TRYON BARN

HISTORIC STRUCTURE REPORT

Conditions Assessment & Feasibility Study

MICHIGAN CITY, INDIANA

1402 Tryon Road

May 8, 2019

Tryon Farm Institute, Inc.

Kurt West Garner, consultant
12954 6th Road – Plymouth, Indiana 46563 - 574-936-0613
www.kwgarner.com

KURT WEST GARNER
Preservation - Consulting - Design

TABLE OF CONTENTS

PURPOSE OF REPORT

K. W. Garner Consulting was contracted by Tryon Farm Institute, Inc. (TFI) to provide a historic structure report on the Tryon Barn. This includes primarily a conditions assessment and feasibility of use and funding options.

A presentation of the draft version of the report was made to members of TFI on May 4, 2019. The consultant briefed the members and highlighted certain areas of the report as well as fielded questions and took comments from the members. Those were incorporated into the report for its final version. Comments mostly centered on phasing of work priorities, funding, and uses for the barn.

DOCUMENTATION/RESEARCH

The consultant first toured the Tryon Barn with representatives of TFI on December 10, 2018 after a request for a site visit was made to the Indiana Barn Foundation by the owner. The consultant provides that service to IBF as a board member of the organization. During that site visit, several items were discussed about the barn, specifically, as well as the chicken coop and potential eligibility of the property for the National Register of Historic Places. The consultant made a request for a determination of eligibility to the National Register through the Indiana Division of Historic Preservation and Archaeology. DHPA requested additional photos, which were provided, and a positive determination was given. A contract for both the National Register nomination and a feasibility/preservation study was provided to TFI by the consultant. The property and barn, specifically, were fully documented by the consultant on February 21, 2019. Conditions for exterior documentation were perfect with clear skies and sun. All parts of the barn were accessible. The documentation included photographs of the entire Tryon Farm homestead and measurements of the barn which have been converted into drawings included with this report. While the chicken coop was not documented in full for this report, a brief summary of conditions and work is included at the end of the section on restoration.

National Register of Historic Places

A historical investigation was conducted by the consultant to allow for the preparation of the National Register nomination. The property is eligible under Agriculture and Architecture as areas of significance. As specifically related to the barn and other agricultural buildings, only the Agriculture narrative is included in this report. The nomination for the National Register was submitted to the Indiana Division of Historic Preservation and Archaeology on March 8, 2019. Technical Review approval was received on March 27, 2019. The nomination will be reviewed for substantive comments in chronological order of submissions. Anticipated date for that review is March 2020 with official listing later in 2020.

HISTORICAL BACKGROUND

The former prairie of LaPorte County has a long tradition of excellent productivity for cultivated crops that included wheat, rye, oats, barley, other grains and root crops. As early as the 1830s, the prairie areas south of Lake Michigan were producing bumper crops including over two hundred thousand surplus bushels of wheat from two farmers alone. A few years before the Tryons purchased the farm, agricultural records demonstrate the growing farming industry of LaPorte County. In 1873, the population of Michigan Township was about 4700. Farming statistics for the county in the same year include 86,305 acres in cultivation, 18,023 cattle, 7,916 horses, 471 mules, 10,332 sheep, and 17,484 swine. More than 384,000 bushels of wheat, 919,000 bushels of corn, 2,750 bushels of rye, 182,000 bushels of oats, 27,000 bushels of barley, 63,000 bushels of potatoes, and 4,392 tons of hay had been produced in that year. In 1891, over ten thousand tons of hay and over three thousand tons of clover was produced. Eight railroads crisscrossed LaPorte County, along with several other important transportation corridors, not to mention the harbor at Michigan City. All of these played an important role in shipping farm products to markets far from the borders of LaPorte County.

Michigan Township, however, was not recognized in its early history for agriculture. Aside from cranberries and huckleberries, the township lacked the more fertile soils for crop production that the former prairies further south from Lake Michigan contained. The township's terrain included sand knolls and dunes and was largely covered with trees. Chapman's 1880 History of LaPorte County states "Owing to the poor quality of the soil in the township, agriculture receives but little attention."[1] No doubt, this affected the size and development of farms in the township, and is likely why a dairy operation, which relied less on soil productivity than cattle grazing was the direction the Tryons took in the development of their farm. In 1880, the township, outside of Michigan City, was considered sparsely settled.

Charles Tryon, Sr. purchased 80 acres of land in Michigan Township, LaPorte County in 1877 from B. Sheridan. The land included a typical, 19th century farm with frame house, and likely a barn, situated on a county road later named Tryon Road. Charles Sr. came with his father's (John) family from Vermont first to Chicago, then to Michigan City in 1834. Charles Sr. was a conductor on the New Albany and Salem Railroad for sixteen years, then moved to Columbus, Ohio. He returned to Michigan City with his family in 1870, then purchased the farm on Tryon Road, adding another 40 acres to its east edge by 1891. Charles and Jane (Lewis) sons, Charles C. and Harvey H., born in 1865 and 1866, inherited the farm after their father's death in 1891.

The Tryon brothers constructed the large bank barn that functioned as a dairy barn in 1892. The barn features a cornerstone carved with TRYON BROS. 1892. The 1892 Plat Directory for Michigan Township identified both Charles and Harvey Tryon as farmers and stock raisers. Charles C. Tryon built the large brick house in 1896 and was married on October 17, 1899 to Margaret Coudon. The 1900 census includes both the Charles C. and Harvey Tryon families at the farm, as well as their step-mother, Adalade. The census indicates the brothers were engaged in a farm and dairy. About 1900, the brothers also constructed the large chicken coop on the property, as well as the drive-through granary building. Given the size of the coop, the family likely raised additional poultry and eggs for sale. The granary features cribbing to each side of the drive-through bay which allowed for grain storage used to feed cattle. Sometime shortly after 1900, Charles's brother, Harvey, left the farm and moved to Pennsylvania.

The 1904 History of LaPorte County provides biographical information about the Tryon Family as well as a description of the family's farming status. It states that Charles C. Tryon was a "thrifty young farmer…who has made a creditable record for himself in this line of activity."[2] The author applauds Tryon's advancement of modern farming stating "He is enterprising and progressive, and even the casual observer could understand the reasons for his success in the up-to-date improvements which are

[1] Chapman, pg. 745
[2] Daniels, pg. 811

everywhere in evidence."[3] The history includes a description of some of the buildings on the property: a "splendid" brick house, a frame house (probably the original house), two large barns, and "other things in keeping. He makes every department of farming pay steady and profitable dividends."[4]

By 1907, the farm had been reduced by about five acres, likely because of the construction of a county road between the original 80 acre farm and 40 acre addition. The Tryons also made a donation of the northwest corner of this new intersection with Tryon Road for a schoolhouse. The township district school became known as Tryon School. The 1910 census for the household no longer included his brother, Harvey's, family but does include a hired hand on the farm named Gus Lispke, age 53 and a native of Germany. Charles C. and Margaret had six children: Mary, Lawrence, Orville, Margaret, Albert, and Rollin. Some minor reinforcement work was done on the barn's foundation c. 1920; it was likely about this time the stanchions and feeding apparatus, as well as the concrete troughs were installed in the basement.

In 1921, the county plat lists the property under the name "The Tryon Farm" with C. C. Tryon as the owner. It included 123 acres but also shows the new county road extending north from Tryon Road and the Tryon School. A new railroad (Marquette Railroad) had been established, cutting diagonally through the 40 acre parcel on the east edge of the farm. A natural stream feeding Trail Creek to the Michigan City Harbor had been extended and named Beck Ditch near the northwest corner of the farm. The Charles C. Tryon family is featured in the illustrations with a photo of the family seated on the limestone steps of the brick home. Charles, noted as a farmer, had also been elected Michigan Township Chairman by 1921. Charles's step-brother, Parvin Tryon, was listed as a farmer in Pleasant Township in the same directory.

The value of the family farm was listed as $15,000 in 1930, but had been reduced to $9,000 in 1940. The 1940 census includes only Charles and Margaret Tryon and their youngest child, Rollin. The Tryons sold their farm by the mid-1940s and relocated to California where two of their children, Albert and Margaret, had also moved. Charles C. Tryon died October 17, 1947 in Taft, California. His wife died in 1963. Their youngest child, Rollin, remained in Michigan City and died in 2001. By 2000, the farm had undergone re-platting and planning for a residential community with certain lands held in common. The development became known as "Tryon Farm". The development parceled off the home and farmstead. The latter was donated to Tryon Farm Institute, Inc. The organization owns the barn, chicken coop, and pasture between the barn and Tryon Road. The farmstead being nominated to the National Register generally occupies the southwest corner of the original 120 acre farm.

The large barn and other agricultural buildings located at the Tryon Farm are important to note for their architectural significance. The Tryon brothers constructed the farm buildings in response to the scientific development of agriculture and husbandry that came during the golden age of farming in Indiana. Subsistence farms had largely been expanded and developed into profitable farms by the middle part of the 1800s. Development of technology and dissemination of information regarding agricultural education and best farming practices grew rapidly between 1860 and 1900. During the 1850s Indiana established the State Board of Agriculture and the first state fair was held. County agricultural fairs also began to be established throughout the state. In 1874, just a few years before Charles Tryon Sr. purchased the farm, the Indiana State Board of Agriculture began to publish the *Indiana Farmer*, a publication which touted the latest trends in farming practices.

In 1862, the Morrill Act was passed by Congress which provided for the establishment of agricultural colleges in each state. Purdue University was founded in 1874 in response to the Morrill Act. Agricultural experiment stations were developed from these collages in order to carry out research in connection to agricultural practices. The Grange was a fraternal organization that was founded in 1869 in Vigo County. It promoted the social, cultural, educational, and economic advancement of its farmer-members. Combined these organizations contributed to the advancement of farming practices in Indiana. Between

[3] Daniels, pg. 811
[4] Daniels, pg. 811

1900 and 1920, known as the "Golden Age" of agriculture, the value of farm property grew rapidly due to progress in farming technology. Horse-drawn equipment was replaced with power-driven machinery and larger amounts of land could be more easily and efficiently cultivated.

It was during this time of agricultural advancement that the development of larger barns that incorporated a wide variety of operations on the farm began. Barn designs that were developed to allow for a more efficient use of labor, storage, and general operations appeared frequently in farm journals of the late 19th and early 20th centuries. Round and polygonal barns, gambrel and round-roofed barns, and other designs encouraged farmers to rethink traditional barn-building practices. During the late 1800s the University of Wisconsin responded to its state's growing dairy industry by developing a sanitary and efficient dairy barn design that reflected its origin the "Wisconsin Dairy Barn". The barn became popular for large-scale dairy operations during the first decades of the 20th century throughout the Midwest and the bank barn used for the Tryon dairy operation generally follows these concepts.

The Tryon Farm demonstrates the movement toward innovation and large-scale agricultural production in the late part of the 19th century. The Tryons seemed intent on using the latest technology developed for agricultural buildings when they built the barn and chicken coop, as well as the drive-through granary, though its type has long been a fixture of American farms. The barn, which retains its calving stalls, stanchions, and concrete troughs, is substantial; few other barns its age and size remain in northern LaPorte County. Because most of Michigan Township is incorporated into the city of Michigan City, and due to its expanded growth, little of the township remains rural. Tryon Farm is near the center of the township, northeast of downtown Michigan City. Only one other historic farm remains in the township. It is located immediately west of Tryon Farm at 1415 Tryon Road (south side of the road) and features a brick gabled-ell house with small implement shed (c. 1900).

Comparables
Five other farmsteads in LaPorte County are listed on the National Register of Historic Places. The Ames Family Homestead on County Road W 150 N includes two houses constructed between 1842 and 1856, an early transverse frame barn (1838), and a concrete stave silo, privy, ice house, cow shed, corn crib, chicken house and wood shed all constructed between c. 1900-c. 1940. The John and Cynthia Garwood Farmstead at 5600 Small Road features a large Italianate upright-and-wing house with tower (c. 1866), and a dairy barn, milk house and concrete stave silo all constructed c. 1930. Pinehurst Hall, on U.S. 35 north of LaPorte, features a Greek Revival gable-front house (1853), an English barn (c. 1870). The James and Lavinia Forrester Farmstead on Forrester Road includes an Italianate cube house (1858), concrete stave silo and small dairy barn (1917), and chicken coop (c. 1920). The Wynkoop Farmstead located on State Road 39, north of LaPorte, features a brick I-House (c. 1858) and small bank barn (c. 1860) and several 20th century agricultural buildings including a milk house, chicken coop, and livestock shed. What differentiates Tryon Farm from these other notable farmsteads is the early construction of such a large barn (larger than any of those listed above) built four years *before* construction of the commodious farmhouse, followed very closely by the other two supporting agricultural buildings (chicken coop and drive-through granary). Because of this, the Tryon Farm *most* exemplifies the robust era of the golden age of agriculture through its buildings.

Bibliography

Chapman, Charles C. C., *History of La Porte County, Indiana*. Chicago: C. C. Chapman & Co., 1880.

Daniels, Rev. E. D. A Twentieth Century History and Biographical Record of LaPorte County, Indiana, Chicago: The Lewis Publishing Co., 1904.

CHARLES C. TRYON AND FAMILY,
MICHIGAN CITY, INDIANA.

This image of the Charles C. Tryon Family is located in the 1921 Platt Map Illustrations of LaPorte County, Indiana. The picture was taken on the limestone steps leading to the front porch of the Tryon House.

CHANGES TO THE BUILDING

The Tryon Barn retains a great deal of historic integrity. Remodeling campaigns that have occurred during its use as a livestock barn in the early 20th century are part of its historic fabric and do not negatively affect the building's original architecture. These early remodel campaigns include reinforcement of the brick masonry basement wall with buttresses and improvements to the dairy operation with new stanchions, troughs, and improved dairy office. The Dutch-lap style wood siding and wood window sashes divided into four panes are either original or early replacements of original materials. The barn has a corrugated metal roof which is likely a c. 1945 installation, replacing either an earlier tin or wood shingle roof. The tightness of the wood roof decking (seen from inside the barn) makes it difficult to know if any previous roofing material is extant under the existing corrugated metal. Concrete steps and terraces were also installed at an early date, c. 1945, and have created some challenges with drainage around the building.

Much later changes occurred to the building, mostly interior, in the last two decades. Some of these changes altered historic structural components while others were sympathetic reinforcement of the existing timber frame structure. This most notably occurred in the basement level where steel angles and beams were added to structural posts and wood floor joists in an effort to better support the main level floor. While most of this construction appears to have occurred about the same time, other reinforcement by means of adjustable pipe columns and stacked concrete block was likely added later for the same purpose. Another late change to the building is the blocked-in basement windows (or other openings) in the north and east walls. It is not suggested that these be reopened, but noted due to the likely addition of soil or gravel fill in the cavities to the outside of these openings to elevate grade.

Late changes on the main level include the removal of a structural wood post in one of the bents. No movement from the removal was witnessed, but bents work in unison just like trusses, and removal of members can create other issues in tension or compression. It also appears loft areas were either added or expanded and railing composed of wire and modern wood were added. A broad staircase was added to the east loft while the west loft was cut off. A small, raised platform was added along the north wall. None of these greatly distract from the overall feeling or appearance of the space as a historic timber frame structure. The modern intrusion of a garage door is somewhat masked by corrugated metal and plank walls that enclose the area under the west loft. This enclosed space is better climate-controlled and sealed from birds, bats, etc. This space has finished interior walls and ceilings, exposed timber frame, and shelving. This space also includes two modern pairs of casement windows. A steel exterior door is in the north wall and is the primary access to the main level. Another exterior-related modern addition is the construction of a wood deck off the east side of the building. It has rustic-style, stick-built handrails.

ASSESSMENT

Existing building statistics:

Barn Dimensions:	Approx. 80'-0" x 36'-0" exterior, main level nominal dimensions
Square Feet:	Approx. 2,720 square feet each floor: 5,440 sq. ft. total, nominally

Structural Conditions Assessment

The general structural condition of the building seems to be sound due to maintenance and reinforcement by previous owners. A few areas of concern were discussed in the initial site visit between the consultant and TFI representatives. The main concern, and highest priority of repair, is that of drainage around the building and masonry deterioration of the basement walls as a result of water infiltration. Areas of brick and mortar deterioration were recorded along the north and east basement walls (interior) and along the exterior of the south basement wall. None of these seem to be of immediate structural concern, however, masonry acts as a uniform structural component and as individual units or mortar components fail, in time the accrued result could create larger structural issues. This masonry deterioration appears to be the result of trapped water from the roof (or related to rain events) not properly being removed from grade around the building. This seems most evident in the north wall where water is recorded pooling in a swale at grade, and to a lesser extent on the west wall and southeast corner where grade falls away to expose the basement walls.

The lack of proper drainage away from the north wall is also creating a condition where wood rot in siding and structural members can occur due to splash conditions from stoops and swales and the inability of wood materials to dry (north-facing walls/algae recorded). No gutters or downspouts are fixed to the eaves, which may be an acceptable condition so long as water from the roof and grade is directed away from the building. As expected, these areas are most susceptible to paint failure and wood rot. Generally, however, the barn's wood siding and wood windows are in very good condition.

The barn has had permanent reinforcement of its wood post and beam construction in the basement level. This is substantial with steel angles and beams attached and interconnected to the floor joists supporting the main level of the barn. Records may indicate this was engineered to provide safe additional loading on the main level floor. Possibly at a later time, some ad hoc pipe columns and concrete block pillars were added to further reinforce areas of the main floor. No structural issues were witnessed on the main level, indicating the reinforcement campaign proved beneficial to the preservation of the barn. Of important note is the missing post column on the main level. While no compromise of the bents or unifying structure was recorded, bents were constructed to act in unison and may weaken if members are missing (similar to a truss). Careful, periodic examination of the barn in areas supported by the bents (north wall, north slope of roof and ridge) should be made to determine if missing posts are having reverberating effects on the barn.

The barn's roof seems to be functioning well to protect the building and interior from water infiltration. This corrugated metal roof was likely installed c. 1945. It is of a heavy-mil thickness and due to its installation on a steep slope, has proven longevity. The same metal is present on the chicken coop, house tower, garage, and drive-through granary. It likely was the first roof placed on the garage and the estimated date on that is c. 1945. As with any material, though, it should be planned for eventual replacement. As noted earlier, there are no gutters or downspouts.

RESTORATION

Specific Areas of Work
Attached to this report are measured drawings of the barn. They include simple first and second floor plans with conditions noted and keyed to photographs also included with the report. The following specific areas of work are summarized in priority of undertaking.

Drainage
Of highest priority should be correction of drainage around the perimeter foundation/basement wall. This has led to masonry deterioration of the brick basement walls, particularly the north and east walls as is evident from the interior. No structural failings were recorded as part of the investigation, other than face brick separation near the center, lower part of the south wall. This does not appear to be structural as much as separation, nor does this condition seem to point to drainage. The lack of gutters and downspouts, and generally rain events, have pooled water in a swale along the north wall of the barn. Concrete pads and stoops on this side have dammed up water and prevents it from flowing away from the building. Further moisture penetration was recorded along the east wall (interior) and southeast corner where grade is banked up against the wall.

Recommended correction is excavation and membrane installation in areas where grade is banked up against the brick basement walls. Prior to membrane installation, mortar and brick repair may be required or full-scale masonry parging may prove most effective. Perimeter drainage with gravel backfill and perforated tile should be installed. Buried tiles with risers for future downspouts should also be installed at the same time. Because of available elevation fall to the south, the tiles can divert water around the building and to lower areas south of the barn. If desired, cisterns or barrels may be installed to aid in capturing rain for demonstration gardening/sustainable design. Install new, handicap accessible, concrete stoops/ramps to the north side of the building after drainage installation.

Masonry
As mentioned in the condition assessment, masonry repair is required on the building mostly due to moisture penetration in the basement. If drainage is addressed, and since none of the masonry deterioration appears to have structural ramifications in its current state, mortar repair is negligible, but provides long-term preservation of the basement walls. Exterior mortar repair (and minimal brick replacement) is important, however, because it prevents water penetration. These areas are mostly identified a few courses above grade, as would be expected. Another location is centered near the bottom of the south wall where face brick is separating from the wall. It is recommended that this specific area is removed and re-laid with brick salvaged during removal. Minor exterior brick replacement with matching brick is required, but is minimal. Referenced at the end of the report is the Department of the Interior's Preservation Brief addressing appropriate repair of historic mortar.

Structure
As noted earlier, ad hoc adjustable pipe columns and concrete block have been installed in the basement to help support the main level floor. Similar engineering and design, like has been undertaken with wood posts and steel angles, should be completed and installed in these areas. Additionally, it is recommended that close monitoring of the area where a structural wood post column was removed on the main floor be undertaken. Ideally, columns would be reinstalled (rough sawn/hand hewn to match).

Siding & Windows

The siding is generally in good condition. Minor deterioration was recorded in areas near grade, particularly on the north wall. Eventually, full-scale siding restoration should be undertaken through normal means of siding repair/replacement of deteriorated boards, scraping, priming and painting with two coats of paint. From a standpoint of long-term restoration, it is also recommended that the three new windows on the main level be replaced with historic profile windows. Other windows, which appear to be in good condition, should be preserved/restored during a full-scale building repainting.

Roof

The barn's heavy-gage metal corrugated roof appears to be about 60 years old. It also appears to be in generally good condition with no extensive failure or leaks for water penetration. Minor drips through fasteners and condensation is not unusual for a barn roof of this construction or age, but would not negatively affect the building's timber frame. However, scheduling the replacement of the metal roof, with a metal roof, should be included in the organization's goals for long-term preservation. Gutters and downspouts should be included in this construction. It may also be advantageous to include insulation board in new roof installation, depending on uses identified for the barn.

Upgrades for Usefulness

Depending on TFI's desired use for the barn, other upgrades for amenities may need to be considered. Weather-tightness of the barn, as well as parking and toilet rooms should be investigated with planning activities and openness to the public. Regarding weather-tightness, barns are notoriously open for weather, rodents, etc. due to gaps in doors, siding, and eaves. Most of this can be alleviated during siding and window repair/restoration, but full weather-tightness is difficult at rolling doors. Installation of gaskets, brush seals, and other types of seals will greatly reduce gaps at doors, but careful consideration of these materials should be made to not detract from the barn's historic appearance. Heavy screening over cupola louvers should also be installed.

Floor preservation was discussed at the draft report presentation. Simple preservation that would allow for ease of cleaning would be to have the barn's wood floor thoroughly scrubbed and then application of a polyurethane mopped over the wood surface. This will take a considerable amount of material as it will soak in and need a minimum of two coats.

The barn has electricity, though added outlets and lighting would need to be considered if greater use is determined appropriate. Discussion about using the basement level for community storage occurred at the first site visit. This may be appropriate, but the basement should also be considered for storage for the organization's programs, particularly as demonstration gardens and animal husbandry are developed. Parking and toilet rooms are described in the use/marketability section.

Chicken coop

The chicken coop, considered a contributing building in the National Register nomination and also eligible to receive grant funding, is brick with a corrugated metal roof of the same age as the barn. The coop generally is in good condition, but obvious settlement cracks have occurred in the mortar joints, particularly on the north wall (36). The brick does not appear to be load-bearing masonry, but rather faced onto a wood frame structure. The settlement may be resulting from either deteriorated fasteners to the masonry, or a lack of fasteners. This brick may have been an added exterior finish sometime after original construction. Recommendation for this building would be to have a mason complete some investigative work, likely in conjunction with barn masonry restoration, and replace the metal roof at the same time the barn roof is replaced. The windows and ventilator appear to be historic, if not original. The metal door, however, is a modern replacement (35). For restoration purposes, TFI should consider replacing the metal door with a wood door of vertical boards.

Estimated Costs and Work Priorities

Work is broken into three phases by priority and generally should be undertaken together under each phase. Work in Phase III should be integrated with the organization's long-term use of the barn facility, but is noted here for planning purposes. There is a 10% cushion for contingencies included in the estimate which should provide some level of confidence when raising funds for rehabilitation. Also included are architectural/engineering fees that may be necessary for varying aspects of the project, mostly tied to Phase III development.

Phases & Scope of Work

**these include materials/restoration on chicken coop in appropriate categories of work*

<u>Phase I (1-3 years)</u>	
Masonry restoration	$70,000
Grading/step replacement	
Interior structural review of ad hoc materials/missing post	
<u>Phase II (6-9 years)</u>	
Exterior restoration wood siding/windows	$65,000
New roof installation with gutters/downspouts	
<u>Phase III (10-15 years or as determined necessary)</u>	
Electrical/mechanical upgrades (as needed for use)	
Parking	
Floor preservation	$30,000
Contingency (approx. 10%)	$15,000
Architectural/Engineering:	<u>$15,000</u>
Total Project Costs:	**$ 195,000**

USE/MARKETABILITY

TFI Functions

TFI currently uses the barn for their own events, educational and/or social. The barn itself functions as an educational opportunity as an example of barn architecture from the Golden Age of Agriculture. It is recommended that unique architectural areas be preserved, such as the calving stalls and at least the south half of the milking floor with stanchions and troughs. The openness of the main level should also be preserved. These areas allow the visitor to gain perspective on the historical significance of the farm and barn. Simple, small interpretive signs on the property or in the barn will allow TFI to share the farm's story.

Complementing the historical aspect of the farm/barn are discussions about using the farm as a working site for small-scale agriculture. This concept is appealing for a region with heavy urban influence. Demonstration gardens and small animal husbandry are aspects that may benefit the Michigan City public in general, as well as be part of the organization's greater mission to the community of Tryon Farm. Aside from its current uses, the barn could serve as a community venue for musical and other simple live performances. This aspect may provide a broader audience for the organization to reach besides those in the Tryon Farms community. Tryon Farm has an interesting story to tell, both historically and in its present development. Demonstrating/marketing this to the public is important for sustainability.

Potential Lease Space

TFI may be in a position to generate some revenue from leasing the barn for events, such as weddings and dinners. Improvements to drainage include reconstruction of ramps/concrete stoops which make the main level handicap accessible to the public. Similarly, from an accessibility standpoint, the basement level could have slight improvements to make it accessible internally. Threshold conditions into the basement permit wheelchair access, however a step from the office/stall area to the milking floor would need to be addressed through a slight ramp, possibly removal. The lower level would not likely be part of any lease agreement so access to it by the leasing party would not be of concern. The income generated from lease of the barn should offset any costs associated with utility costs, additional insurance if deemed necessary, management and clean-up, and any other costs incurred to make the building available. Generally, rental of the space will not raise sufficient funds for restoration, but rather on-going maintenance.

A balance will have to be determined with the residents of Tryon Farm with the extent of use of the barn. Residents chose Tryon Farm because of its quiet, rural setting. Events at the barn should be limited in size, and possibly regularity, so as to ensure the quiet nature of the development remains.

Toilet Rooms and Parking

As uses are explored and test-functions scheduled, TFI may want to consider providing amenities that would better serve its visitors. Specifically, improved parking and toilet room facilities should be considered as programming at the barn expands. The aspect of parking is currently handled through off-street parking in the lawn along the community road. This is inexpensive and convenient for upkeep. However, there should be a hard surface pad provided for handicap parking with designation signs and a hard surface walk leading from that area to at least the main level of the barn. Asphalt, concrete, or pervious concrete pavers that meet ADA requirements would be acceptable. Two spaces should be adequate (an area approximately 24' x 20'). This could be provided immediately off/adjacent to the community road east of the fence. The other facilities that should be considered for long-term use of the barn/farm are toilet rooms. While this could be provided within the existing structure of the barn, it would likely be as cost-effective to build a small building with 2-3 unisex bathrooms north of the barn or in combination with a larger year-round community room. The building should complement the architecture of the farm, either brick or wood, but would not necessarily need to appear like a 19th century agricultural building. This allows for visitor use during programs conducted by TFI or for events resulting in the lease of the barn.

OWNERSHIP/FUNDING SOURCES

Ownership structure and funding sources available to TFI as a non-profit are important considerations in long-term planning for restoration/preservation of Tryon Barn. The building's contributing status as part of Tryon Farm, a property that will be listed to the National Register of Historic Places in 2020, provides the gateway to many funding options, however, there are others to be considered. It should also be noted that while the focus of this report is the barn, the chicken coop, as a contributing resource, would also qualify for these funding options.

As an aside to the main focus of this report, Tryon Farm, as a property that will be listed to the National Register of Historic Places in 2020, also includes the Tryon House and drive-through granary. Both of these are contributing resources and may be eligible for tax credits for qualified restoration work. The State of Indiana has a residential rehabilitation tax credit and there is a Federal Rehabilitation Tax Credit for income-producing properties such as the LLC that owns the drive-through granary.

Non-profit Ownership Funding Options

Indiana Landmarks Revolving Loan Fund

The state-wide non-profit preservation organization offers low-interest loans for buildings that are threatened and historically important. It is a loan, however, and would need to be repaid. Typically these loans are capped at $50,000. Many organizations use the funds for the initial purchase of properties planned for restoration.

Todd Zeiger is Landmarks Northern Regional Director, stationed out of South Bend. He can be reached at 574-232-4534 or tzeiger@indianalandmarks.org.

Historic Preservation Funds

The fund is managed by the Indiana Division of Historic Preservation & Archaeology. Grants are made to non-profits and municipalities for threatened historic properties that are listed in on the National Register of Historic Places. The funds may be applied for once a year, in October, and require a 50% match. The cap for the request is $50,000. Given the scarcity of this resource (a barn) in the immediate Michigan City area, and few barns that would qualify for this grant, TFI maybe be in a good position competitively.

More information about this program can be found at http://www.in.gov/dnr/historic/2803.htm.

Community Development Block Grants

While the agency responsible for the distribution of these funds may change depending on the state's administration, the source is consistent through the federal agency of Housing and Urban Development. Currently these funds are administered through the Indiana Office of Community and Rural Affairs. The grants may be made to non-profit groups through a municipality and require a minimum of a 20% match, though higher matching dollars allow the application to be weighted heavier in favor of the applicant. The maximum amount that may be applied for is $500,000. Projects that are given priority often relate to the administration's goals; however a project with broad community benefit would score well. It should be noted that Historic Preservation Funds generally cannot be used as a match for CDBG funds since both are federal sources.

Michigan City falls under OCRA's Northwest District liaison Gerry White. He can be reached at 317-694-8372 or gewhite@ocra.in.gov. Note that these districts may change from time to time.

Local Sources

Other local sources should also be identified in order to show maximum participation by the community. Sources may include local municipal dollars, local economic development dollars, private donations, and community foundation dollars. The Michigan City Redevelopment Commission has, through previous financial assistance, demonstrated their interest in preserving historic resources that can show broader economic impact for the city. A case can be made for the Tryon Barn as a venue for TFI's programs.

Appendix A: Field Survey Photograph Log

Photographs were taken during documentation of the building on February 21, 2019.

EXTERIOR PHOTOGRAPHS

Main Facades

1. Looking northwest at south and east facades

2. Looking southwest at north and east facades

3. Looking east at west facade

Exterior Details

4. West basement wall demonstrates need for minor tuck-pointing near grade

5. Inadequate masonry mortar repair that occurred in previous years should be addressed

6. One of the most significant failures is a separation of face brick from the lower wall. It is unclear why the separation is occurring, but this can be removed and re-laid.

7. This best demonstrates the need for improved drainage and its lack creates need for masonry repair.

8. Recommended removal of deck for basement masonry wall repair.
A new deck may be installed after repair.

9. North wall suffers most from inadequate drainage because of water splash and lack of sun.

10. Algae and dampness leads to paint failure and wood rot.

11. Rainwater is trapped along swale from concrete steps/pads into the building.

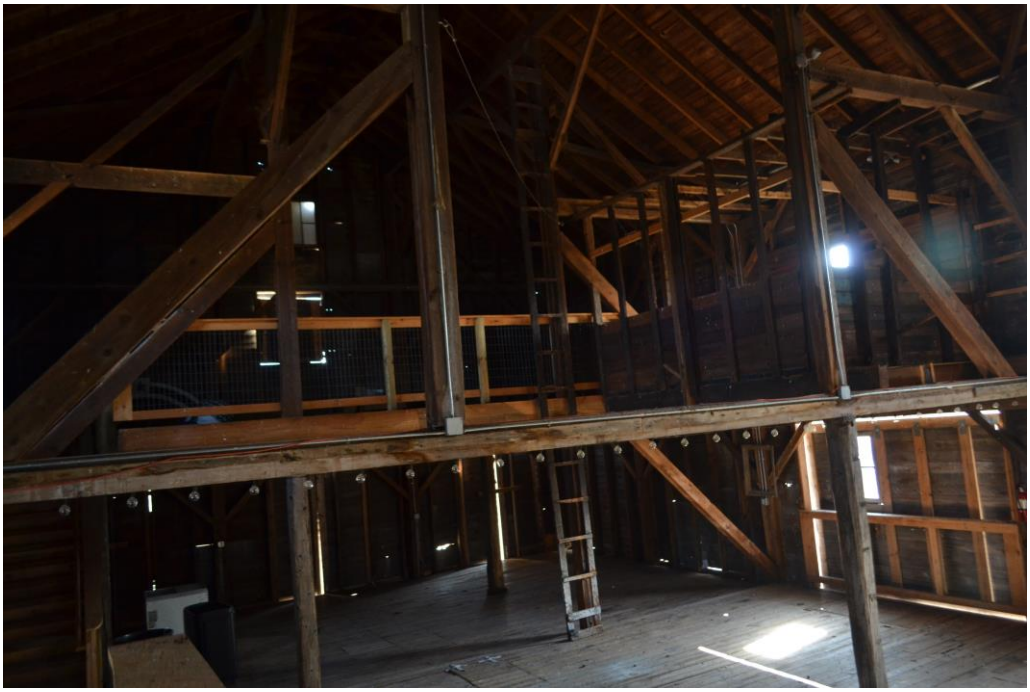
12. Aside from perimeter drainage issues, the exterior is in fairly good condition. Wood siding is in good condition with limited need for repair/replacement. Paint failure will require future scheduling of scrape/prime/paint.

13-14. Three non-historic windows have been added or retrofitted into existing openings. In long-term restoration, it may be desirable to replace the new casements with divided, four-pane sashes (one on south façade and one on west façade). Similarly, one window in the north façade appears to be in an original opening location, but should be a divided, four-pane sash. This is likely an early replacement. A historic window is behind TFI's logo in the east gable; consideration should be made to expose and restore that window. Other windows are in good condition and easily preserved. West façade modern window above (13); replacement window north façade below (14).

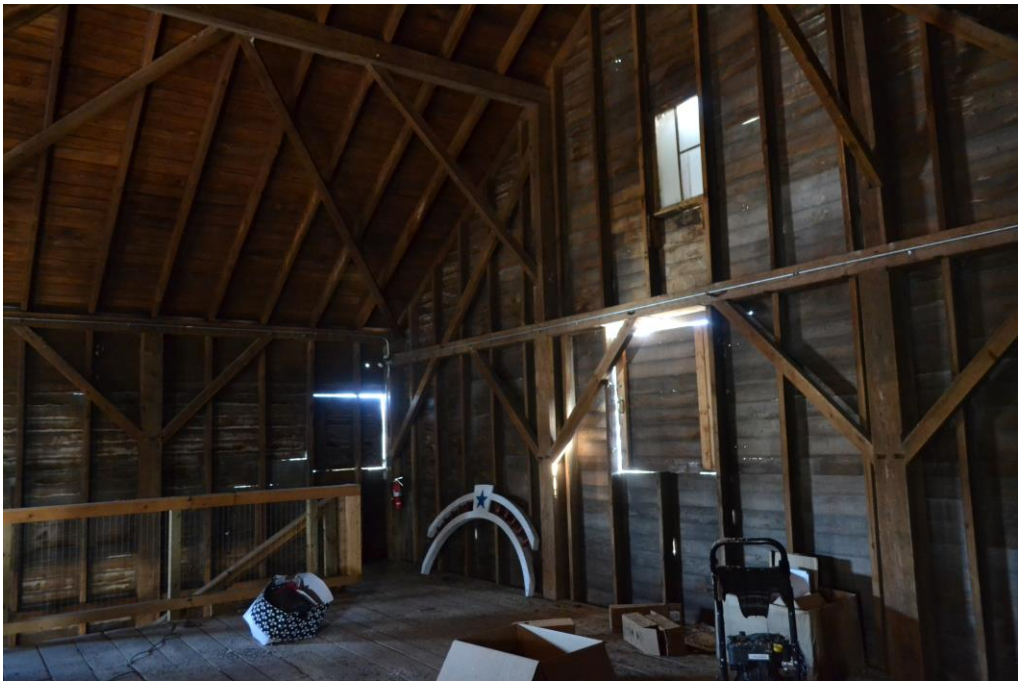
INTERIOR PHOTOGRAPHS

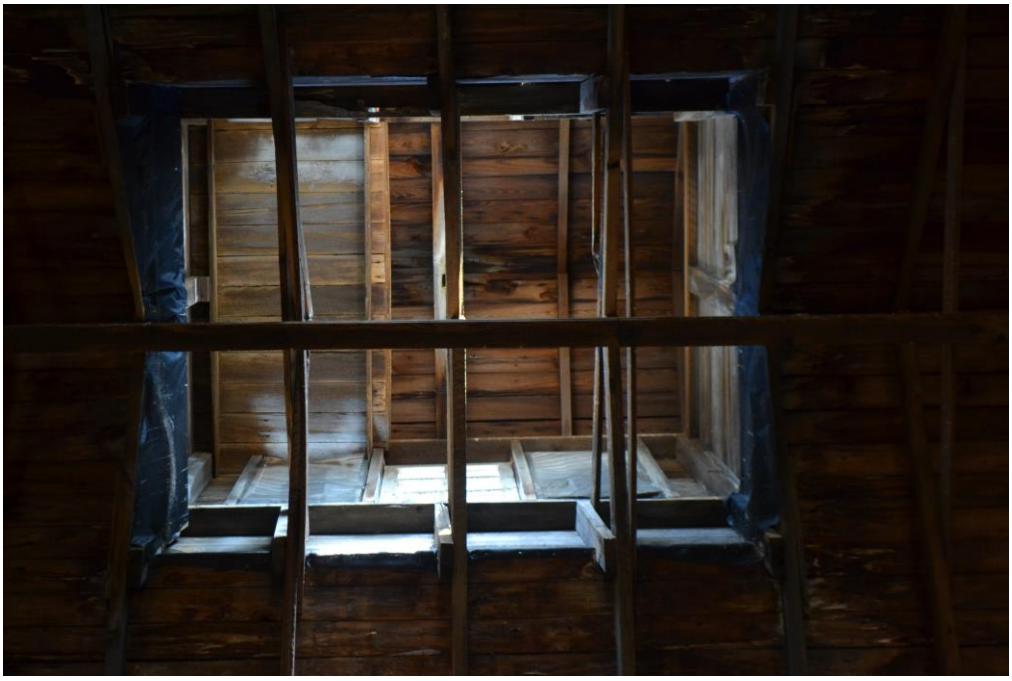
Main Level

15. Looking east (top) and 16 west (bottom). Missing structural post in bottom photograph.



17. Looking east (top) and 18. northeast in east loft (bottom). Note missing structural post in top photo and existing, but covered gable window in bottom photo.

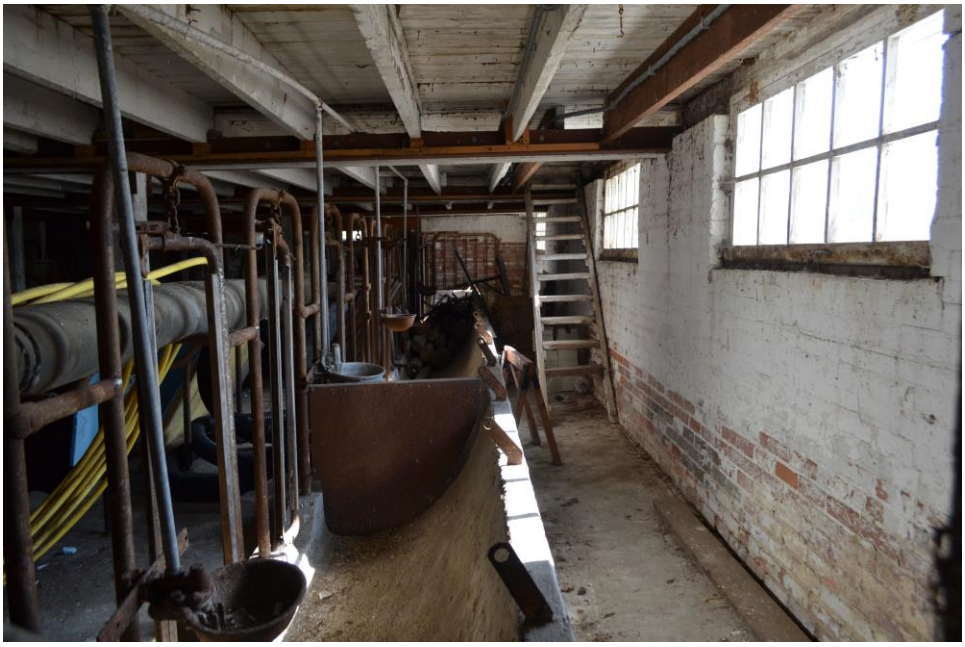


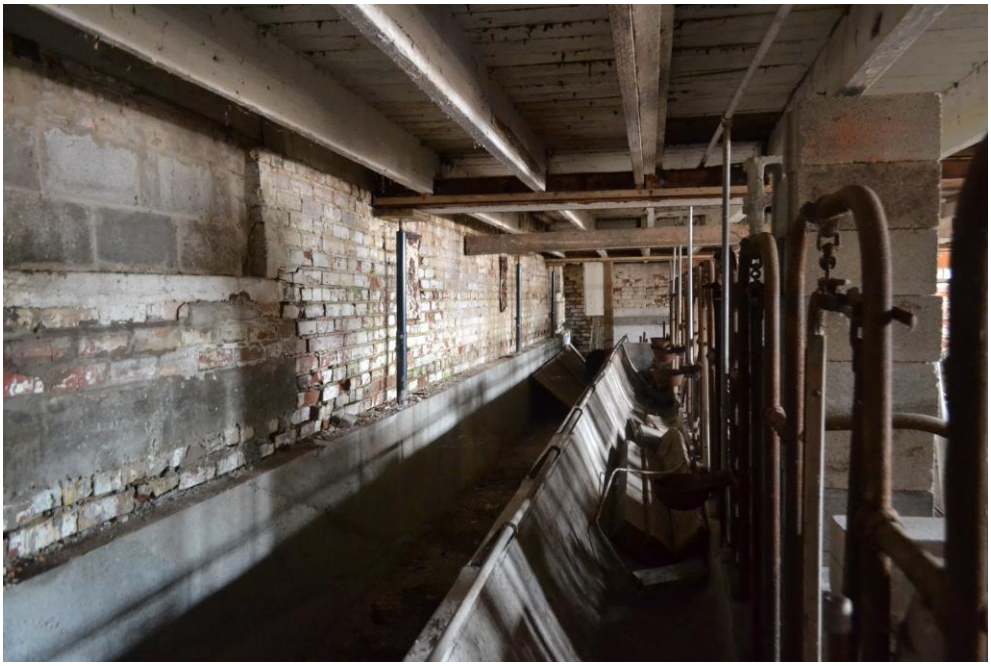


19. Cupola in top photo with existing tarps. 20. Enclosed classroom in bottom photo.

Basement Level

21-22. Example of extant cattle stanchions, drink bowls, and concrete troughs. Note post and beam reinforcement with steel angles (above and below).

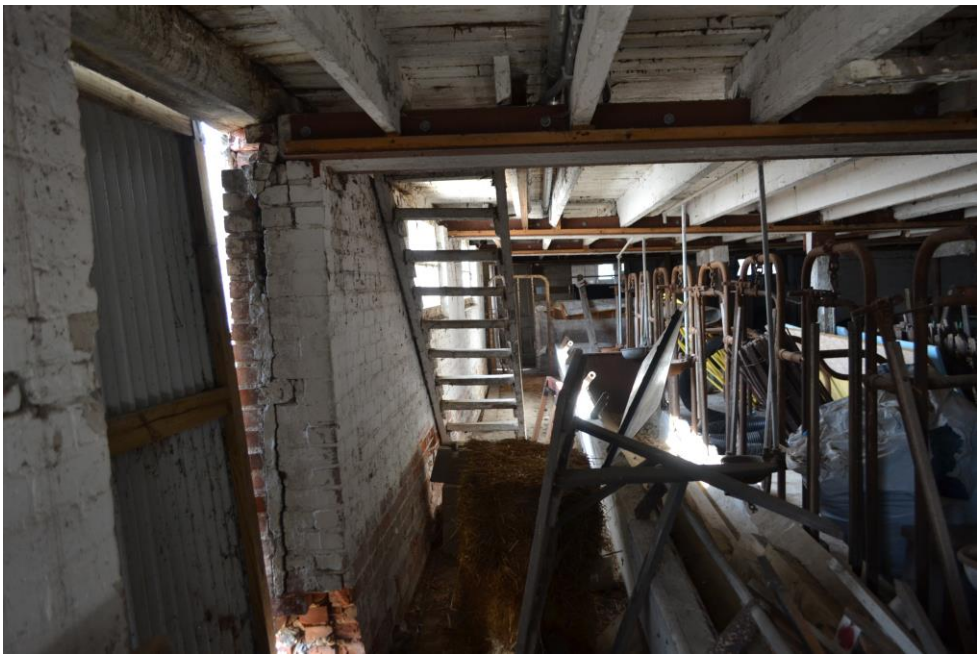




23-24. North basement wall shows signs of moisture settling down through the ground along the wall. Note that there were once windows in this wall, now blocked-in, which means that grade was likely raised a few feet at some time.

25-26. East basement wall showing masonry deterioration from moisture penetration. This area also appears to have been at least partially exposed with grade raised on the exterior. This end also includes new column and beam construction for reinforcement of main level floor.

27-28. Some ad-hoc reinforcement of main level floor joists with concrete block and adjustable pipe columns. A traditional wood post and beam support could be exchanged with the ad-hoc materials.



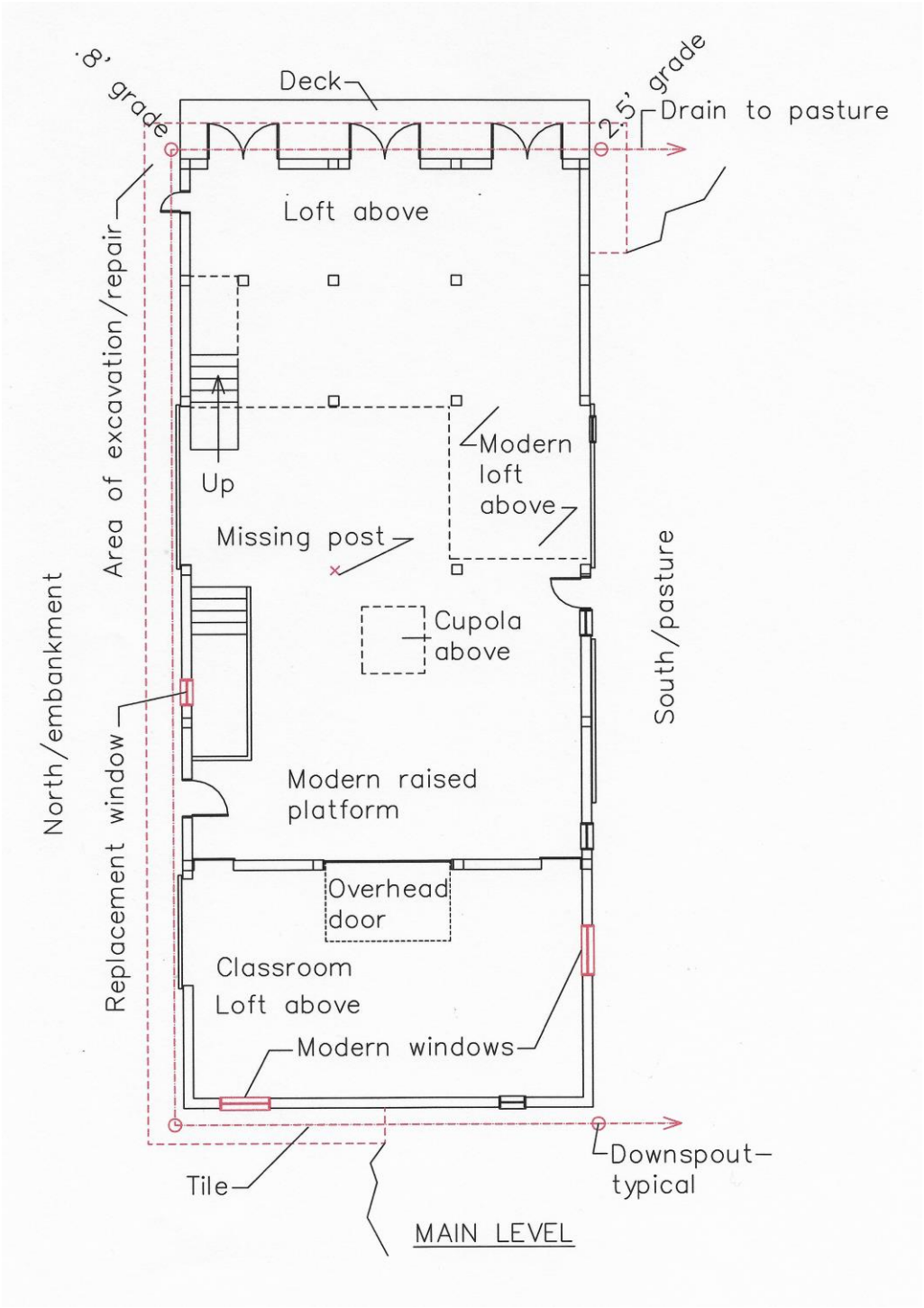
29. Looking west along south basement wall (above). Note separation of face brick on outside of wall and deterioration of masonry wall at base. 30. Passageway from milking floor to calving stall area (below).

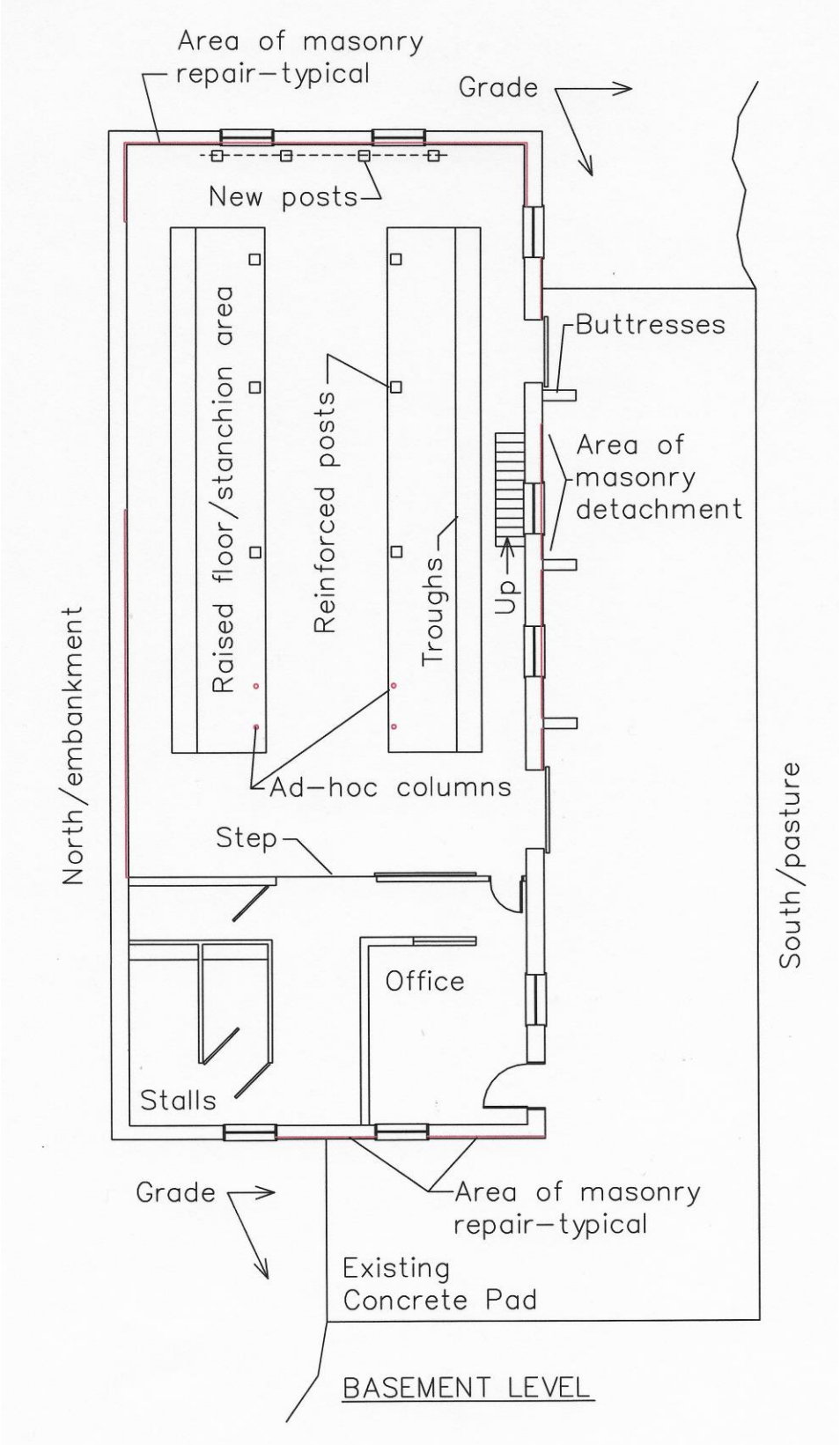
31-32. Calving stall area retains a significant amount of historic materials and stall division.

33-34. Dairy office in southwest corner features modest renovations and reinforcement, including masonry wall reinforcement along base of south basement masonry wall. Concrete buttresses were installed outside of the south wall sometime as an early reinforcement.

35-36. Chicken Coop. Above note inadequate mortar parging on front wall and settlement over modern metal entry door. Below note obvious settlement in mortar joints on back (north) wall.

Appendix B: Drawings/Details




Area of masonry repair–typical
Grade
New posts
Buttresses
Area of masonry detachment
Raised floor/stanchion area
Reinforced posts
Troughs
Up
North/embankment
South/pasture
Ad–hoc columns
Step
Office
Stalls
Grade
Area of masonry repair–typical
Existing Concrete Pad
BASEMENT LEVEL

Reference: Secretary of the Interior's
Preservation Brief 2: Repointing Mortar Joins in Historic Masonry