and Massing:** Pole barn, front-gable orientation, gable roof.
- **Materials:** *Foundation:* poured concrete slab; *Walls:* steel resting on three rows of squared timbers; *Roof:* steel.
- **Other:** Large, sliding doors and openings on west and south (front) elevations, pedestrian door on west elevation. Open lean along east elevation.

### **Old Grain Bin:**

- **Style and Massing:** Cylindrical bin, approximately 12 or 13 feet tall. Capped by cone-shaped roof.
- **Materials:** *Foundation:* none visible; *Walls:* corrugated steel; *Roof:* standing seam metal.
- **Other:** Full-height door and opening on south elevation. Door marked with “Butler Mfg. Co.”

### **Newer Grain Bins (2):**

- **Style and Massing:** Cylindrical bins, approximately 20 feet tall. Capped by cone-shaped roofs.
- **Materials:** *Foundation:* concrete slab; *Walls:* corrugated steel; *Roof:* standing seam metal.
- **Other:** Openings with doors on south elevations.

### **Modified Grain Bin:**

- **Style and Massing:** Cylindrical bin, approximately 20 feet tall. Capped by cone-shaped roof.
- **Materials:** *Foundation:* concrete slab; *Walls:* corrugated steel; *Roof:* standing seam metal.
- **Other:** Large opening cut out on west elevation. Smaller openings cut on other sides.

### **Green House:**

- **Style and Massing:** Arched metal frame enclosing rectangular foot print.
- **Materials:** *Foundation:* none visible; *Walls and Roof:* heavy plastic bolted over frame.
- **Other:** Door opening on north elevation.

### **New House:**

- **Style and Massing:** Vernacular, elongated, rectangular, 1-story structure with shallow, gable roof. Side gable orientation. Square wing with shed-roof extension to rear (east elevation at north end). Front-gable, 2-story garage attached at south end of main block.
- **Materials:** *Foundation:* concrete block; *Walls:* vinyl siding; *Roof:* asphalt shingles.
- **Other:** Gable-roofed open porch in front (west elevation), patio covered with trellis attached behind the garage on east (rear) elevation. Paired, double-hung windows.

### **DESCRIPTION OF PROPERTY:**

**Legal Description:** *legal description of the entire farm.*

**Site Description:** The property consists of a portion of the original 80 acre farm purchased by the family ancestor in 1836. Today, the 21.5 acre parcel includes the site of the historic (and current) farm yard and surrounding fields and pasture land. The farm yard is defined by a large, wide U-shaped driveway. Inside the driveway is the old farmhouse surrounded by foundation plantings and a lawn punctuated with small flower beds. The house faces west toward the main road. Beginning at the south branch of the driveway as it leaves the main road, one first encounters the green house on the south side of the drive, and then a large parking area for semi-trucks. Behind the truck parking area to the southeast stands the newer house. The gravel drive expands in width at the rear of the old farmhouse as it turns toward the north. Its eastern edge is defined by the front and side lawn of the newer house and the location of a modified grain bin that now houses fuel. At the northeast end sits the back machine shed. Behind the shed to the north is a small enclosed yard containing two cows. The driveway then curves back to the west and the main road. Three grain bins and then the front machine shed are situated on the north side, respectively. Behind them is a large, fenced-in pasture. Tilled fields are located on the land to the south and east of the farmyard. Immediately to the south of the property sits a small, front-gable house with a shallow-pitch roof. It was once a portable school building owned by the family, but now sits on its own ½ acre lot.

### **HISTORY:**

#### **Dates of Construction:**

- Farmhouse: *c.* 1923, with addition *ca.* 1980, and other modifications
- Front Machine Shed: 1966, northeast room addition 1967 or 1968
- Back Machine Shed: 1977
- Old Grain Bin: 1966
- Newer Grain Bins (2): 1977
- Modified Grain Bin: 1977, later modified
- Green House: 1997
- New House: 1992
- Portable school house: purchased from Toledo 1930s, sold with ½ acre in 1960

**Dates of Construction and Demolition:**

- Log cabin built mid-19<sup>th</sup> century; removed 1890s
- Farmhouse built mid-1890s, moved from property in 1920s
- Cow Barn built before 1893, roof modified to gambrel style 1920s, demolished before *c.* 1975 (not in *c.* 1975 aerial photo)
- Horse Barn built mid-19<sup>th</sup> century? (older section of hand-hewn timbers), roof modified and extension added in 1920s, demolished mid-1970s (after *c.* 1975)
- Silo moved from Sterns farm in 1920s, blew down in *c.* 1944
- Milk House built 1920s, demolished 1972
- Corn Crib removed by late 1950s
- Pig Pen converted to migrant housing 1950s, removed *c.* 1973
- Garage built 1977, burned 2000

**Original Family Owner:**

Louis Basile (Bazil) III and Margaret Jacobs Cousineau (1836-1856) - 80 acres. Purchased from Dan B. and Elizabeth Miller.

**Subsequent Owners:**

Gilbert and Mary Knaggs Cousino (1856-1910) - 22 acres (Inherited from the Estate of Louis Basile III)

Adolph G. and Lida Dezelle Cousino (1910-1950) - 22 acres.

Inheritors of the Estate of Adolph G. Cousino (1950-1956)  
Carolton L. and Lulu McQuaid Cousino (1956-1975) - 22 acres. Half acre sold in 1960.

Current owners (1975-*c.* 1995) - 21.5 acres. Has purchased additional land, including a 34-acre portion of the original 80 acres in *c.* 1978.

Current owners and next generation (*c.* 1995-present) - 21.5 acres and additional land.

**Architect/Contractor:**

None/Family members. According to son Carolton, Adolph designed and constructed the older farmhouse with the help of his brother. However, its typical Craftsman bungalow style and massing suggest the possibility that the plans were purchased, or that the house may even be a kit house. The remaining buildings on the property were added by the current owners..

**History of Property:**

The Family is of French Canadian descent and has lived in Monroe County since the 1780s when Louis Basile Cousineau I and his wife Frances Beauregard traveled west from Montreal to Windsor and Detroit and finally to Monroe County.<sup>119</sup> The original 80-

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<sup>119</sup>Cousino Family Book, in the possession of the current owners. Numerous Cousineaus/Cousinos are

acre parcel of the current Cousino Farm was purchased by their grandson, Louis Basile III and wife Margaret Cousineau in 1836.<sup>120</sup> They were married in about 1831 and had purchased an 80 acre parcel to the immediate west in 1834. It is not known what improvements were made to the farm, but it is likely that Basil III cleared some of the land and constructed a house and barn. The location of these original structures is not known.<sup>121</sup> Little is also known about his farming practices.<sup>122</sup>

Basil III died in February of 1856. Because he left no will, the 160-acre farmland bisected by Crabb Road was divided among his widow and descendants.<sup>123</sup> His fourth son, Gilbert (1836?-sometime after 1910), inherited 22 acres on the east side of the road. Gilbert farmed the 22 acre-parcel and was able to support his growing family of nine children. He married Mary Knaggs. The family constructed a 1.5-story “log” house of squared timbers notched together in a half-dovetail pattern.<sup>124</sup> The house was a side-gable structure with a shallow-pitch gable roof and two brick chimneys, one at each gable end. The front elevation had an off-center door flanked by two double-hung windows (9/6). One additional window on the facade was located further north. The actual date of construction of the house is not known, and there remains a slight possibility that it was built by Basile Cousino rather than Gilbert Cousino. A barn depicted in the photograph of the house was also constructed sometime before 1893. It is a three-bay, side-gable barn with vertical siding. It was situated behind (east) of the current farmhouse. Board fences surrounding the house and leading to the barn were also part of the landscape during this time.

During the 1890s, Gilbert’s sons Adolph G. and Alexis constructed a new house on their father’s farm. The house was a 1.5-story, 2-bay, side-gable structure and had a rear lean attached, giving it the characteristic saltbox profile. The roof pitch of the new house was steeper than that of the old. The new house had two rooms on each floor, and the kitchen was located in a rear wing. The house was moved to a farm on Erie Road (approximately two miles to the north) during the mid-1920s after the current bungalow was completed. The timber-frame structure that preceded it was removed during the 1890s.

In 1910, Gilbert (a widower) sold the farm to his son Adolph G. for one dollar and the right to remain on the property and be taken care of for the remainder of his life. Adolph (1878-1950) had married Lida Dezelle (1881-1959) of Toledo in 1903, and already had a

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mentioned in the *History of Monroe County, Michigan*. The majority resided in Erie Township, which is one township east of Bedford Township and included the area of Bedford Township prior to 1836. Basil Cousino is mentioned as one of the inhabitants of a “new settlement called River Raisin” in Monroe County who signed a “copy of the first Application for a Priest,” dated October 15, 1788 (*History of Monroe County, Michigan* by Talcott E. Wing, ed., 1890: 517).

<sup>120</sup>Liber Z, page 94, Monroe County Register of Deeds.

<sup>121</sup>Basile III’s widow inherited the northwest quarter of the farm in 1856. This is part of the portion purchased in 1834. These two facts suggest that that the original farmstead was built on this portion of the farm.

<sup>122</sup>The 1850 Federal and 1854 State Agricultural Census records may contain some information on the farm. They were not examined in this study.

<sup>123</sup>File No. 863, Probate Court for Monroe County, May 12, 1856. A copy is in the possession of the current owners.

<sup>124</sup>The house and a barn are depicted in an 1893 photo in the possession of the current family.

number of children when he formally took possession of the farm. He continued to farm as a subsistence farmer, renting an additional 20 to 30 acres, and planting enough crops to feed his family and some livestock. Beginning in the middle of the 1910s, however, Adolph began experimenting with a sugar beet field. There was little mechanical equipment available for sugar beet farming during this time, so the beets were all planted in clusters, and later topped, harvested and loaded onto wagons by hand. Adolph also maintained five to ten acres of potatoes.

Adolph officially entered the dairy business during the 1920s when he purchased a few calves to join his two or three cows. He sold the cream to a creamery in Adrian. The dairy enterprise resulted in a changed landscape on the farmstead. The roofs of the cow barn and horse barn were modified from gable to gambrel ones; the horse barn received an addition to accommodate additional horses; a milk house was constructed out of concrete block; and a wood silo was obtained from a nearby farm. Stanchions were also added to the cow barn during this time. The west-facing barns were situated adjacent to one another along a north-south axis to the east of the farmhouse. The cow barn was located at the northern end of the axis, with the silo located to its immediate east. The horse barn, with a granary at its southern end and the milk house attached on the northern end of the west elevation, was located in the middle of the farmstead. The pig barn was located at the southern end of the axis. It was separated from the horse barn by a farm lane that continued east. Behind the pig barn was the corn crib. Adolph and Lida also constructed a new farmhouse, a 1 ½-story bungalow with a few Craftsman-style details, all typical of the period.

By the 1930s Adolph was assisted on the farm by his children, including son Carolton L. Due to a demand in infrastructure investment and low profits, the men sold their dairy herd of approximately 35 cows in 1934. The family kept horses, chickens, and pigs on the farm. They grew tomatoes, potatoes, bean, wheat, corn, hay, and sugar beets. The tomatoes and potatoes were sold as cash crops in the nearby city of Toledo, Ohio, and the sugar beets were taken to the Rossford Railroad siding (near Perrysburg, Ohio) for shipping. Adolph supplemented his farm income by working for neighbors and their farms using his team of horses. He also worked miscellaneous jobs off the farm, helping with the construction of the nearby Pier Marquette Railroad and Sterns Road. During World War II he worked for Champion Spark Plugs.

Carolton L. Cousino (b. 1906) married Lulu Barry McQuaid (b. 1912) of Toledo. He purchased the farm from the heirs (siblings) of his father's estate in 1956, although he farmed the property long before then. Like his father, he grew some potatoes, selling them at markets in Detroit and Toledo until the early 1950s. However, beginning in the late 1940s, the tomato and sugar beet enterprises became the major focus of his efforts. Migrant workers were hired to help pick tomatoes and thin the beet crop. During the 1950s, the pig pen was converted to housing for the workers. In addition, a new pole barn with worker housing and a shower was built on the north side of the house.

Beginning during the 1960s and continuing into the mid-1970s, new technology and available machinery made it possible to expand the number of acres on the farm and

produce a greater yield of cash crops. By 1969, Carlton's son quit his day job to work on the farm full-time. The additional farm acreage included the c. 1978 purchase of the 34 acre farm to the south which was owned by Noah Cousino, a cousin. The farm was part of Basil III's original 1836 purchase.

The current owners officially took over the farm operations in 1972. The farm continued to produce tomatoes, sugar beets, corn, soybeans and wheat during the early years. The year 1974, however, marked the end of the migrant worker years. Tomatoes were eliminated from the production, and the remaining crops continued to be sold as cash crops. During this time, the family owned 150 acres (some of which is in Ohio), and rented the remainder. The acres were approximately divided as follows:

- sugar beets, 100 acres
- soybeans, 400 acres
- corn, 120 acres
- wheat, 100 acres.

The shift to general cash-crop farming also left an impact on the local landscape. New features that appeared include a new pole barn built in 1977 to the rear (east) of the older pole barn. It was needed to house newer equipment, and is referred to as the "back machine shed." The older pole barn used for migrant labor housing was converted to the "front machine shed." The 19<sup>th</sup> and early 20<sup>th</sup> century dairy and horse barns, the milk house, and the pig pen were no longer needed, and therefore removed during the early and mid-1970s. The old-fashioned corn crib had already been removed during the late 1950s, and the second of two portable school houses was sold along with a half-acre parcel south of the current farmstead.

Since 1994 or 1995, the farm has been operated by a partnership made up of the current owners and the next generation. While the father continues to farm the approximately 1100 acres (in the year 2002), the son supplements the income by driving large semi-trucks delivering goods. These trucks are parked on an enlarged gravel parking lot on the farm. He also assists his wife with the operation of the green house, selling plants and annuals to the local suburban population. The green house structure itself was built in 1997.

## **SIGNIFICANCE OF PROPERTY:**

**Areas of Significance:** None (see comment below).

**Significant Dates:**

**Significant Persons:**

**Architect/Builder:**

**Significance Statement:** N/A.

Comment: Because the majority of the buildings present are from the last quarter of the 20<sup>th</sup> century, and those affiliated with the early settlement period and the subsequent 20<sup>th</sup> century dairy and general farming operation are no longer standing, the property possesses too little integrity to reflect its historic past. While little remains of the historic structures on the farm, the family possesses genealogical and other documentation as well as photographs of the farm from over the last 100 years.

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Current owners of Farm

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**DATE OF SURVEY:** April 12, 2002  
**PHOTOGRAPH NOS.:** 3: 1-14  
**SITE PLAN NO.:** SP-03

## INTENSIVE LEVEL SURVEY ENTRY FORM

**HISTORIC NAME:** William Johnston Farm  
**OTHER NAMES:** Elmhurst Fruit Farm  
*Current owners here*

**ADDRESS:** *current address here*

### RESOURCES ON PROPERTY:

The Johnston Farm consists of approximately 37 acres in the southeast quarter of the section. Historic resources located on the property today include the farmhouse, two large 19<sup>th</sup> century barns, and five gable-roofed structures from the mid-20<sup>th</sup> century that served as shelter for migrant workers. There are no new structures, although the house has received additions in 1981 and 1991, and a house was constructed in 1973 on three acres that were once part of the original 40-acre farm. The landscape is graced with scattered trees, including one large oak tree and two old mulberry trees. The hilly farmland is covered by open fields leased to a nearby farmer.

### FUNCTION OF RESOURCES:

<b>BUILDING</b>	<b>HISTORIC USE</b>	<b>CURRENT USE</b>
1. Farmhouse:	Domestic/single dwelling	Domestic/single dwelling
2. East Barn: <i>and Agriculture/processing</i>	Agriculture/animal facility	Domestic/secondary structure
3. West Barn: <i>and Domestic/single dwelling</i>	Agriculture/animal facility	Domestic/secondary structure
4. Tenant House #2	Domestic/single dwelling	Domestic/secondary structure
5. Tenant House #3:	Domestic/single dwelling	Domestic/secondary structure
6. Tenant House #5:	Domestic/single dwelling	Domestic/secondary structure
7. Tenant House #6:	Domestic/single dwelling	Domestic/secondary structure
8. Tenant House #7:	Domestic/single dwelling	Domestic/secondary structure
9. Outhouse:	Domestic/secondary structure	Vacant

**OWNERSHIP:** Private

### ARCHITECTURAL CLASSIFICATION:

#### **1. Farmhouse:**

- **Style and Massing:** Italianate, two-story irregular-shaped house with rear one-story gable-roofed wing. Details include single brackets along eaves, decorative hood moldings, front porch with wood columns, bay window.

- **Materials:** *Foundation:* fieldstone and concrete block; *Walls:* vinyl over wood frame; *Roof:* asphalt.
- **Other:**

## **2. East Barn:**

- **Style and Massing:** 1½ -story, gable roof barn, with original side-gable orientation, and no basement.
- **Materials:** *Foundation:* fieldstone rubble and poured concrete; *Walls:* asphalt (“brick” pattern) shingles over wood; *Roof:* asphalt over wood nailer boards.
- **Other:** Concrete loading dock added on north elevation, entry added to east gable end. Housed granary in southwest corner.

## **3. West Barn:**

- **Style and Massing:** Elongated, 1½ -story, gable roof barn, with side-gable orientation, and no basement.
- **Materials:** *Foundation:* stone; *Walls:* asphalt (“brick” pattern) shingles over wood; *Roof:* asphalt.
- **Other:** East end modified with garage door entry on north elevation. Once housed tenant dwelling in middle (identified as Tenant House #1).

## **4. Tenant House #2:**

- **Style and Massing:** Narrow, 1-story, gable-front structure with slightly taller, one-story unit attached at rear (west end).
- **Materials:** *Foundation:* poured concrete; *Walls:* asphalt (“brick” pattern) shingles; *Roof:* asphalt.
- **Other:** Small gable-roof hood supported on brackets over stoop entry, concrete block chimney, exposed rafter ends in eaves.

## **5. Tenant House #3:**

- **Style and Massing:** Narrow, 1-story, gable-front structure with full-width side wing.
- **Materials:** *Foundation:* poured concrete; *Walls:* T-111 siding material; *Roof:* asphalt over boards.
- **Other:** Small gable-roof hood supported on brackets over stoop entry, newer single sash windows, exposed rafter ends in eaves.

## **6. Tenant House #5 (“Potting shed”):**

- **Style and Massing:** Narrow, 1-story, gable-front structure.
- **Materials:** *Foundation:* poured concrete; *Walls:* asphalt siding; *Roof:* asphalt.
- **Other:** Wood corner boards, concrete block chimney, 4-light single window sashes, door at each gable end, exposed rafter ends in eaves.

## **7. Tenant House #6 (“Brooder House”):**

- **Style and Massing:** Narrow, 1-story, gable-front structure.
- **Materials:** *Foundation:* poured concrete slab; *Walls:* horizontal wide boards covered with tar paper; *Roof:* metal.

- **Other:** Concrete pad at gable entry, single sash 4-light windows at west gable end.

**8. Tenant House #7 (“Shower Cabin”):**

- **Style and Massing:** Narrow, 1-story, gable-front structure.
- **Materials:** *Foundation:* concrete; *Walls:* asphalt shingles in brick and stone pattern over vertical boards; *Roof:* asphalt over nailer boards.
- **Other:** Corner boards, exposed rafter ends in eaves.

**9. Outhouse:**

- **Style and Massing:** Small, one-story, frame structure with side-gable roof orientation.
- **Materials:** *Foundation:* None; *Walls:* wood drop siding; *Roof:* tar paper over plywood.
- **Other:** Corner boards, frieze boards, rounded molding over window openings, 4-panel door.

**DESCRIPTION OF PROPERTY:**

The farmstead is situated approximately in the middle of the eastern boundary of the rectangular parcel. The parcel is bordered on the east and on the south by public roads, and on the west and north boundaries by adjacent properties. The farmstead is surrounded primarily by rolling open fields. Wood lots are visible along the western (rear), northern and southern boundaries of the property. The farmstead consists of a V-shaped driveway pointing westward from the road. The house is situated along the northern branch of the driveway. The two barns are clustered along the southern branch, and the migrant worker houses are situated in linear fashion to the west behind the barn complex and the house. A large garden is located in the open area surrounded by the buildings. A relatively large, old oak tree is located where the two driveway branches join. Several older weeping mulberry trees grow on the lawn between the main house and the driveway.

**HISTORY:**

**Dates of Building Construction:**

1. Farmhouse: 1870, kitchen porch enclosed 1942, north porch enclosed 1979 (for bathrooms), additions in 1981 and 1991
2. East Barn: c. 1870, loading dock added during early 1940s
3. West Barn: c. 1870
4. Tenant House #2: 1943, built early 1940s)
5. Tenant House #3: 1943, side wing added 1980
6. Tenant House #5: early 1940s
7. Tenant House #6: former Brooder House, moved from nearby McCabe (formerly Earl Merlau) Farm in 1982
8. Tenant House #7: between 1950 and 1955

9. Outhouse: late 19<sup>th</sup> or early 20<sup>th</sup> century, moved to current location  
 ( New House: 1973, sold in 1991 with 3 acres of land)

*Buildings No Longer Standing*

- Corn crib: removed mid-1930s
- Wood shed: built 1870s or 1880s, connected to house during 1940s, removed in 1991 (replaced by house addition). A second one located on north side of house (over bulkhead entry to basement) was removed 1978 or 1979.
- Chicken coop: dates not known
- Smoke house: removed mid-1930s
- Windmill/Well house: built before 1880, removed mid-1950s (possibly 1954)
- original Outhouse: removed by mid-1930s
- Tenant House #4: burned in ?, former well house
- Tenant House #8: trailer, removed
- “Old House”: unknown, moved onto property c. 1900; burned, 1973

**Original Owner:** William Wilshire and Mary Johnston, 1868-1906

**Subsequent Owners:** John and Lily Johnston, 1906-1930  
 Richard and Opal (Johnston) Barden, 1930-1973  
 Current owners, 1973-present

**Architect/Contractor:** Not known/William Johnston and family are possible builders of the house.

**History of Property:**

William Wilshire Johnston and his wife Mary (Overhiser) Johnston purchased 160 acres from a group of New York investors in 1868.<sup>125</sup> The price for the land was \$1040, or \$6.50 per acre. The Johnstons had immigrated to Michigan from Indiana in 1861, although both the Johnston and the Overhiser families had moved west from New York in the preceding generation. Family oral history suggests that the family moved onto the farm in the fall of 1864.<sup>126</sup> It is not known in what kind of structure the family lived, but by 1870 William had cleared land and was prosperous enough to build a full, two-story house in the Italianate architectural style. The house displays single brackets in the eaves, and has decorative window and door surrounds. William also constructed two barns during this time. He raised a little bit of everything—both livestock and plants, which enabled him, like his contemporaries, to remain self-sufficient. William was also able to contribute to his community. He helped construct the first church of his congregation in approximately 1880.<sup>127</sup>

<sup>125</sup>Allegan County Register of Deeds, Liber 4, pages 401-402.

<sup>126</sup>Interview with current property owner, great-grandson of William W. Johnston, November 14, 2001, Casco Township, Allegan County, Michigan, by the author.

<sup>127</sup>According to the current owner, the Church burned in 1906, and was replaced by a second structure,

In June 1880, William and Mary's son, John Calvin Johnston, inherited 40 acres of the original farm.<sup>128</sup> John was approximately ten years old when his family moved onto the farm. He married Lily Belle Vance of Crawfordville, Indiana in 1882. Together they had five children, three of whom died in 1889 of diphtheria. John and his family lived in South Haven during the winter months, where he operated a hardware store. A caretaker lived on the farm. During the summers the family worked the farm. It was mostly a general subsistence farming operation. John kept a few milk cows and horses in the West Barn, and stored hay in the East barn. He had chickens (although it is not known where the chicken coop was kept), a pig pen in the West barn, and a corn crib situated on the north side of the West barn. A brick smoke house was constructed to the west of the house. John also planted the first group of apple trees ("Spy") at the rear of the farm. He formalized the shift from a subsistence operation to a fruit farm operation when he named the farm the "Bonne Foi Fruit Farm."

John and Lily Johnston's youngest daughter, Opal Elaine, was born in 1899. She married Richard A. Barden in 1922, and moved with him to the Munger farm nearby. The couple returned to the Johnston Farm in approximately 1928, four years after the death of John C. His widow, Lily, continued to live in South Haven until her death in 1941.

Opal and Richard Barden were instrumental in converting the Johnston farm from a subsistence farm into a small, but successful, fruit operation. They purchased additional land, including the Munger Farm (40 acres) from Richard's father sometime before 1941, and another 40 acre parcel situated adjacent to the Munger Farm in 1944. The total 120 acre farm was dedicated to raising fruit, and renamed "Elmhurst Fruit Farm" in honor of an elm that once stood on the front lawn.<sup>129</sup> The family raised apples, pears, peaches, and cherries.

In addition to land acquisition and tree planting, the buildings on the Johnston farm were modified to accommodate the new line of business. The East barn was converted to a sorting and packaging shed. It received a concrete loading dock which enabled trucks to pull up directly to the barn. On the inside, it housed a mechanical grader, conveyor belt, boxes and space for packaging the fruit. It also had a designated room for storing chemicals. The West barn was altered on the inside to provide a small, furnished apartment for hired labor. Finally, the remaining smaller outbuildings from William and John C.'s era, which were no longer needed, were removed. These included the corn crib, the chicken coop, and the smoke house.

Migrant labor became a significant component of the Barden's Fruit operation. From the late 1930s to the mid-1950s, the family constructed up to eight dwelling units to house the workers and their families. The units were typically one story tall, one room wide,

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which was removed in 1973. A stained glass window from the second structure was incorporated in the Johnston-Barden House addition from 1991 (interview by the author, November 14, 2002, Casco Township, Allegan County, Michigan).

<sup>128</sup>Allegan County Register of Deeds, Liber 82, page 256.

<sup>129</sup>The tree succumbed to Dutch Elm disease in 1963.

and several rooms deep. The eighth one was a parked trailer. The buildings were constructed along a row at the west end of the farm yard. A small outhouse was moved in to serve the building's occupants, since the buildings had no running water. Most of the migrants during this time and up through the 1960s were white families from Missouri, Arkansas, Kentucky, Tennessee, and Alabama. They lived on the farm from June to about October 20<sup>th</sup>. As the season progressed, they assisted with the picking of cherries and blueberries, thinning of the peaches, and then picking apples. During WWII, prisoners of war from Germany helped with the fruit harvest. The prisoners did not live on the farm, instead returning to their nearby compound each evening. Local labor was also occasionally used.

Richard A. Barden passed away unexpectedly from heart problems in 1945. His son, although only 15 years of age, continued to farm with the help of Opal and up to 25 hired hands. Apple varieties harvested during this time included Wolf River, Dutchess, Wealthy, Snow, Jonathan, Red Delicious, Yellow Delicious, and Spy. Peach varieties included Red Haven, Red Skin, Kal Haven, Hale Haven, and Elberta. Montmorency cherries and Bartlett and Bosc pears were also harvested. The son married in 1960, and moved into an older house that had been moved onto the farm about 1900 to house the caretaker. He farmed until 1967, when he went to work as a chemical salesman for the Ford Machinery Corporation (FMC) and later with the "Growers Service" (United Ag Products), both situated near Fennville. The fruit farming was no longer self-sustaining. His wife returned to work as a school teacher, beginning in 1972. The orchards were leased from 1967 to 1970, and then the owner elected to lease the land for cash crop farming.

Since 1970, the land has been cleared of most fruit trees and is tilled for corn and soybeans. The land is rented to a local farmer, who does not use any of the buildings on the farm. Two of the migrant worker's houses have been lost, one has been moved, and one has received an addition. Otherwise, the farm buildings remain the same, and serve as storage units for the family. The current owners moved into the original farmhouse in 1980, and now manage a Bed and Breakfast operation.

## **SIGNIFICANCE OF PROPERTY:**

**Areas of Significance:** Agriculture

**Significant Dates:** 1870-1970,  
marking the period of active development of the farm

**Significant Persons:**

**Architect/Builder:**

**Significance Statement:**

The Johnston-Barden Farm is a fine example of a farmstead that was converted from a subsistence farm typical of the late 19<sup>th</sup> century to a small fruit operation by World War II. Many farms in the area underwent a similar change in agricultural focus. Buildings from both periods of this farm's history remain. The period of significance begins in 1870, when William Johnston constructed the house and two large barns on the property. Fruit farming began slowly during the early 20<sup>th</sup> century, but was actively pursued by the late 1930s and early 1940s. The shift in farming operation resulted in the construction of migrant worker housing and the modification of both barns. The period ends in 1970, with the cessation of fruit farming. The existing buildings all contribute significantly to the understanding of the evolution of the farm from a subsistence operation to one specializing in fruit production.

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Current owners

2001 Owners of Elmhurst Farm, Casco Township, Michigan. Interview by the author, 14 November 2001, Casco Township. The owners possess aerial and other photographs dated *ca.* 1880s, 1905, 1957, 1965, 1984 in their collection.

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**DATE OF SURVEY: November 14, 2001**

**PHOTOGRAPH NOS.: 8: 1-26**

**SITE PLAN NO.: SP-08**



## INTENSIVE LEVEL SURVEY ENTRY FORM

**HISTORIC NAME:** William Phelps Farm  
**OTHER NAMES:** *part of the Jochim C. "Joe" Schroeder Farm*  
*Current owner here*

**ADDRESS:** *address here*

### RESOURCES ON PROPERTY:

This farm currently consists of approximately 80 acres, and is the sister farm to the Maple Hurst Farm situated to the immediate south. Historic resources remaining on this property today include the farmhouse, several older trees, and the depression in the ground of the former pond site. A newer garage is also situated on the property. The land consists of open fields farmed by a neighbor.

### FUNCTION OF RESOURCES:

BUILDING	HISTORIC USE	CURRENT USE
• Farmhouse:	Domestic/single dwelling	Domestic/single dwelling
• Garage:	N/A	Domestic/secondary structure

**OWNERSHIP:** Private

### ARCHITECTURAL CLASSIFICATION:

#### Farmhouse:

- **Style and Massing:** Italianate, two-story L-shaped house with rear one-story gable-roofed wing tucked in "L". Three porches situated on front (east), north, and west (rear) elevations.
- **Materials:** *Foundation:* fieldstone; *Walls:* brick over wood frame; *Roof:* asphalt.
- **Other:** Front and side porches have turned columns and spindles typical of the mid-19<sup>th</sup> century period.

#### Garage:

- **Style and Massing:** 2-car, one-story, rectangular-shaped structure with shallow-pitch front-gable roof
- **Materials:** *Foundation:* poured concrete; *Walls:* vinyl; *Roof:* asphalt.
- **Other:** 2 car garage

## **DESCRIPTION OF PROPERTY:**

Legal Description: *description here.*

### Site Description:

The farmstead is situated approximately in the middle of the east end of the rectangular parcel. The parcel is bordered at this end by Wheaton Road. The farmstead is surrounded primarily by open fields. Wood lots are located along the rear (western) end of the property. The farmstead consists of a short, circular driveway leading to the house and garage. To the north of the house stand several mature trees on a grassy field, and the land dips down to where a pond once existed. The plowed fields are situated to the west of the house and garage, and the neighbor farm is located to the south of the farmstead.

## **HISTORY:**

### Dates of Construction:

- Farmhouse: 1876
- Garage: 1982

### Original Owner:

William Phelps (Section 14), 1876-1895; and  
Daniel Phelps (Section 11), 1873-1912

### Subsequent Owners:

Daniel J. Phelps, 1895-1912  
Samantha Phelps Green, 1912-1928  
Jochim "Joe" and Nina Green Schroeder, 1928-1976  
Estate of J. C. Schroeder, 1976-1977  
Current owners, 1977-present

### Architect/Contractor:

Not known/William Phelps possibly built the house

### History of Property:

Land that would become the Phelps-Schroeder Farm was first purchased from the United States government in 1837, when Sizer L. Stoddard and William Constable and his partner, Edward McVickar, obtained the patent deeds to the land in Sections 11 and 14, respectively.

Buildings constructed on the property, but no longer standing today, include:

- Barn, 1880s
- Corn Crib, 1880s
- Chicken Coop, 1880s
- Wood Shed, before 1873, modified 1880s
- Garage, 1880s
- Smoke House, 1880s

The current owner, son of Jochim Schroeder, recalls the layout of the farm during the 1920s and 1930s. The farmhouse was situated closest to the road. Immediately behind the house were the secondary structures supporting the domestic function of the farm: woodshed, garage, and smokehouse. The farm outbuildings were generally arranged on a linear array leading from the garage behind the house northward. First came the chicken coop, then a corn crib, pond, and finally, the barn. The barn was used to house sheep, whereas the remaining outbuildings were vacant. The farmhouse itself was rented to hired help or served whatever function needed. At one time, even wheat was stored in the formal parlor.

The Schroeders moved from their farm to East Lansing in 1937. For a brief time they rented the farm, including both houses, to families who farmed the land. Later, the Phelps House was rented to non-farmers, or stood vacant. The result was that many of the farm outbuildings on the Phelps Farm were no longer needed and removed. As suggested by the Rural Property Inventory of 1939, the smokehouse, woodshed, chicken coop, and corn crib had already been removed. The current owner remembers the remaining buildings, except the house, being removed by 1940.

#### **SIGNIFICANCE OF PROPERTY:**

**Areas of Significance:**            Architecture

**Significant Dates:**            1876

**Significant Persons:**

**Architect/Builder:**

**Significance Statement:**

Because of the removal of all buildings on the property associated with farming, this property retains little integrity with respect agriculture. However, the farmhouse is an excellent example of the Italianate architectural style. The wide frieze board decorated with dental molding, the arched window openings, the relatively flat hip roof, and the use of brick in an area where most houses are of wood, are all typical features of the architectural style.

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**DATE OF SURVEY:** April 8, 2001

**PHOTOGRAPH NOS.:** 13: 1-6

**SITE PLAN NO.:** SP-13

## INTENSIVE LEVEL SURVEY ENTRY FORM

**HISTORIC NAME:** Valentine and Catherine Diehl Farm  
**OTHER NAMES:** Jacob and Laura Diehl Farm  
Floyd and Hyacinth Diehl Farm  
*Current owner here*

**ADDRESS:** *current address here*

### RESOURCES ON PROPERTY:

<b>FUNCTION:</b>	<b>HISTORIC</b>	<b>CURRENT</b>
1. Farmhouse:	Domestic/single dwelling	Domestic/single dwelling
2. Garage:	Domestic/secondary structure	
3. Granary:	Agriculture/storage	Agriculture/outbuilding
4. Granary, new:	Agriculture/storage	Agriculture/storage
5. Large Silo:	Agriculture/storage	Agriculture/storage
6. Barn Extension/lean:	Agriculture/outbuilding and animal facility	Agriculture/outbuilding
7. Barn:	Agriculture/animal facility	Agriculture/storage
8. Milk House:	Agriculture/processing	Agriculture/outbuilding
9. Silo (east):	Agriculture/storage	Agriculture/storage
10. Silo (west):	Agriculture/storage	Agriculture/storage
11. Equipment Garage:	Agriculture/outbuilding	Agriculture/outbuilding
12. Old Milk House:	Agriculture/processing	Agriculture/outbuilding
13. Tool/Equipment Shed:	N/A	Agriculture/outbuilding
14. Brooder House	Agriculture/animal facility	Agriculture/outbuilding
15. Corn Crib:	Agriculture/storage	Agriculture/storage

**OWNERSHIP:** Private

### ARCHITECTURAL CLASSIFICATION:

#### 1. Farmhouse:

- **Style and Massing:** Vernacular, 1 ½-story, Upright and Wing structure with gable roofs; rear addition with a one-story gable-roofed wing on north (rear) elevation.
- **Materials:** *Foundation:* fieldstone and poured concrete; *Walls:* Aluminum siding; *Roof:* asphalt shingles.
- **Other:** Large picture window added 1952, front porch enclosed 1954.

## 2. Garage:

- **Style and Massing:** Rectangular building with asymmetric gable roof, front-gable orientation.
- **Materials:** *Foundation:* poured concrete; *Walls:* horizontal drop siding, vertical wood boards; *Roof:* asphalt.
- **Other:** Building extended to the south and east to accommodate larger vehicles. Garage door on south elevation, small single-sash windows in gable ends.

## 3. Granary:

- **Style and Massing:** Rectangular 1½-story side-gable building with one-story lean at rear (north elevation) giving building a saltbox profile.
- **Materials:** *Foundation:* fieldstone and poured concrete; *Walls:* board and batten; *Roof:* asphalt and corrugated metal.
- **Other:** 6/6 double hung windows in taller portion.

## 4. Granary, New:

- **Style and Massing:** Rectangular building with Quonset-hut like roof and sloping walls on north (rear) elevation. Side-gable orientation.
- **Materials:** *Foundation:* poured concrete; *Walls:* corrugated metal; *Roof:* corrugated metal.
- **Other:**

## 5. Large Silo:

- **Style and Massing:** Tall, cap-less cylinder.
- **Materials:** *Foundation:* poured concrete; *Walls:* poured concrete; *Roof:* N/A.
- **Other:** “The Smith Silo, Oxford”

## 6. Barn Extension/Lean:

- **Style and Massing:** Vernacular, 1½ story, pole construction (?), shed roof, extends beyond barn to north, shelter with poured concrete floor to west.
- **Materials:** *Foundation:* poured concrete (?); *Walls:* corrugated steel; *Roof:* ?
- **Other:** Large doors on north elevation, three, relatively large buttresses of concrete on north foundation; drainage pipes on north and south (gable end) elevations. Small square windows in gables, one door on south elevation.

## 7. Barn:

- **Style and Massing:** Vernacular, rectangular footprint, 1½ story, with gambrel roof.
- **Materials:** *Foundation:* poured concrete; *Walls:* tongue and groove vertical boards (5 ¼” wide); *Roof:* corrugated metal.
- **Other:** Wide openings on side elevations, pedestrian-sized door opening on south gable end. South half of barn was used for dairy operation (painted white on interior, stanchions); north half of barn was used for hay storage. Side elevations have series of small frieze windows under eaves.

### **8. Milk House:**

- **Style and Massing:** Vernacular, almost square footprint, 1-story with gable roof attached to east elevation of barn. Side gable orientation.
- **Materials:** *Foundation:* concrete ?; *Walls:* horizontal drop siding; *Roof:* grand rib steel.
- **Other:** Sliding track door on south elevation.

### **9. Silo, east:**

- **Style and Massing:** Tall cylindrical mass with dome.
- **Materials:** *Foundation:* concrete; *Walls:* concrete with vertical ribs; *Roof:* metal.
- **Other:** Small glass window openings at the top.

### **10. Silo, west:**

- **Style and Massing:** Tall, wider cylindrical mass with no cap.
- **Materials:** *Foundation:* concrete; *Walls:* concrete; *Roof:* N/A.
- **Other:**

### **11. Equipment Garage:**

- **Style and Massing:** Vernacular, square footprint, 1-story with shallow gable roof. Front gable orientation. Pole construction.
- **Materials:** *Foundation:* none (on wood poles); *Walls:* corrugated metal; *Roof:* corrugated metal.
- **Other:** Sliding door openings on west elevation, two windows (6/1 double hung) on east elevation. Exposed rafters in eaves.

### **12. Old Milk House:**

- **Style and Massing:** Two small, rectangular buildings with gable roofs, attached to one another. East building narrower than west building, front gable orientation.
- **Materials:** *Foundation:* poured concrete; *Walls:* clapboard and horizontal drop siding with corner boards; *Roof:* asphalt over nailer boards.
- **Other:** Former well house

### **13. Tool/Equipment Shed:**

- **Style and Massing:** Two, connected, large, rectangular pole barns with gable roofs. Side gable orientation.
- **Materials:** *Foundation:* None; *Walls:* corrugated metal with horizontal, squared wood timbers at base; *Roof:* corrugated metal.
- **Other:** Openings on south elevation.

### **14. Brooder House:**

- **Style and Massing:** One-story, vernacular building with gable roof, rectangular footprint, side gable orientation.
- **Materials:** *Foundation:* concrete base; *Walls:* corrugated metal; *Roof:* asphalt.
- **Other:** Two 4/4 double hung windows on south elevation, 5-panel door at west end.



### **15. Corn Crib:**

- **Style and Massing:** One-story, narrow, elongated rectangular footprint, shed roof. Framing of wood posts.
- **Materials:** *Foundation:* none; *Walls:* farm fencing on wood post framing; *Roof:* corrugated metal.
- **Other:** Construction material matches fence posts around barnyard to east of barn.

### **DESCRIPTION OF PROPERTY:**

Legal Description: *legal description here*

Site Description: The property consists mostly of gently rolling tilled fields outlined by fence rows and wood lots. The farmstead itself lies relatively far back from the road, near the line separating the northwest and southwest quarters of the southeast quarter of Section 21. Mature walnuts line the driveway as it approaches the farmstead. Mature maple trees on front lawn of house.

### **HISTORY:**

#### **Dates of Construction:**

1. Farmhouse: 1878, with exterior modifications in 1880s, 1907, 1954
2. Garage: c. 1918, enlarged c. 1936
3. Granary: 1860s or 1870s, rear burned 1925 and rebuilt c. 1932, new foundation in the 1940s
4. Granary, new: c. 1942
5. Large Silo: 1963
6. Barn Extension/lean: 1959, feed bunk added 1963
7. Barn: 1925
8. Milk House: 1958
9. Silo (east): c. 1948
10. Silo (west): 1925
11. Equipment Garage: 1964
12. Old Milk House: c. 1920 as well house, converted to milk house c. 1945
13. Tool/Equipment Shed: 1964 (west end), 1966 (east end)
14. Brooder House: 1958, moved to current location 1964
15. Corn Crib: 1965

#### **Dates of Construction and Demolition:**

- Log cabin built mid-19<sup>th</sup> century; removed before 1925
- Original L-shaped barn built c. 1870; destroyed by fire in 1925
- Chicken House built c. 1925, removed ca. 1964
- Tool Shed built before 1900, removed 1966 or 1967 (had windmill on top of it to grind feed, later used for grain storage)
- Corn crib built 1965, removed after 1992
- Corn crib, old built 1946 or 1947, removed 1965

**Original Family Owner:** Valentine and Catherine Diehl (1866-1897) - 40 acres, expanded to 200 acres by 1889

**Subsequent Owners:** Jacob and Laura Diehl (1897-1953) - 120 acres  
(Laura purchased an additional 80 acres in 1901)  
Floyd and Hyacinth Diehl (1953-1991) - 120 acres,  
expanded to 220 acres after 1974  
Current owner (1992-present) - 124.9 acres

**Architect/Contractor:** Generally not known. The barn was built by George Stacey in 1925.

### **History of Property:**

#### *The First Generation: Valentine and Catherine Diehl, 1866-1897*

The Diehl Farm history begins in late 1866 when Valentine (1831-1897) and Catherine Schmitt (1832-1897) Diehl purchased a 40 acre piece of land northwest of the hamlet of Davison from Sylvester Haynes (or Hayn) for \$900.<sup>130</sup> The land was accessed by an old Indian trail running northwest from Davison. The Diehls constructed a log cabin on a topographical high point on the property near the trail.

Valentine and Catherine Diehl were married in 1852, shortly after they emigrated from Hesse-Darmstadt in Germany with Catherine's sister Eva. The couple lived in the towns of Lockport and Clarence, both near Niagara, New York before immigrating to Michigan in 1863. It is not known why they moved west, but it seems likely that the economic opportunity that lured many settlers from New York to Michigan also influenced the Diehl family. The Diehls first worked for C. C. Pierson in Atlas, Michigan, and then lived on a farm near Goodrich for three years. Finally, in early 1867, they moved on to their own farm of 40 acres in Section 33 of Richfield Township, Davison, Michigan. By the time the Diehls settled on their own farm, they had had eight children. Three more children were born on the farm. Two children died at a young age, but the remaining ones grew to adulthood and married.

Little is known about the appearance of the farm during the 1860s. Family history states that the Diehls first constructed a log cabin, implying that the previous owner, Sylvester Hayn, did not have a residential structure on the land. Mr. Hayn did have a house and barn on an 80 acre parcel to the north of the Diehl parcel. By the time of the 1870 census, the Diehl family seems to have become quite settled. Twenty-five of the 40 acre parcel was cleared for tilling; the remaining fifteen acres were wooded. The family owned a collection of livestock, including two horses, two milk cows, one other cattle, twenty sheep, and six pigs. Poultry was not enumerated in this census. The presence of horses and cows suggests that the family most likely had some form of livestock shelter,

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<sup>130</sup>The Centennial Farm application lists the year as 1862. The 1866 date is taken from a family history, titled "Genealogy of My Parents," written by Joe E. Diehl, page "B."

such as a barn, by this time. The family harvested winter wheat, corn, oats, barley, potatoes, and hay and seed clover during the census year. They also produced butter and wool. In general, with the exception of barley, these farm products were produced on most farms in the area. Items grown on a few of the surrounding farms but not on the Diehl farm included orchard products, maple sugar, buckwheat, and spring wheat.

During the 1870s, the Diehl family expanded their farm operation. In 1871 they purchased the forty acres to the immediate south of their land from Nicholes Magle for \$100, providing direct access to the public road. The result was that the buildings on the farm were now situated well back from the road, and were accessed *via* a relatively long driveway. This “settlement” pattern is unlike the usual arrangement of farmhouse and outbuildings situated relatively close to the road. In 1881, the family purchased another 40 acres to the west of the southern half of their land; and they purchased the 40 acres west of the northern half of their land by 1889. In addition, they added a 40 acre strip along the eastern boundary of the farm. Thus, by 1889, the farm consisted of 200 acres, all in the southern half of Section 33 of Richfield Township.

The farm was well established by this time. The parents, Valentine and Catherine, were assisted on the farm by their oldest son, John, age 15, and by their older daughters who were 12 and 14. All children attended school as well. In 1878 the family turned their attention to the construction of a modern house. The Upright and Wing house, constructed of timber frame and covered with wood siding, was built on a fieldstone foundation in the center of the main 80-acre parcel. The Upright portion is 1 ½- stories tall and two bays wide. The one-story side wing included the front door, flanked by windows on each side and sheltered by a modest, hip-roofed porch. The wing extended beyond the porch and included an additional window. A third, one-story wing was attached to the rear of the side wing, possibly in the early 1880s. The window openings were flanked by shutters and crowned by a pedimented board with drip cap. The house had corner boards with small, decorative trim at the top, as well as a relatively wide frieze with extra molding strip on top. The Upright portion and each wing were capped by decorative brick chimneys. Also constructed by this time, if not earlier, was the old granary. The side-gable structure, with its 6-over-6 double hung windows, window trim peaks, and fieldstone foundation shares many architectural details of the house. It actually resembles a small, vernacular house of the mid-19<sup>th</sup> century.

By the 1880 Agricultural census, the older Diehl children were no longer living at home. The younger ones attended school, and Valentine, at age 50, continued to maintain his then 80 acre farm. The land was divided into 50 acres of tilled fields and 30 acres of wood land. Of the 50 acres, 12 were mown for hay. Valentine also harvested corn (150 bushels/6 acres), oats (300 bushels/6 acres), and wheat (227 bushels/12 acres) in this year (1879). In addition, the family had an apple orchard consisting of twenty bearing trees. Livestock kept on the Diehl farm in 1880 included five horses, three milk cows, nine additional cattle, 17 sheep, five pigs, and 25 poultry. The animals were raised for food and for sale. In 1879, for example, Valentine sold 36 sheep and 2 cattle. Additional livestock products obtained included 300 pounds of butter, 100 dozen eggs, and 17

fleece. Thus, the farm continued to operate as a thriving subsistence farm with a small amount of surplus sold to the public.

Little is known of what was conducted on the farm during the 1890s. By this time Valentine Diehl had and continued to provide money and other materials to his children to help establish them on their own farms. Valentine and Catherine themselves lived in the farmhouse to the west of the one they constructed in 1878. It is known that Jacob, the youngest child of Valentine and Catherine, was assisting his father on the farm during this time.

### *The Second Generation: Jacob and Laura Ida Diehl, 1897-1938*

The period of occupation by the second generation of the Diehl family can be divided into two chapters. In the early years (1897 to mid-1920s), the farm was operated by Jacob (1874-1920) Diehl and his wife, Laura Ida Bohnsack (c. 1879-1973). Laura was born in Oregon Township, Lapeer County. The couple was married in March 1901 and raised four boys. They farmed at 120 acres. Sometime between 1901 and 1930 Laura purchased an additional 80 acres to the north of the farm. That parcel of land had its own barn and house and had been owned by Sylvester Hayn when Valentine Diehl first arrived in Davison. The Diehl family continued to use the barn.

Jacob Diehl kept seven or eight cows which he milked by hand. He also kept sheep and pigs, and raised wheat, corn, and oats. The oats was used as feed for the horses, but a surplus would be sold for cash. Other items sold for cash included wool, butter, and eggs. The latter two were sold by Laura in Flint. Laura also kept geese. The older animals were sold in Detroit. Jacob or his father, Valentine, planted pear and cherry trees in front of the house. An apple orchard was situated to the north of the house, where a wheat field is today. A row of walnut trees was planted along the lane in from the public road.

The farmstead during this time was also modified. It is not known when the barn was constructed, but it had a gambrel roof covered with wood shingles, suggesting that it was either built toward the end of the 19<sup>th</sup> century or possibly as late as the early 20<sup>th</sup> century; or it was built earlier by Valentine Diehl and then the roof line was modified at a later date. The structure was relatively tall, and had an “L” shaped footprint. The inside of the “L” faced to the southeast. A wood silo was located near the north elevation of the barn, and was probably constructed around the turn of the century or in the early 20<sup>th</sup> century. It is known that the farmhouse received an addition in 1907 as the Diehl family grew. The perimeter of the side wing was extended six feet, changing the footprint of the main Upright and Wing house from a “T” shape to a square. The rear wing was maintained. A garage was built in about 1918.<sup>131</sup> A well house was constructed adjacent to the house c. 1920.<sup>132</sup> The old log cabin was used for storing ice until it was removed sometime before

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<sup>131</sup>The Rural Property Inventory lists the date of construction as 1928. The garage has clearly been enlarged two times—first to make it wider and then to make it longer.

<sup>132</sup>The Rural Property Inventory lists the date of construction as 1900. As seen in numerous other studies, the dates supplied by the Rural Property Inventory are often do not match with current family history. For

1925. These modifications suggest the use of a car as well as changes in the handling of the fresh milk. The changes mark the early stages of the transition from an independent subsistence farm of the 19<sup>th</sup> century to a dairy farm that by necessity engaged with the outside world in the 20<sup>th</sup> century.

The second chapter begins in the 1920s, after Jacob's untimely death on November 18, 1920 and a disastrous fire in 1925. The cause of the fire was never determined, but it destroyed the L-shaped barn, its leans, an adjacent wood silo, and the rear of the old granary. No livestock was lost, and they were temporarily housed in the barn on Laura's 80 acre parcel to the north. Soon after the fire, the Diehl family commissioned the construction of a new barn with silo. The builder was George Stacey, assisted by Laura's son, Floyd Diehl. The timber came from the trees on the wood lot. Wood for the siding was hauled to Flint to be planed into tongue-and-groove boards. A new chicken house was also constructed at this time.

In 1928 Laura constructed a small house on the two acres in the southeast corner of the main portion of the farm. The house was built for her son Floyd so that he could live and work on the farm. He was the only one of her four boys to pursue farming. Floyd had quit school at age 13 after his father's death to help out on the farm. The family was also assisted by a hired man sometime during Floyd's childhood. The man made the old granary his home. The granary itself received a new rear addition in about 1932, replacing the portion that had been destroyed in the 1925 fire. Finally, the garage was expanded in about 1936, to allow for larger cars.

According to the Rural Property Inventory conducted in 1936, the land consisted of 80 acres (the east 40 acres was possibly not included in this survey). 73.5 of the 80 acres were tilled fields, and 5.5 consisted of a poor quality wood lot of mixed hard woods. The farmstead was situated in the middle of the rectangular parcel, and the four surrounding fields were separated from each other by a farm lane running north-south up the middle of the parcel, and by a boundary running east-west, meeting at the farmstead in the center. The wood lot was situated along the northern end of the western boundary, parallel to the northwestern field. The southeast field consisted of 25 acres, the southwest field was 19 acres, the northwest field was 12.25 acres, and the northeast field was 17.5 acres. Buildings present during this time included the house, a garage, a general purpose barn, silo, granary, hen house, and milk house. All these buildings remain standing today.

The period ends in 1938, when Floyd, representing the third generation of the family, actively took charge of the farm operations, although he did not obtain ownership of the land until about 1953.

### *The Third Generation: Floyd and Hyacinth Diehl, 1938-1991*

Floyd (1907-1991) married Hyacinth Mathews (b. 1908) in 1928, the same year that the small house was constructed by Laura. The couple had met at the local Grange, where

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this study, dates supplied by the family are given precedence.

both were active members. The couple and their two sons moved into the farmhouse in 1938.

Floyd operated the farm as a dairy farm from 1938 until about 1980 when the dairy herd was sold. The farm sold the milk and chickens in Lapeer. Later the milk was sold in cans on the farm. In about 1960, the farm installed a bulk tank for milk storage. In addition to operating the dairy, the farm raised 30 to 40 sheep, pigs, a few beef cattle, and up to 300 chickens. Hyacinth followed her mother-in-law's footsteps and kept an egg route. Crops raised included corn, oats, and wheat. Hay was also grown. A 1950s aerial photograph shows pasture land to the north of the house, and corn growing on the field to the west of the house. The barn yard between the barn and old tool shed was fenced. A garden was planted south of the maple trees in front of the house. According to Hyacinth Diehl, who maintained the garden, the garden included tomatoes, green beans, cucumbers, sweet corn, and beets, among other things. The garden produce was used for feeding the family, and not for selling produce to the public. Fruit trees and an orchard were also part of the farm's scene.

The Diehls made a steady set of improvements to the infrastructure on the farm. Floyd was assisted by his son, who returned to the farm from the service in 1953. During the 1940s, they added a new granary, a corn crib, and a capped silo. The latter accompanied an increase in the size of the dairy herd from about 25 to 35 cows. Floyd also purchased an additional 20 acre parcel across the road to the south of the farm in Davison Township, 1947). Later, one acre of that land was used to build a house (not included in this survey) while the rest of the land was tilled. In the 1950s the Diehls built a new milk house with cooler, a brooder house and lean to the barn. The inside of the farmhouse received a bathroom, replacing a tub that had been placed in the pantry; and the living room porch in front of the house was enclosed when Floyd's son was married (1953). In the 1960s, the farm received a large silo, a truck garage, a pole barn (with a later addition), and corn crib.

Only a few buildings have been removed. These include the old tool shed that had a windmill on top, the c. 1925 chicken house, and the 1940s corn crib (later play house)—all removed during the mid-1960s. It is not known when the outhouse was removed. It was located where a walnut tree now stands northeast of the house. It was large enough to accommodate two adults and one child.

Between 1980 and 1996, the farm primarily raised cattle for beef. The 100 to 150 animals were mostly purchased and sold in Cass City. Some animals were sold locally and processed at the local slaughtering plant in Davison. The family also kept their chickens and sheep, and continued to grow corn, wheat, oats, and hay. The sheep were kept in the barn during the winter, but pastured along the western portion of the property in the warmer months. The fields were defined by wire fencing mounted onto wood posts.

Due to the economic forces of modern times, the farm has made two changes in recent years. The 80 acres purchased by Laura during the early 20<sup>th</sup> century were sold in

approximately 1990 due to high real estate taxes. The land has been developed for housing. Fortunately, the land and its new use are not readily visible from the farmstead, and therefore have little impact on the rural, agricultural setting. The second major change is provided by the switch to cash crop farming. That switch caused many of the outbuildings to be converted to storage facilities or left vacant.

### **SIGNIFICANCE OF PROPERTY:**

**Areas of Significance:** Settlement, Agriculture (early to mid-20<sup>th</sup> century dairy farm)

**Significant Dates:** 1878, 1925-c. 1980

**Significant Persons:**

**Architect/Builder:**

### **Significance Statement:**

The Diehl farmstead today provides an excellent example of a Michigan farm as it evolved over the course of the 20th century. It displays agricultural significance because of the relatively high percentage (80%) of outbuildings associated with agriculture and the period of significance that remain standing today. In addition, much can be learned from the numerous pairs of old and newer buildings that have had similar functions: an old and newer house, an old and newer granary, an old and newer barn, an old and newer milk house, and an old and newer garage. A number of resources from before the period of significance, including from the 19<sup>th</sup> century when the land was first settled, also remain. Finally, despite its proximity to the urban Flint area, the farm's setting has maintained a high level of integrity. The house is shaded by old, large maple trees; the drive is lined by mature walnut trees; the building complex is situated on a slight rise at the end of a relatively long driveway; the complex is surrounded by acres of wheat fields, with wood lots visible at the perimeter of the property. Because the farmstead was uncharacteristically sited well back from the main road, the road and its modern traffic have had little impact on the setting and associated feel. The property has been well maintained over many years by the Diehl family. Its buildings and their respective locations provide a physical link to the decisions and actions made by four generations of the Diehl family over the course of the 20<sup>th</sup> century.

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**DATE OF SURVEY:** August 3, 2001  
**PHOTOGRAPH NOS.:** 15: 1-23  
**SITE PLAN NO.:** SP-15

## APPENDIX B.

### S.H.P.O. REQUIREMENTS AND EVALUTATION MATERIAL

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Although this report was not funded by the State Historic Preservation Office (S.H.P.O.), an attempt has been made to present the contents of this report in a manner consistent with S.H.P.O. standards. Information not otherwise included in this report is therefore provided below.

Reports on survey results and evaluations for historic significance that have been partially funded by or through the State Historic Preservation Office (S.H.P.O.) need to include additional information that may or may not be included in similar reports for other purposes. Some of the specific information needed is listed below. However, each circumstance may require case-specific information. It is therefore advised that the reader check the *Manual for Historic and Architectural Surveys in Michigan*, the *National Register Bulletin #15*, and consult directly with the S.H.P.O. before submitting a report to the S.H.P.O.

#### **Historic Context Narrative**

For submission of a historic context narrative, the document must identify the region, period, and theme that is being discussed (National Register Bulletin #15: 7). For this report, the following is provided:

<u>Context</u>	
Region:	State of Michigan
Period:	1815-present
Theme:	Agriculture

#### **Property Types**

For many surveys, it is necessary to identify the property types associated with a historic context (National Register Bulletin #15: 8). For the theme of agriculture, the property types found in this study include those listed in Appendix B-1 immediately following this section.

#### **Evaluation Criteria**

After evaluating historic resources associated with a given context, it is useful to summarize the criteria that a specific resource or collection of resources must meet within a given historic context in order to be considered historically significant. A farm may be evaluated as having historic significance if it meets one or more of the Criteria (A, B, C, or D) as defined by the National Register of Historic Places (National Register Bulletin #15: 12-24), and if it also meets specified criteria unique to the historic context. Examples of such criteria, developed from the material presented in this report, are

provided in Appendix B-2. The National Register Criteria definitions are summarized in the Table below for ease of reference.

<b>National Register Criteria</b>	
<b>Criterion A:</b>	A property must possess integrity and be “associated with events that have made a significant contribution to the broad patterns of our history.”
<b>Criterion B:</b>	A property must possess integrity and be “associated with the lives of persons significant in our past.”
<b>Criterion C:</b>	A property must possess integrity and “embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction.”
<b>Criterion D:</b>	A property must “yield, or be likely to yield, information important to prehistory or history.”

Most Michigan farms evaluated as having historic significance will generally meet Criterion A of the National Register of Historic Places. The relationship of the historic resources, including the buildings and other features in the landscape, provides a fabric and a sense of place that has required generations of human activities to create. These activities are a result of general and specific events that have taken place in the local community over time, and specific actions that were taken by the individual property owner in response to events in their lives. The result is that the significant historic resources are tangible objects reflecting “broad patterns of events” of the local region.

It is possible for a farm to have historic significance under Criteria B, C, and D, although there will not be many due to the nature of the criteria (refer to Appendix B-2 for examples). In general, if a property is to have agricultural historic significance under Criteria B, the individual(s) deemed significant must have contributed in some significant way to the field of agriculture. Examples of such individuals might include (but are not limited to) an academic active in the study of agriculture or related discipline, an inventor, a local business man whose operation played a significant role on the surrounding farms, or a local farmer whose role as a farmer was somehow significant to the surrounding region. In addition, the property being evaluated must reflect the significant contributions of the individual.

Properties may have agricultural significance under Criteria C if the majority of the resources present meet the criteria. If only a single or small percentage of buildings on a property meet Criteria C, then those buildings may qualify for historic significance under Criteria C, but not within the context of agriculture. For example, a remnant farmstead

cannot meet any criteria under the context of agriculture. However, it may have architectural or other significance. As is often the case, an exception to this situation may be made. An individual building could be designated under Criteria C within the context of agriculture in the following hypothetical example: there exists one building on a farm that portrays a distinctive construction characteristic that by itself has played a significant role in the development or practice of agriculture and that is now rather unique.

Farmsteads may also display historic significance under Criterion D. Cabak, Groover, and Inkrot (1999) discuss such an example where the waste of a 20<sup>th</sup> century farming community studied through archaeological excavation provides a significant amount of knowledge that has furthered the understanding of the evolution of 20<sup>th</sup> century agriculture in the region. Because farming, by its nature, requires change at minimal cost, most farms should be able to provide a wealth of information found underground as well as in the attics and other storage buildings on the property.

Centennial Farms and their owners can provide much information from their genealogic, photographic, and other family records. It has been suggested that the collection of Centennial Farms in Michigan as a whole be designated as historically significant for the potential of information on Michigan agricultural history that they can reveal (Terry Shaffer, personal communication, 2002). However, using the current definitions provided by the National Register, the mere presence of such historical information, especially in the absence of accompanying tangible material, is not sufficient to evaluate a property as having historic significance under Criteria D.

## APPENDIX B-1.

### PROPERTY TYPES (As determined from Field Observations)

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#### AGRICULTURE

Agriculture District, Farm	Nursery
Farmstead	Orchard (apple, cherry, pear, peach, blueberry, etc.)
Barn (Cattle, Dairy, Hay, Horse, Main, General)	Outhouse
Cold Fruit Storage Building	Potato Barn
Corn Crib	Poultry House (chicken coop, brooder house, hen house)
Equipment Shed, Machine Shed, Work shop	Pump House
Farmhouse	Roadside Stand
Fertilizer Shed	Root Cellar
Fruit Shed	Shelter, (animal) Shed
Garage	Silo
Grain Bin	Smoke House
Granary	Spring House
Greenhouse	Well House
Hog (Pig) House	Windmill
Ice House	Wood shed
Loading dock	Stable
Migrant Workers' housing	Sugar Bush, Sugar House
Milk House, Milking Parlor	Vineyard
Mint Still complex	

#### DOMESTIC (found, but do not contribute to agricultural significance)

House  
Garage  
Manufactured Home

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Other resources that contribute to setting and integrity: fence and walls, pole barn, driveway, farm lane, paths, laundry posts, well, landmark trees and bushes, flower beds, vegetable gardens, wood lots, foundations, adjacent agricultural properties.

## APPENDIX B-2.

### MICHIGAN AGRICULTURE: SUGGESTED CRITERIA FOR SIGNIFICANCE

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#### **Agricultural Significance under National Register Criterion A:**

- The property must retain the essential physical features (including buildings and setting) that make up its agricultural character or appearance during the period of significance. In other words, the property must retain a sufficient number of historic resources that supported the farming system(s) in operation during the period of significance;
- Agricultural property types on a farm are to be evaluated collectively rather than independently;
- The property must maintain overall integrity of location, design, setting, materials, workmanship, feeling, and association, while keeping in mind that part of the historic fabric of farmsteads is created by the continuous process of modifying and/or moving resources to meet the agricultural, economic, and technological needs;
- In general, 50% or more of the historic resources on a property should be contributing. A contributing resource is one which adds to the understanding of the historic context, was constructed during or before the period of significance (which is at least fifty years ago), and has not been radically or inappropriately altered after the period of significance. The percentage is an approximate guideline; the actual number should be determined for each sub-context developed. The number 50% is included here to emphasize the fact that an agricultural property will have, by definition, a lower level of integrity in comparison to non-agricultural properties and districts.
- The degree of impact of the non-contributing structures on the overall farmstead composition must be measured on a case-by-case basis, and will be a function of the use and relative location of the non-contributing structures. Properties whose overall historic integrity and setting has been significantly impacted by the addition of numerous newer buildings and/or the loss of older buildings should not be included, despite an agricultural use. The property must not be classified exclusively as a modern farm or a remnant farm.
- The collection of buildings must be in overall good condition and intact.
- A farm should not be eliminated from future consideration because of an apparent lack of archival information.

#### **Agricultural Significance under National Register Criterion B:**

- The property must retain the essential physical features (including buildings and setting) that make up its association with the period of significance in the life of a significant person(s).
- The significant person(s) must be individually significant and have made a distinctive contribution or played an important role to the field of agriculture in the region.
- The property must illustrate the significant contribution(s) made by the significant person(s).
- The collection of buildings must be in overall good condition and intact.

- In general, the percentage of the historic resources on a property that are contributing should be higher than the 50% level suggested for Criteria A.
- The degree of impact of the non-contributing structures on the overall farmstead composition should be minimal.

**Agricultural Significance under National Register Criterion C:**

- The property must embody the distinctive characteristics of a type, period, or method of construction; represent the work of a master; possess high artistic value; or represent a significant and distinguishable entity whose components may lack individual distinction.
- The property must retain the essential physical features (including buildings and setting) that make up its agricultural and architectural character or appearance during the period of significance. In other words, the property must retain a sufficient number of historic resources with integrity that supported the farming system(s) in operation during the period of significance.
- The property must maintain overall integrity of location, design, setting, materials, workmanship, feeling, and association.
- In general, the percentage of the historic resources on a property that are contributing should be much higher than the 50% level suggested for Criteria A.
- The degree of impact of the non-contributing structures on adjacent buildings and the overall farmstead composition must be measured on a case-by-case basis, but should be relatively low. In addition, there should be a relatively low degree of impact of any modifications or additions to significant individual resources. Properties whose overall historic integrity and setting has been significantly impacted by the addition of numerous newer buildings and/or the loss of older buildings should not be included, despite an agricultural use. The property must not be classified exclusively as a modern farm, but may be classified as a remnant farm.
- The collection of buildings must be in overall good condition and intact.
- If only a single or small number of buildings present are significant under Criterion C of the National Register, then these buildings should be evaluated within a context other than agriculture.

**Agricultural Significance under National Register Criterion D:**

- The property must reveal significant information related to the history and practice of agriculture. The information must be archaeological in nature.
- A farm should not be eliminated from future consideration because of an apparent lack of archaeological information.

## **APPENDIX C.**

### **BUILDING MATERIALS AND TECHNIQUES ASSOCIATED WITH SPECIFIC CULTURES AND/OR TIME PERIODS IN RURAL MICHIGAN**

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#### **Introduction**

The majority of Michigan's rural buildings have been constructed of wood using framing technology associated with specific periods of time. Examples include, but are not limited to, timber framing, balloon framing, pole construction, or a combination of these. However, less common materials have also been used in the construction of rural buildings. These are often associated with specific periods in time, specific stages in a settlement period, and/or with specific ethnic groups and material cultures. They include the use of notched logs, other types of logs, stovewood, adobe brick, polychrome brick, and cobblestones.

The building techniques using the materials listed above are not necessarily significant to the understanding of the history of agriculture in the State. However, they can provide diagnostic clues as well as a physical connection to the past, and as such, the information they provide may contribute to the understanding and evaluation of the significance of a rural property such as a farmstead. The information on construction technology reflecting a specific material culture is therefore provided here. A discussion of building types and forms associated with specific Michigan ethnic groups has been provided in Chapter VIII.

#### **Notched Log Construction Techniques**

Most structures of horizontally laid notched-log construction have disappeared from southern Michigan. Almost invariably, those that do survive have been covered by some sort of cladding material both on the interior and the exterior. On the other hand, a considerable number of log structures can still be found in Michigan's Cutover regions of both the Upper and Lower Peninsulas. In the case of dwellings, of those that have not been covered, most sit abandoned or have been recycled to other uses. The majority of the remaining uncovered structures were built to serve agricultural purposes, and a surprising number still serve in that capacity.

When evaluating the significance of log structures, two factors are paramount-- their thematic association with pioneer settling of the land, and their artifactual role as products of material culture. In the latter instance, various ethnic groups introduced diverse log-building traditions into rural Michigan. The material culture of each group is manifested both by their traditional folk dwelling (Chapter VIII) and outbuilding types



and by the construction techniques they employed. This section will present an overview of log carpentry techniques and their material culture associations.

Just as bent and trussing systems comprise the critical focus for understanding timber-frame construction of barns, log shaping, corner joinery, and roof-construction folk practices are the key elements by which material culture distinctions in log carpentry are examined (Jordan, Kilpinen and Gritzner 1997: 59). The existing literature devoted to log construction in the United States and Canada is potentially overwhelming. Despite voluminous scholarship on the subject, considerable controversy remains concerning the European roots for horizontal notched-log construction in this country. Ironically, except for Finnish folk buildings, log architecture has received virtually no documentary attention in Michigan. Nevertheless, we can identify at least three log-building traditions that were introduced into Michigan, raising the possibility of hybrid structures.

### **Notched-Log Construction Primer**

#### **Log Shaping**

There are four distinct types of horizontal notched-log construction: 1) round-log, 2) shaped-log; 3) hewn log (Figure C.1; Roberts 1996: 14), and 4) squared log (Roberts 1996: 27-31). In round-log construction, the logs are round, simply comprising tree trunks cut to length. Generally, for ease of use, small, straight logs less than eighteen inches in diameter were selected. Three construction features are an outgrowth of using round-log construction. First, because of the taper in unshaped logs, they are incapable of providing a tight fit. The gaps between logs may be left open in outbuildings for which interior temperature regulation and moisture penetration are not concerns; for dwellings, stables, and cow barns, for which protection from the weather is essential, the gaps need to be “chinked” with clay, wood, or stone. Second, in most round-log structures, the ends of the logs (crowns) protrude some distance beyond the corner notches. Although several different notches may be used, some form of “saddle notching” is most common. Third, round-log structures are seldom covered with siding, a feat made difficult by the differing sizes of the logs, the lack of a flat surface on the exterior, and the protruding crowns. Historically round-log construction has been utilized for temporary shelters and for selected outbuildings (Jordan and Kaups 1989: 136-137). For dwellings, it is clearly associated with the initial pioneering stage of settlement and was probably first introduced by ethnic Swedes and Finns into the New Sweden colony on the Delaware in the seventeenth century (Jordan and Kaups 1989: 137). Its use in Michigan is more diagnostic of first-stage pioneering or of association with agricultural functions not requiring weather protection than of any specific ethnic material culture.

In the second type of horizontal notched log construction, the logs are “shaped.” Most importantly, the logs are shaped on top and bottom to achieve a tight fit, making chinking unnecessary (Figures C.2 and C.3). A bedding of moss is laid between the logs to further enhance the snugness of the fit. The interior and exterior vertical surfaces of the logs may be either flattened or left rounded. “There is much variety in the actual shape of the logs, in the ways they are joined at the corners and in the lengthwise joints, but the shaping of the tops and bottoms of the logs and the consequent absence of interstices and

chinking marks the principle distinction between this type of log construction and the other three types” (Roberts 1996: 16). Short crowns often protrude beyond the corners, and as is the case with round-log construction, shaped logs are seldom covered with exterior siding. Warren Roberts reports that shaped-log construction is found in the U. S. only in areas of nineteenth-century Fenno-Scandinavian settlement (Roberts 1996: 20).

The third type of horizontal notched-log construction uses hewn (planked) logs. The logs are hewn flat on the two sides intended to form the exterior and interior walls, which allows the application of siding over the logs. The top and bottom dimensions are left in their rounded form and no attempt is made to achieve a tight fit. Chinking, a practice initially introduced into the Delaware River Valley in the seventeenth century by Finnish settlers, is used to fill the gaps between logs.

Terry Jordan also calls our attention to an intermediate method of log working in which only the ends of the logs near the notches are hewn, leaving the greater portion of the logs round. Although end-hewing has been practiced by several culture groups, including the Finns, it became a common response in nineteenth century Ontario to a law exempting round-log structures from taxation (Jordan, Kilpinen, and Gritzner 1997: 61-62). Whether Canadians migrating to Michigan continued to employ end-hewing awaits field investigation.

Warren Roberts has argued, based on his examination of nearly 300 hewn-log houses in southern Indiana that the purpose behind the hewing of the exterior walls of log houses was to provide a flat surface to which siding could be attached. His analysis of these buildings convinced him that they were usually sided at about the time of construction. He states that the logs he has “seen under siding in good condition have never had the silvery gray patina of exposed wood, proving that the logs were covered with siding when the house was built or shortly thereafter” (Roberts 1996: 76). Since it has generally been assumed that sided log structures were covered long after their construction, preservationists tend to strip off such siding, believing they are restoring the building to its original appearance. Roberts argues that in most cases the presence of siding is consistent with the dwelling's original appearance, and that stripping the siding from the structure exposes the logs to weathering and ultimate decay (Roberts 1996: 75-89). As to whether the siding of second-stage log houses in southern Indiana was a regional mannerism or whether it was historically more widely characteristic of the Midland log construction tradition has not as yet been pursued by other scholars. There are at least some anecdotal accounts of log houses having been sided over at the time of construction or shortly thereafter in Michigan (Lewis 2002: 165).

Roberts also identifies a variant of the hewn construction method, which we treat as a fourth form of log shaping since it is specifically associated with colonial New England and its material culture. In this tradition the practice was to saw the logs on all four surfaces so that the logs could be fitted without the need for chinking (Figure C.4). As is characteristic of the hewn method, they employed dovetail notching which allowed for flush or boxed corners lacking crowns. Subsequently, New Englanders who pioneered in the west in the nineteenth century usually had to construct their new log homes before

sawmills became available to them, but, loyal to tradition, they often hewed all four surfaces although not always with a skill that precluded the need to chink (Roberts 1996: 27-31).<sup>133</sup> The New England square-cut treatment of logs also diffused with Loyalists into Canada. Surviving log structures in areas of heavy New England and Canadian settlement in Michigan need to be evaluated in this context.

As for the kinds of wood used in the four horizontal notched-log construction traditions, Roberts points to an association of soft conifer woods with round and shaped log construction and the use of hardwoods for hewn and squared log construction. He suggests that coniferous trees are not strong enough to make the kinds of flush corner joints used in hewn-and-chinked log construction (1996: 21, 23).

### Corner Joinery

In horizontal log construction, much of the structural weight is distributed to the corners necessitating some means by which to secure the logs and prevent their shifting or collapse. It is the corner notch, the joint where logs from adjacent walls are attached to one another, that provides the key to horizontal log construction. Each of the log-building cultures of Northern Europe developed a traditional repertory of corner notching techniques to cope with securing the logs. Notches that lock the logs in place, that is, that are self-binding, are true notches. Conversely, false notches involve trimming the log ends for a harmonious fit, but they require spiking or pegging to secure the logs from shifting. Only the notch types that we can anticipate will be found in Michigan are discussed.

Of the true notches, the simplest is the *Saddle Notch*, in which a half moon-shaped notch is carved out near the end of the log.<sup>134</sup> This notch type is less associated with a particular culture group than with expedience.<sup>135</sup> Saddle notching is the normal accompaniment to the use of round logs for the construction of pioneer period-cabins and barns, and lesser agricultural outbuildings (Figure C.5). There are two variants of the *Single Saddle Notch*, one in which the cut is on the underside of the log into which the crossing log fits, and the other in which the cut is made in the top of the log. The undersided notch is less likely to trap moisture than the notch cut on top of the log. A third approach is to make a *Double Saddle Notch* (Figure C.6). A clue that the Saddle Notch was cut by a saw rather than an axe is a notch configuration of slanted sides and a flat bottom instead of a rounded shape (Jordan, Kilpinen, and Gritzner 1997: 71). Saddle-notched logs always have crowns.

More sophisticated is the *V-Notch*, which may have evolved from the undersided Saddle Notch (Kniffen and Glassie 1986: 169). Instead of being round, the notch is trimmed into a V-shape into which fits the chamfered head of the lower log. If the log is left round, it

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<sup>133</sup>For an example of the New England square-hewn tradition carried to Ohio, see Donald and Jean Hutslar (1971: 183).

<sup>134</sup>The Saddle Notch has also been called the Dog Neck Notch, and its Finnish name is *koirankaulanurkka* (Vidutis 1994: 45).

<sup>135</sup>The Saddle Notch is far more common in Scandinavia than in Germany, and almost surely originated with the Swedish colony in North America. However, by the time Michigan was being settled in the nineteenth century, the Saddle Notch had become part of the standard repertoire of the pioneer.

has a pear-shaped extended crown. In most instances, however, V-notching is used on hewn logs and the box corners are shaped like the gable end of a house (Figure C.7).<sup>136</sup> When the logs are rough-hewn or squared, the corners can be boxed with lumber and siding added, providing a more polished finish and thereby camouflaging that the structure is of log construction.

The V-Notch originated in medieval southern Norway and diffused into western Varmland in Sweden, where a colony of transplanted Karelian Finns in the Finnskog uplands became the agents by which the notch type was carried to America's Delaware River Valley (Jordan and Kaups 1989: 145-151).

Most complicated of the true notches is the *Dovetail Notch*.<sup>137</sup> “It effectively locks the logs in both directions, produces a boxed corner, slopes downward on every face (so that water drains out), and is employed both on hewn and, though rarely, on round logs” (Kniffen and Glassie 1986: 171). It has two splayed surfaces on each log (Figure C.7). Although it appeared in the Delaware River Valley in colonial times, probably via Swedish and Finnish material culture, within the region associated with Pennsylvania log building traditions (see Midland Tradition, below) it failed to diffuse much west of Pennsylvania. The Dovetail Notch was also used with military fortifications in New England, and from there it diffused into English Canada and westward with the Canadian frontier (Jordan, Kilpenin, and Gritzner 1997: 72-75). Whether Canadians, Fenno-Scandinavians, or both brought the Dovetail Notch to Michigan is a question awaiting investigation.

Closely related to the latter notch, and far more common, is the *Half-Dovetail Notch*. Only one face of the notch slants to drain water. It has been utilized with rough hewn, squared and end-hewn notches, and its distribution associates it with several horizontal log-building traditions (Figure C.8).

Another locking form of joinery is the *Vertical Double Notch*.<sup>138</sup> Employed with square hewn or sawn logs, it is characterized by right-angle cuts near the crown in both the top and bottom of each log, like the children's “Lincoln Log” play kits (Figure C.8). This notch type was introduced into Michigan in the late nineteenth century by Fenno-Scandinavian immigrants (Noble 1984a: 113).

Finally, among the locking notches, is the *Tooth Notch*, a form of corner joinery limited to Finnish and Scandinavian settlers in Michigan (Jordan, Kilpenin and Gritzner 1997: 77).<sup>139</sup> A tooth-like tenon projects from the underside of a half notch and fits into a mortise in the underlying log (Figure C.9).

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<sup>136</sup>The V-Notch is sometimes referred to as “roof topping” or “steeple notching” (Noble 1984a: 112). In Canada, it is called the “Pennsylvania corner” or “Pennsylvania-Dutch keying” (Jordan and Kaups 1989: 144).

<sup>137</sup>Also called a Salmon Tail Notch, and in Finnish, a *lohenpyrst* (Vidutis 1994: 45).

<sup>138</sup>Also called a “Long Notch” or a “Lock Joint.” The Finnish name for this type is *pitknurkka* (Vidutis 1994: 45).

<sup>139</sup>It has also been called the Hook Notch, the Tongue Notch (Jordan, Kilpenin, and Gritzner 1997: 77), and the Lock Notch (Vidutis 1994: 46).

A false notch that has widespread distribution in Michigan is the *Square Notch*, in which both the top and bottom corners of the log end have been cut out. Its popularity in nineteenth century log structures probably relates to the increased use of saws instead of axes (Noble 1984a: 113). While the Square Notch required only a few straight cuts, which probably was an aspect of its popularity, securing the corners necessitated the use of spikes or drilling and pegging the logs together. A variant is the *Half Notch*, in which only the top or the bottom corner has been cut out. The half notch is also called a Lap Notch. It is used with square saw-cut or hewn logs and has the advantage that the corresponding tiers of the four walls lie even with one another, easily achieving a snug fit (Figure C.10).

### Roofing Techniques

Two basic types of structural roof building techniques have been employed with log structures: ridgepole-and-purlin construction, and rafter-and-board-gable construction (Jordan and Kaups 1989: 166-173; Roberts 1996: 89-97). The precise prototype of the American pioneer ridgepole-and-purlin roofing technique is part of the material culture of the Savo-Karelian Finns of southeastern Finland, the very Finns who participated in the establishment of the Swedish colony on the Delaware (Jordan and Kaups 1989: 172). Not dependent upon the use of pegs or nails, this roof type proved to be one of several Finnish techniques adopted by settlers of the Delaware River Valley that enabled them to be successful pioneers on the frontier (Jordan and Kaups 1989: 135). It was only after the raw frontier era had passed that the steeper, raftered roof containing board gables and lacking a ridgepole made a sustained appearance (Jordan and Kaups 1989: 166-167; see also Figure C.11). The latter roof type is associated with second-stage pioneering.<sup>140</sup> This sequence is attested to in a settler report from southern Michigan: “It is doubtful if there was a cabin with rafters and board gable in Cass or Van Buren counties [during the first decade of settlement], and for years after you could distinguish the eastern [secondary] settler from the [backwoods] southerner by the board gable with rafters” (Copley 1912: 641).

Aside from a ridge pole, the feature that distinguishes the ridgepole-and-purlin roof is the continued layering of horizontal logs to the full height of the gable. These gable logs are called “trap logs” and they both support and are supported by a sequence of log purlins all the way up to the ridgepole. The means of construction can best be visualized by the illustrations in Figures C.12 and C.13.

The rafter-and-board-gable roof requires more work to build and a higher level of craftsmanship. The lower end of the rafters sit on the outer edge of the plates and opposing rafters are joined at the peak with a halved joint, a pegged mortise and tenon joint, or simply nailed together. Builders of post-pioneer dwellings were often able to obtain rafters at sawmills, but rounded logs, preferably of tamarack, a readily available swamp tree in Michigan, were commonly used in Yankee Three-Bay Threshing Barns. The tamaracks grew straight and tall without much taper, and if harvested fairly small

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<sup>140</sup>In second-stage pioneering, the new pioneer could generally shelter with an earlier settler while constructing his log structure and thereby take greater care in its construction, shaping the logs, crafting sophisticated notches, and obtaining rafters and gable boards from a sawmill.

(five to ten inches at the stump), were of an ideal size and shape for roof rafters and wall girts.<sup>141</sup> Collar beams often provided additional support between opposed rafters (Roberts 1996: 89). Original roofing material is unlikely to have survived on any but derelict log buildings; consequently the history of materials usage is not included here.

### **Midland Tradition**

Although a variety of European ethnic log-building traditions were introduced into North America between the seventeenth and nineteenth centuries, the most commonplace and most widely distributed is the Midland tradition. Michigan is peripheral to the primary distribution area of Midland log structures, but is not lacking in examples.

The Midland cultural tradition embraces a range of material and nonmaterial cultural traits and complexes comprising a backwoods culture that originated in the seventeenth-century New Sweden colony on the banks of the Delaware.<sup>142</sup> Log-building construction techniques were simply one manifestation of a backwoods culture adapted to mid-latitude woodland colonization.

Eastern Finns, or more specifically, Savo-Karelian Finns, who had developed an integrated woodland occupancy strategy relying on a mix of forest-clearing shifting agriculture and hunting, were among the early settlers of the Swedish colony. They were ideally “preadapted” to the task of settling a frontier (Jordan and Kaups 1989: 53-60, 250-252). Conversely, the Scots-Irish, who arrived later in the Delaware River Valley, once acculturated to the techniques of backwoods culture and because of their numbers, became the most significant agents of its diffusion. Finns and Scots-Irish also borrowed heavily from Native Americans in the areas of foodways, agriculture, and dress. In a real sense, Midland frontier culture, in its mature form, comprised a Fenno-Celtic-Amerindic synthesis (Jordan and Kaups 1989: 36-37, 177).

Within the Midland log carpentry tradition, the Savo-Karelian contribution is most directly expressed in construction of the first-stage “pioneer cabin.” It is distinct from the more finished “log house” of the secondary settlement phase intended for some degree of permanence.<sup>143</sup> The pioneer log cabin is characterized by crude carpentry; round, saddle-notched logs with projecting crowns; chinking; small size and low height; earthen floors; minimal fenestration; and ridgepole-and-purlin roofs.<sup>144</sup> It also lacked a proper ceiling

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<sup>141</sup>Conversation with Steve Stier, barn builder. The tamarack is the only coniferous species that drops its needles in the fall and grows them in the spring. During this dormant period they look like dead evergreen trees. Some of the constructional advantages are that the wood is dense, stiff and stringy when dry, has a patterned tight grain, and is a pleasant creamy yellow color.

<sup>142</sup>Jordan and Kaups (1989) in *The American Backwoods Frontier*, definitively trace the origins, development and diffusion of American backwoods culture and its architecture.

<sup>143</sup>See Jordan and Kaups (1989: 175-176) for a discussion of the distinction between a log cabin and a log house. Kenneth Lewis (2002: 165) also makes the distinction between a pioneer log shelter and a larger hewn-log house in Michigan; and Brian Coffey (1984: 61-75) offers a clear distinction between log shanties and hewn log dwellings. Coffey (1984: 62, photo: 63) mentions that the shanty often had a single-slope roof.

<sup>144</sup>Lewis (2002: 165) quotes a pioneer letter which informs that in southern Michigan pioneer stage log huts frequently had a single-slope roof. This observation is borne out by numerous examples depicted in

although a sleeping loft might extend over about half the room (Jordan and Kaups 1989: 174). One feature of the Midland pioneer cabin, however, represents an early modification to English and Scots-Irish preference. Eastern Finns traditionally placed a hearth poorly vented by a smoke hole in one corner of their cabins. British pioneers substituted an exterior chimney centrally placed on a gable wall, which quickly became an integral feature of a Midland tradition cabin (Jordan and Kaups 1989: 175).<sup>145</sup>

Other deviations from Finnish tradition involved door placement and footprint of a single-pen cabin. In the traditional Savo-Karelian one-room cabin, the door was placed in a gable end. This configuration is known in the literature as the “Finnish plan” (Jordan and Kaups 1989: 199-208; Jordan, Kilpinen, and Gritzner 1997: 20-21). Conversely, an English plan single-pen cabin has side-facing gables, front and rear doors centered across from each other in each eave wall, and a square shape, with each wall between 15 and 16 feet in length (Jordan and Kaups 1989: 209). The Scots-Irish also modified the Finnish plan similarly to the English except that the footprint of the cabin was more rectangular with eave walls being five or six feet longer than the gable walls and the front and back doors were offset from the center (Jordan and Kaups 1989: 209).

By the 1760s Midland log carpentry had diffused northward into New Hampshire and Vermont (Jordan and Kaups 1989: 177-178). Consequently, when Yankees migrated to Michigan beginning early in the nineteenth century, they had become familiar with Midland forest clearance techniques and log carpentry.

Second-phase notched log houses belonging to the Midland tradition incorporated more diverse ethnic practices. More sophisticated Finnish and Swedish corner notches were employed rather than the crude saddle notch. While eight notch types have been utilized in the Midland tradition, all with northern European antecedents (Jordan and Kaups 1989: 141), the V-notch is the most useful as a diagnostic tool since it is unique to the Midland tradition (Jordan, Kilpinen, and Gritzner 1997: 69). Notch types shared by the Midland tradition with other log carpentry traditions, which can be found in Michigan, include the two forms of the dovetail notch and the square notch. Hewn-and-chinked log construction also identifies the log structure as belonging to the Midland tradition. Other minor Midland notch types are not likely to be encountered in Michigan.

### **New England-Canadian Tradition**

It has long been thought that, with the exception of military constructions, colonial New England lacked a notched log building tradition. Throughout the colonial period the frontier remained close to the seaboard so saws and other specialized woodworking tools could be supplied directly to the settlements by ship without the logistical problems of hauling overland. Settlers could build saw-cut timber frame structures virtually from the beginning of the settlement period.

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Michigan county atlas lithographs.

<sup>145</sup>The term “British” as distinct from “English” encompasses Scots, Scots-Irish, and Welsh as well as English.

Nevertheless, recent research has documented that some degree of domestic notched log construction did take place in colonial New England. How widespread it was and just what its construction characteristics are have not been definitively determined and defined. This alternative log building tradition could be identified as the Yankee log building complex, but because it later diffused into Ontario and westward from there, we refer to it as the New England-Canadian tradition.<sup>146</sup> It may have been derived originally from military engineering construction techniques, possibly *via* Scottish immigrants. Alternatively, as Warren Roberts suggests despite an admitted lack of documentary evidence, a generalized knowledge of log construction may have existed in Great Britain, which would explain why a handful of examples of this approach to log construction have been found elsewhere on the eastern seaboard outside of New England (Roberts 1996: 29-34).

Early New England examples, best documented along the New Hampshire - Maine border, were constructed of fitted logs saw-cut on all four sides and with flush or boxed dovetail notches at the corners, then sided over with milled lumber. Military log constructions in New England also used two false notches, the square notch and the half notch (a rebated, rabbeted, or lap notch). The availability of local sawmills made shaping and skilled fitting of the logs possible without the need to resort to chinking. After the Revolutionary War, Loyalists carried the Yankee log building tradition into Ontario and other New Englanders carried it westward into the upper reaches of the American Northwest Territory. Pioneering generally outran the spread of sawmills, so hewing logs usually substituted for sawing. Consequently chinking was assimilated into the New England - Canadian tradition (Roberts 1996: 30). With chinked logs, shaping them on all four sides is not necessary, but individuals schooled in the New England - Canadian carpentry tradition sometimes did so anyway. Moreover, since the complex dovetail notches frequently used in colonial New England log dwellings were cut in sawmills, simpler notching techniques and hand cutting tools were often resorted to on the post-colonial period frontier.

One of the most common notching alternatives was the easily formed square notch, with which New Englanders were already familiar (Figure C.14). While the square notch was also known to Midlanders, it was only common on the inner coastal plain of the South (Jordan, Kilpinen, and Gritzner 1997: 66),<sup>147</sup> suggesting an English infusion to the repertoire of Midland carpentry techniques in that region. It is a common notch type in Michigan (map, Kniffen and Glassie 1986: 175). Possibly it goes too far to conclude that all log structures with square notches in Michigan are material artifacts derived from the New England - Canadian tradition, but the presence of this construction trait in any given example is highly suggestive. Interestingly, Roberts quotes a Michiganian writing in 1851, "the house Mr. Campan built is still standing; it is what is called a blockhouse, i.e., a house built of logs that have been hewed square before being laid up" (1994: 38). Use of the term "blockhouse" appears frequently in Michigan pioneer literature, including in

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<sup>146</sup> Jordan, Kilpinen and Gritzner (1997: 66) call it the "Anglo-Canadian" tradition.

<sup>147</sup>The square notch is more common along the periphery of the Midland region than in its core area and is not diagnostic of Midland material culture. See also the map, "Distribution of Methods of Horizontal Log Construction" in Kniffen and Glassie (1986: 175).



references to the first log structure built in Ann Arbor.

The roof type utilized with hewn-log construction commonly used rafters, shingles and, in the gables, vertical boards nailed to studs notched between the top log and the rafter (Roberts 1996: 88). One modification westward moving Yankees made, particularly in their post-pioneer log dwellings, was to build the gable-end chimney on the interior side of the wall rather than on the exterior as was the case with the earlier shanty shelter (Jordan and Kaups 1989: 175).

The prevalence of log dwellings with square notches, when taken together with the importance of Yankee and Canadian settlers in the pioneering history of our state, suggests that the New England - Canadian log building tradition significantly impacted nineteenth-century log building in Michigan. The issue needs careful analytical study given that chinking, derived from the Midland tradition, was assimilated into Yankee and Canadian log building practices on the frontier. Examples in which the logs have been square hewn would clearly be diagnostic of the latter tradition. In fact the writer has observed examples of structures in which the square-hewn logs were trimmed sufficiently carefully that chinking was not required (Figure C.15). Nevertheless, future analysis of log dwellings in Michigan is likely to conclude that the common product was synthetic.

### **Finnish and Scandinavian Log Construction**

The major components of the Midland log-building tradition were derived from the Savo-Karelians from eastern Finland. The Finns who migrated to Michigan and, more broadly, the Great Lakes region in the late nineteenth and early twentieth centuries, however, came from Finland's western districts, where log-building traditions were closely related to those in the rest of Scandinavia, particularly Sweden (Jordan and Kaups 1989: 38, 176-177).

The use of shaped logs for buildings in which heat retention was desired is a key defining construction feature of the Fenno-Scandinavian building tradition (Kaups 1983: 8). The shaping technique is well suited for construction with green or partially dried softwoods. Using a broadaxe and a two-pronged hand-forged iron scribe called a *vara*, the builder hewed the logs so that the top of each was convex, the bottom concave, and the sides flat. The shaped groove between the upper and lower logs was filled with sphagnum moss to enhance insulation. The objective was to make a snug, weather-tight fit that was very sturdy because the entire length of the log was molded in place (Figure C.16). Frequently the logs were chamfered at their edges, creating a V-profile along the contact-point between the logs (Kaups 1983: 8; Noble 1983: 15-16; also see the illustration in Figure C.2).<sup>148</sup> Only in instances of poor workmanship was chinking necessary. In nearly all cases chinking was added after stuffing of the grooves had been attempted first. However, in some instances, such as the Pelkie area of the Keweenaw Peninsula, Finns moved into chinked log buildings built earlier by French-Canadians (Kaups in Noble 1984b: 251). For hay barns and woodsheds, the Finns built with rounded logs, reflecting another aspect of Finnish construction traditions.

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<sup>148</sup>The presence of the V-profile can aid in identifying that the logs have been shaped.

In the Old Country, Finns, Swedes and Norwegians trimmed the corner notches with an axe, but in the Lake Superior region they were fashioned with rip-saws, which enhanced the popularity of the full dovetail and the vertical double notch, both in vogue in nineteenth-century Finland. Less commonly employed by the Fenno-Scandinavian immigrants were the tooth, half-dovetail, square, and V-type notches (Kaups 1983: 8-11). The square notch, when utilized, may have been borrowed (likely from the New England - Canadian tradition), and because of suspicion concerning its sturdiness, doweled or amply spiked (Kaups 1983: 13).<sup>149</sup>

Kaups elaborates “It bears emphasis that notches do not always correspond in detail to stereotyped illustrations found in the literature. For example, the full-dovetail notch in which two angular surfaces function to bind the wall logs comes in such variety of angular shapes that a case could be made for subtypes. Moreover, in some buildings two or more notch types occur. These may range from full-dovetail to half-dovetail to square notch, the latter requiring dowels or spikes for stability. In other buildings, the logs in an original wall may be fastened with vertical-double notching [Figure C.17], while the logs in an upper addition to the building are held together with full-dovetail notching, implying that two different builders practiced their preference for a particular mode of notching. Furthermore, there are hay barns with logs fastened with a mixture of saddle, half-hexagon, and V-notches. Variations in notches are expressions of what [Henry] Glassie labels *subtypifications* and demonstrate that there are rules for doing things and that in folk practice there are individual statements that wander from the rules, producing variations on themes” (Kaups 1992: 253).

Most of the log Fenno-Scandinavian dwellings in the Great Lakes region do not have fireplaces and large chimneys since by the late nineteenth century cast-iron stoves vented by flues handled the cooking and heating needs of the settlers (Noble 1983: 16).

## **Other Log Building Types**

### **Rustic Log Buildings**

Another form of log building emerged during the late nineteenth and early twentieth centuries. It was not an expression of material culture, but an expression of stylistic fashion and a romanticized “back to the wilderness lifestyle.” It is variously referred to as the Rustic or Adirondacks style. Although not associated with agriculture, it does find rural expression in Michigan's northern resort regions. Construction techniques vary widely, but they usually make use of modern methods of joinery. Round logs are the normal common denominator since they exude the most primitive ambiance (Roberts 1996: 15). Their significance should be evaluated in terms of architectural merit and/or the history of leisure.

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<sup>149</sup>In Finland the use of the square notch has been limited to well-frames.

### **French Horizontal Log Construction**

The French used a variety of log-building techniques in North America (Green 1998: 32-33; Kniffen and Glassie 1986: 163-167). To date only two surviving Michigan examples, located in the River Raisin watershed in Monroe County, have been identified (see Figure C.19 depicting the Navarre-Anderson Trading post). Both structures made use of the *piece sur piece* construction method, which will be described here. Vertical-post, or palisade construction, which was also used in French Canada, and which was widely known to a variety of European ethnic groups, has been documented elsewhere in the Great Lakes region. It will be discussed in the subsection that follows.

In *piece sur piece* construction, logs, either left in the round or hewn on all four sides, were joined at the corners of the building by one of three methods, a lapped false notch, a dovetail notch, or adherence to a vertical corner post called a *coulisse* (Figure C.18). Unlike the situation with notched-log construction, in vertical cornerpost construction there was no expectation that the logs would extend the full length of the building, therefore they were cut short enough to avoid the problem of log tapering. Instead, the logs were tied into intermediate vertical posts with mortise and tenon joinery. The mortise and tenon joint was sometimes reinforced by pegging (Green 1998: 35-36). By this means the building could be extended to whatever length desired. Typically, two or three intermediate *coulisse* were utilized in the axial wall and one in the gable wall (Figure C.19).

### **Palisade Construction**

Palisade construction, using vertically oriented logs or planks, has a long history in Europe (Kniffen and Glassie 1986: 163). The French commonly used this method of construction in North America, but there is no evidence that they used it either in Michigan or Wisconsin. The only place in the Great Lakes region palisade construction has been identified and documented is in Wisconsin, where the builders were nineteenth-century Germans, Bohemians (Czechs), Swedes, and Finns (Perrin 1981: 16). The technique used by these ethnically diverse settlers was the same as what the French call *poteaux sur sole* and was used for both houses and barns.

Timbers were hewn into posts or planks, set upright upon a hewn sill into which they were mortised, and capped at the top with a timber plate (Figures C.20 and C.21). Some of the dwellings were chinked with clay and straw between the planks, but the Finns and Swedes took care to carefully edge and fit the adjacent timbers (Perrin 1981: 16-17, 19). A number of the dwellings are reported to have been furred and clapboarded on the outside (Figure C.22), and lathed and plastered on the inside. Palisaded construction seems to have ceased in Wisconsin around the turn of the twentieth century (Perrin 1981: 18). There is no reason to believe that the same ethnic groups that settled in the northern areas of Michigan during the same period of time didn't also sometimes use palisade construction, but such dwellings and barns might be difficult to detect by means of a "windshield" survey.

### **Reinforced Concrete**

It has recently come to the writer's attention that the romance of the pioneer American log cabin has been recast in reinforced concrete. Buildings using this material are called "permalog" structures. At this time nothing is known about their history or the manufacturer (Figure C.23).

### **Stovewood Construction**<sup>150</sup>

Stovewood comprises a fundamentally different form of log wall construction, and in Michigan is found primarily in areas of Finnish settlement in the Upper Peninsula. Although stovewood houses can be found in the Great Lakes region, among the Finns, the technique is reportedly limited to use on buildings for animals (Vidutis 1994: 44). Although considerable variety in implementation of this construction technique may be encountered, basically, logs were cut into short uniform lengths<sup>151</sup> ranging from fourteen to twenty inches and stacked perpendicular to the length of each wall much like one might pile firewood (Tishler 1982: 125; Perrin 1974: 7). The logs might be round, split in half or even in quarters. They were laid in a bed of wet lime mortar with the ends exposed (Figures C.24 and C.25). Often the mortaring was limited to the two ends of the log blocks, creating an insulating dead air space. Sometimes the stovewood has been concealed behind plaster, clapboards, shingles or board and batten.

The wood of choice was cedar because of its insulating and weather resistant qualities, its durability, and its availability in the Upper Peninsula's numerous cedar swamps. Tamarack, oak and poplar were also favored (Tishler 1982: 125; Stratton 1990: 41).

Stovewood construction proved ideally suited to pioneer homesteading in the agriculturally marginal environments of the northern Great Lakes "Cutover region."<sup>152</sup> The technique required little in the way of manpower, skill or economic wherewithal. Moreover, such construction did not require "the extensive lengths of straight, high-quality timber necessary for traditional log or timber-framed buildings" (Tishler 1982: 125-126). In fact, in parts of the Cutover region, only small second growth timber was inexpensively available. As late as the 1930s, rural inhabitants made common use of stovewood construction. In the Upper Peninsula such construction was frequently referred to as "depression building" (Tishler 1982: 128).

A number of ancillary techniques were used to add strength and stability to the wall. On Wisconsin's Door Peninsula, farm structures are found that use stovewood as nogging in half-timber construction. The use of stovewood stacked between framed-in panels has also been reported in Michigan (Stratton 1990: 42). A variant of this nogging technique

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<sup>150</sup>Also called "cordwood," "stackwood," "woodblock," "stackwall," or "log butt" construction.

<sup>151</sup>One source reports the typical length of the log blocks used in the construction of stovewood barns in Michigan to be 16 inches. See Stratton 1990: 41.

<sup>152</sup>"The Cutover" embraces the northern areas of Michigan, Wisconsin and Minnesota, where the original forest cover was almost completely eliminated during the late nineteenth and early twentieth centuries by a combination of timber companies and forest fires. For a map delimiting the region, see Alanen (2000).

sometimes used for dwellings was to place four- to six-inch blocks between the wall studding in balloon-frame construction primarily to provide insulation (Tishler 1982: 128; Stratton 1990: 42-43). Another technique occasionally employed in Michigan to maximize insulation was to erect two sets of parallel walls and fill the gap with sawdust or other insulating materials (Stratton 1990: 42). A variety of techniques were employed to strengthen corners. Sometimes squared sections of timber were used to stabilize corners in a manner similar to stone quoins; in other instances tall vertical posts were utilized to provide corner stability. An early technique was to alternate the orientation of the stovewood blocks at the corners (Tishler 1982: 128, 131).

The origin of stovewood fabrication remains unresolved. According to Robert Stratton some observers contend that stovewood structures estimated to be a thousand years old still stand in such diverse areas as Siberia and Greece. More concretely, links to Poland, Finland, Sweden, and Norway have been cited, all focused on the Scandinavian - Baltic Sea region. In North America, numerous examples have been documented or observed throughout the St. Lawrence - Great Lakes corridor. Sibyl Moholy-Nagy, a Canadian writer, comments that the technique has been widely used in the Canadian backwoods. Others have suggested a French Canadian origin in Quebec. It is tempting to assume that the hearth area for stovewood construction lies in northern Europe and that emigrants from that region carried the technique to North America as part of their material culture. However, documented construction dates of examples in Scandinavia are of recent enough vintage to make an argument that the technique originated in the St. Lawrence-Great Lakes corridor and was diffused to northern Europe by returning emigrants. Tishler, in consultation with antiquities and folk life authorities in Scandinavia, has suggested this possibility, although he still leans toward the east to west hypothesis of diffusion.<sup>153</sup>

Although no inventory of stovewood structures has been attempted in Michigan, some writers have reported on specific barns or outbuildings. One of the largest barns identified is the Waino Jaaskela barn located on a 400-acre farm on the Sturgeon River near Chassell. It was built in 1937 of tamarack logs twenty inches in length. One barn builder who is identified is Edward O. Niemi of Alger Heights near Munising. Beginning in 1926, he erected over a dozen stovewood barns. All of them have gambrel roofs. He used sixteen inch blocks and made a mortar mix of 85% lime and 15% cement. One known example is the William Piippo barn about two miles south of Chatham. Niemi's own barn, about a mile-and-a-half south of Chatham was built in 1928, and at last report there was also a stovewood chicken house nearby (Stratton 1990: 41-42).

Referring to a group of Finnish barns near Treary in Delta County in the Upper Peninsula, Lee Hartman says "...the bottom three feet of foundation enclosing the stables was constructed of rocks set in mortar. From that point upward, all the way to the ceiling of the basement level, the wall consisted of 18-inch long cedar logs stacked like cordwood, the circular ends of the logs forming the walls. Mortar was plastered into openings on the outside few inches and on the inside few inches. That formed a dead air

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<sup>153</sup>The information in the above paragraph is derived from Tishler (1982: 131-133), and Stratton (1990: 43-44). See also Tishler (1979: 28-31).

space in the middle, providing superior insulating qualities. Often painted red, each log end was differently shaped, creating a pleasing effect against the white mortar background” (1976: 82).

### **Adobe Brick Construction**

It is believed that adobe or sun-dried brick construction in Michigan is limited to the work of one mason, Stephen Mills, who practiced his trade in Washtenaw County between 1836 and 1865.

As a young man Mills migrated in 1833 to Washtenaw County, Michigan, from Phelps Township in New York's Finger Lake region at which time he purchased a tract of land. Having staked out his future farm, he returned to New York to learn the mason's trade.<sup>154</sup> He returned in 1836 and settled in Pittsfield Township.

Although Mills is known to have constructed some buildings in fired brick or in cobblestone, his trademark structures were built of adobe. Generally he used clay excavated from the immediate property, and pounded the mud into wooden forms, after which it was allowed to dry in the sun. He fashioned bricks about half the size of modern concrete block, about four inches thick and five by eight inches in the other dimensions. The bricks lacked binder materials, relying upon the drying process to provide cohesion.

Mills' adobe houses were constructed of two separate walls, separated by an air pocket. The exterior walls were two courses thick and covered with stucco for weather protection, while the interior walls had a thickness of only one brick, and were plastered. In most of the dwellings the interior walls raised straight from the basement to the roof, consequently the room configuration was the same on each floor. On the exterior, Mills incised lines in the stucco, giving the appearance of stone blocks (Thayer 1977: 3-5). Only a handful of Stephen Mills' adobe farmhouses survive in 2004 (Figure C.26).

### **Polychrome Brick Construction**

When the glaciers retreated from The Great Lakes region they left behind many shallow clay deposits in which limonite rather than hematite oxides predominate. When used for brick making, these clays fire into a cream, buff or yellow color, depending upon the concentration of limonite oxide.<sup>155</sup>

Several ethnic populations in Michigan and other areas of the broader Great Lakes region have made use of a combination of yellow and red, or occasionally other colored bricks to create patterned wall designs. More than one hundred Dutch houses have been documented in Allegan and Ottawa counties in southwestern Michigan and more undoubtedly remain to be identified. The predominant trim color in this region is buff. On the eastern side of Michigan, stretching from St. Clair County through the Thumb and

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<sup>154</sup>An investigation by Mary Culver, preservation consultant, Washtenaw County, confirms the use of adobe brick construction in the locality from which Mills came to Michigan.

<sup>155</sup>In Wisconsin the cream bricks are called “Milwaukee brick.”

northward from Bay to Presque Isle County, nineteenth century Canadian immigrants from Ontario created different sorts of designs using contrasting yellow brick. Occasionally German and, possibly, Polonian farmers emulated some aspects of their Canadian neighbors' dwellings (Figure C.27).

### **Cobblestone Construction**

The hearth area of cobblestone construction in North America is central and western New York State (Noble and Coffey 1986: 45; map: 46). English and Irish masons who came to work on the construction of the Erie Canal are believed to have introduced this form of construction to the region. The first domestic cobblestone structures appeared in the mid-1820s (Noble and Coffey 1986: 49). Subsequently, westward-moving masons carried this form of construction into Ontario, Michigan and Wisconsin (Perrin 1963-1964: 136-145; Perkins 1987: 1-8). The technique of using water-rounded cobbles for masonry construction petered out in the early 1860s with the onset of the Civil War (Noble and Coffey 1986: 47; Perkins 1987: 3-4). The increase in wages resulting from the Civil War seems to have precluded its revival as a form of building construction (Schmidt 1958: 231).

Three forms of wall construction have been distinguished. Although there is a temporal sequence to the initiation of each approach to cobblestone construction, older techniques continued to be used even as more refined approaches were initiated (Peterich 1956: 13; Noble and Coffey 1986: 48). In reference to cobblestone construction in Wisconsin, Perkins identifies an additional category of construction “which employed multi-sized, shaped, and colored fieldstones frequently laid -up in irregular courses” that he refers to as “a lesser form of cobblestone construction” (1987: 4).

*In the earliest wall type the cobbles are laid up in a coursed rubble construction so that both the exterior and the interior of the wall are thoroughly integrated...the cobbles consist mostly of sub-angular field stone of more than one rock type, and stone colors are decidedly mixed as are the sizes and shapes of the stones. The general range of stones is 2 1/2 to 3 1/2 inches by 3 to 7 inches long, with some even larger, making courses often rather irregular. The continuous, wavy, irregular horizontal [mortar] joints are 1 to 1 1/2 inches wide and much more prominent than the short vertical [mortar] joints which separate the stones within each course.*

(Noble and Coffey 1986: 49, from Schmidt 1966: 4)

The second type of wall construction makes more consistent use of the abundant water-rounded cobbles found along the lakeshores and within glacial deposits. “In these walls much greater attention is paid to exterior appearance, especially its regularity. The wall is no longer totally integrated; only certain elongated stones tie the exterior to the rest of the structure...some walls were even constructed with a hollow core, an insulating advantage...In these walls, greater care was taken in the selection of the stones. Smaller stones, measuring from 1 1/2 to 2 1/2 inches by 2 to 4 inches are mostly water rounded. The smaller stones were also placed in more regular courses made possible by the use of

a guide to form straight and level joints. In general, five cobblestone courses were laid within the height of each cut stone, corner quoin. The orientation of the stones became uniform with a vertical, horizontal, or oblique position of the long axis of the cobbles” (Noble and Coffey 1986: 49-50). This enabled the mason to create herringbone patterns or alternate the courses of contrasting stone colors. Another refinement was the reduction in the width of the mortar jointing, and in some instances a half-round beading was incorporated into the jointing.

The third and latest stage of cobblestone construction simply entailed the use of pebbles as a veneer. The pebbles tended to be small, typically 1 to 1 1/2 inches by 1 1/2 to 3 inches in size, and were implanted in a mortar veneer covering a rubble wall. Characteristically “courses are quite regular as are the orientation and exposure of the cobbles within each course. The horizontal joints are narrow, even and very straight, but the vertical joints have become more prominent assuming a flat V profile” (Noble and Coffey 1986: 50). In many instances, buildings that fall into the third category of construction only have the facade in cobblestone, with the other walls simply employing fieldstone.

Cobblestone buildings have been less studied in Michigan than in New York and Wisconsin, and their geographic extent within the state remains undetermined. Eleven such houses have been identified in Washtenaw County (Figure C.28). Stephen Mills has been identified by descendents as the mason who constructed the Campbell-Ticknor house (today known as “Cobblestone Farm”) and the Orrin White house in Ann Arbor (Thayer 1977: 10-11). Other masons may have been locally identified, but the majority of Masons who built in cobblestone in Michigan are anonymous. Investigators who encounter nineteenth century coursed Cobblestone buildings should identify the kind of wall construction, and describe the coursing and jointing patterns and designs.

Although as yet unreported upon, Michigan enjoyed a second period of cobblestone construction early in the twentieth century. It was an outgrowth of popular fashion rather than material culture. Part of the philosophy of the Arts and Crafts movement was to use exposed natural materials in the construction of buildings. The use of uncoursed cobblestone exemplified this movement. Scattered throughout Michigan, but most numerous in the northern part of the state, are many cobblestone Craftsman bungalows and other buildings built during the second and third decade of the twentieth century (Figure C.29). Cobblestone was also used as a veneer material on foundations, for porch walls, or as string courses. These dwellings now assume a degree of architectural significance as representative period pieces. During this period cobblestones were also used for freestanding garages, sheds, garden walls, and yard furniture such as birdbaths. This second era of cobblestone construction came to an end with the Great Depression.

### **Other Stone Construction**

Occasionally rural structures of ashlar or fieldstone construction will be observed. They are not associated with cultural significance but may possess architectural merit, and should be evaluated on a case by case basis. Other forms of stone construction await



identification and investigation. In the vicinity of Gladwin, Michigan, for example, there are a number of rural houses of mixed fieldstone and cobblestone construction, which strive for picturesque effect. Investigation may establish that they are the creative product of a single builder (Figure C.30).

### **Other Material Construction**

The field surveyor may encounter other unusual construction techniques and materials. Because these buildings may be few in number, they also possess the potential to be considered architecturally significant. As an example, Kurt Dewhurst and Marsha MacDowell have documented the use of conduit tile for building construction in Grand Ledge, Michigan, and its vicinity (1983: 91-103). Local clay deposits may have been used by the Potawatomi Indians for pottery making, and clay products have been manufactured there since about the time of the Civil War. By the early part of the twentieth century the use of conduit tile in the manner of brick masonry had become a common local practice. Eventually some use of this building material made its way into the nearby countryside.

- Figure C.01    Three forms of log prepping (Roberts 1996).
- Figure C.02    The Fenno-Scandinavian method of shaped log hewing. A bedding of moss is laid between each log (Noble 1984a: 122).
- Figure C.03    A Michigan example of Fenno-Scandinavian log shaping from Drummond Island. The builder died during construction and the crowns were never trimmed (M. McLennan).
- Figure C.04    Although built by a German settler in the Frankentrost colony in the Saginaw Valley during the 1860s, this log house was constructed of square-hewn logs. This technique, when skillfully done, can achieve a sufficiently tight fit of the logs that chinking is not required (Sawyer 1981).
- Figure C.05    Charles Bertrand's pioneer cabin near Hawks, Presque Isle County, is an example of round-log, saddle-notched construction (Hawks [LaRocque] Centennial, 1896-1996).
- Figures C.06 a-c  
The three forms of saddle notching: notch on the top (Figure 6a), notch on the bottom (Figure 6b), and doublenotch (Figure 6c; Kniffen and Glassie 1986).
- Figures C.07 a-b  
Diagrammatic examples of variously shaped V-notches and Dovetail notches (Kniffen and Glassie 1986).
- Figures C.08 a-b  
Examples of half-dovetail notches (Figure 8a; Kniffen and Glassie 1986), and the vertical double-notch (Figure 8b; source unknown).
- Figures C.09 a-b  
Illustration of a Fenno-Scandinavian Tooth notch (Figure 9a; Noble 1984a: 122), and an example from Minnesota (Figure 9b; Kaups 1992: 254).
- Figure C.10    Two types of false notches utilized for log construction in Michigan (source unknown).
- Figure C.11    A second-stage pioneer-era log cabin with a rafter-and-board gable roof in Superior Township, Washtenaw County. Metal sheets have replaced the original roof sheathing (M. McLennan).

- Figure C.12 Examples of “ridgepole-and-purlin” construction. A = A late eighteenth-century American backwoods cabin probably in frontier Georgia. B = An example of similar roof construction in a house from Karelian Finland (Jordan and Kaups 1989, derived from John R. Swanton 1946 and Niilo Valonen 1963, respectively).
- Figure C.13 Diagrammatic of “ridgepole-and-purlin” construction. Key: **A** = eave beam; **B** = trap (trapping) logs; **C** = ridgepole; **D** = purlins (rib poles); **E** = butting poles; **F** = weightpoles; **G** = knees; **H** = clapboards; **I** = capping (Jordan and Kaups 1989, after Donald Hutslar 1986).
- Figure C.14 A Washtenaw County example of square notching; the William and Amanda Meyer cabin, Superior Township (M. McLennan).
- Figure C.15 The William and Amanda Meyer cabin, Superior Township, Washtenaw County, exemplifies the New England – Canadian square-cut log building tradition. Although the logs were hewn, chinking was not necessary (M. McLennan).
- Figure C.16 Although some repair work with cement chinking is apparent, close examination of this old Finnish homestead on Drummond Island found that a layer of sphagnum moss prevalingly survives between the shaped and chamfered logs (M. McLennan).
- Figure C.17 Vertical-double notches, Finnish hay barn, Drummond Island (M. McLennan).
- Figure C.18 Diagram of French *piece sur piece* construction in which logs, tenoned at their ends, are fitted into mortised posts called coulisse (Jordan, Domosh, and Rowntree, n.d.).
- Figure C.19 Its *piece sur piece* construction was exposed for view during the restoration of the Navarre-Anderson Trading Post located on the River Raisin in Monroe County. Built in 1789, it is today sheathed in clapboard, but the construction method can be observed through a clear panel inserted in one wall (Au and Brode 1988).
- Figure C.20 A Finnish barn of palisaded construction in Wisconsin (Perrin 1981: 22).
- Figures C.21 a-b  
Close-ups of palisaded wall construction on a Finnish dwelling and barn, respectively, in Wisconsin (Perrin 1981: 17; 21).

- Figure C.22 Wisconsin farmhouse of palisaded construction that was furred and clapboarded on the exterior. Deterioration of the cladding has exposed the palisade timbering (Perrin 1981: 18).
- Figure C.23 Close-up views of simulated log (permalog) construction in reinforced concrete (Katherine Keefer, EMU graduate student).
- Figure C.24 Exterior side of a Stovewood wall (Tishler 1979).
- Figure C.25 A Michigan Foundation Barn with a stovewood basement. Note the milk house in the foreground (source unknown).
- Figure C.26 A Stephen Mills-built adobe brick house in Pittsfield Township, Washtenaw County. The bricks are weather-proofed with a stucco veneer (M. McLennan).
- Figure C.27 Polychrome detail; a German-built farmhouse east of Frankenmuth (M. McLennan).
- Figure C.28 A cobblestone hen-and-chicks house, once owned by Henry Ford, near Delhi, Washtenaw County (M. McLennan).
- Figure C.29 An early 20<sup>th</sup>-century Craftsman bungalow in Alpena County, constructed with uncoursed cobbles. Similar bungalows are most common in northern Michigan (M. McLennan).
- Figure C.30 In the vicinity of Gladwin there are a number of patterned stone houses like the one above that may be the work of one builder or designer (M. McLennan).

## APPENDIX D-1.

### REFERENCES CITED IN THIS REPORT

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## APPENDIX D-2.

### SELECTED REFERENCES BY CATEGORY

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#### Categories:

- Agricultural History
  - Bibliographies
  - Building Construction, Plans and Design
  - County Atlases and Histories (selection only)
  - Ethnic Buildings and Landscapes
  - Great Lakes Region
  - Interviews for this project
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- Refer also to references listed in Appendix D-1.*

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## **Interviews**

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*Interviews were conducted by Ina Hanel-Gerdenich with the following farm owners:*

Barden, Mr. and Mrs. Richard D., South Haven, Michigan, 14 November 2001.

Brown, Marilynn and Ken, Ortonville, Michigan, 28 February 2002.

Burkhard, Esther, Port Hope, Michigan, 9 June 2002.

Caley, Glenn, Metamora, Michigan, 27 April 2002.

Caley, Phyllis B., Metamora, Michigan, 27 April 2002.

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Clark, Marvin, Traverse City, Michigan, 4 May 2002.

Clark, Ralph Jr., Traverse City, Michigan, 4 May 2002.

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Duff, Dorothy, Grayling, Michigan, 16 December 2001.

Dumond, David D., Owosso, Michigan, 24 July 2001.

Dygert, Mary K. and John P., Coldwater, Michigan, 1 March 2002.

Faunce, Alden and Rita, Petersburg, Michigan, 6 April 2002.

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Geddes, Pauline, Ann Arbor, Michigan, 17 August 2001.

Grieb, Charles, Webberville, Michigan, 14 August 2001.

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## **Methods of Research and Preservation Techniques**

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