

MANSFIELD ROLLER MILL INTERPRETIVE PLAN 2004



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Introduction

The Historic Mansfield Roller Mill tells an incredible interpretive story. Its owners and the innovations that they introduced represent Indiana's move from a frontier to an industrial economy.

The mill is an historic structure that is fully operational. It is also a public facility that educates visitors about its place in history. Filling both functions can create problems. Modern exhibits could detract from the historic integrity of the building. The floorplan of the building is tight. Certain areas, key to telling the story, are difficult to access.

Interpreting the mill process to visitors is the challenge at the Historic Mansfield Roller Mill. It is hoped that the recommendations will help simplify the story and make it interpretive. By doing so, visitors will understand the process and appreciate the forward thinking of Jacob Rohm and others like him.

The first portion of the document contains general recommendations for interpreting the Historic Mansfield Roller Mill. For examples of exhibits, see Appendix A: Conceptual Exhibit Plan.

Resources

Mill Interior

As opposed to an empty facility waiting to be filled, Historic Mansfield Roller Mill is already a functioning machine, furnished with original equipment. Almost every piece is important to understanding the story. This includes the milling equipment, chutes and elevators. It also includes the mechanisms that powered the process including turbines, belts and gears.

Other items within the building that tell the story:

- Scale
- Jacob Rohm's desk
- Sack packer that filled the flour bags
- Bag trucks that moved the bagged flour
- Original flour bags
- Ice Saw (an ice house was once adjacent to the mill)
- Elevator buckets
- Mill calendar



The scales are attractive and draw attention.

Mill Design

The structure itself is also a part of the story. The architecture and design all function as part of the milling process. This includes its vertical structure, roof design, monitor, removable upper floors and foundation.

Mill Exterior

The story of the mill includes many resources found outside the building itself.

Features include:

- Original grist wheels that were replaced by the rollers in the late 1800s
- Dam
- Mill Pond
- Mill Race entering the building
- Tail Race leaving the building



The dam is one of many exterior features that are part of the mill process.



Water Wheel

Presenting both a challenge and an opportunity is a water wheel placed on the exterior of the building. The Historic Mansfield Roller Mill has always been powered by turbine wheels that are underwater in the base of the mill. The vertical water wheel was placed at the mill in 1978 for purely aesthetic reasons. It misleads the visitors into believing that it is part of the milling process.

The challenge is to help visitors get past the water wheel and understand how the mill really is powered. There is an opportunity to use the wheel as a comparison of earlier methods of water power.

Nearby Resources

Assisting with the telling of the Historic Mansfield Roller Mill story are the following:

- Covered Bridge: The bridge was built to permit farmers on the opposite side of Raccoon Creek

- to get their grain to the mill.
- Historic Mansfield community: The community exists because of the commerce created by the mill.
 - Sandstone Quarry: The mill foundation is of Mansfield Sandstone similar to what was quarried. Railroad tracks to the quarry once ran directly in front of the mill, causing problems for the mill. Some resources mention that the trains hauled grain from the mill while others say that the trains were only for the quarry.

Staff Resources

The interpretation and operation of the mill and gift shop is the responsibility of:

- One full-time interpreter who oversees both the mill and Raccoon SRA
- One historian position filled by two people (one 8-month position and one 6-month position)

In addition to paid staff, numerous volunteers are critical to interpretation at the Historic Mansfield Roller Mill.

Audiences

Current Conditions

The 2002 attendance at the Historic Mansfield Roller Mill was 28,172. The heaviest season for visitation is during the summer, however, the Covered Bridge Festival in October generates the single highest attendance dates. The 2003 attendance at the Covered Bridge Festival was 13,518.

Most visitors are the general public and families traveling through the area. Some scheduled bus tours, auto tours and motorcycle tours visit the mill. *A high percentage of the visitors are retirees.* Quite a few visitors are from the region and visit annually. A sampling of guest register sheets revealed that *52% of the visitors were from out of state.*

Occasional school groups visit the Historic Mansfield Roller Mill. Many are private schools or home schooled students.

Seasonal hours and limited staff prohibit visitation during winter with the exception of festivals in December and March.

Target Audiences

There is a desire to increase scheduled programs to attract local visitors and groups. There is also an interest in expanding school field trips. A school field trip to the mill would meet the Indiana history requirement in the fourth grade curriculum.

Summary and Evaluation of Existing Interpretive Methods

Summary

Summary of Personal

Roving Interpretation. The bulk of the personal interpretation is roving interpretation. This involves staff or volunteers at the site being available to answer questions, provide information and be an agency presence. At times the roving interpreter is in period costume using third person interpretation. In third person interpretation, the interpreter is not in character, but the costume becomes a prop for credibility.

Demonstrations. Informal demonstrations in the mill allow visitors to observe different aspects of mill operations. Demonstration examples include the operation of the Meadows Mill and opening the gates.

Festivals. The Historic Mansfield Roller Mill is a part of several larger regional festivals. The bulk of their attendance occurs during these events. The mill is open with staff and volunteers present.

Scheduled Programs. Programs have been conducted as requested by schools and special groups.

Summary of Non-personal

Interpretive Labels. Interpretive labels describe the function and additional information regarding specific equipment. Labels are accompanied by an historic illustration of the equipment.

Kiosks. A covered kiosk is positioned in front of the mill. The protected board provides space for posting schedules and information. A second wall-mounted kiosk is next to the front entrance.

Evaluation

The Historic Mansfield Roller Mill differs from State Park and Reservoir interpretive centers in that:

- a) it is an historic building that houses original artifacts
- b) there is no campground/inn affiliated with the site.

As such, the audience will differ from the audience visiting a State Park and Reservoir property. It tends to be older and less likely to be coming for a scheduled event. They are more likely to be “passing through”.

Evaluation of Personal

Keeping the audience in mind, the current approach to personal interpretation is good. Roving interpreters reach far more people than would come to a scheduled program. For groups that call and schedule programs, interpreters are available to conduct programs.

Guided tours could visit the basement. This is an area that, due to safety concerns, should remain off-limits except with a guide. A paved walkway and safety barriers around the turbines would be installed.

Since there is no campground audience, scheduled public events will have a low attendance. The exception to this would be a public program scheduled during a festival when more people are in the vicinity.

2. *Kiosks*. Two kiosks are located at the front of the mill. One is positioned at the base of the accessible ramp. The second is wall-mounted by the front door. They provide a good place to display changeable information. People will approach the kiosks when seeking hours, events and interpretive information (such as a brief history of the mill). This is especially helpful when the mill is closed. The kiosk at the ramp is larger and provides more space for interpretive information. The kiosk by the door should contain hours and upcoming programs. It would be a good location to mention the features on the porch and the train tracks that ran directly in front of the mill.

Theme

The Historic Mansfield Roller Mill demonstrates technological innovations that led to changes in how people work and live.

Subthemes:

1. The move from a manual to an automated process was part of the Industrial Revolution.

Objectives

- A. Visitors will describe early milling methods, including the use of buhrs and water wheels.
- B. Visitors will appreciate the foresight of Jacob Rohm when he converted to automated technology.
- C. Visitors will be able to list the innovative ideas of Oliver Evans found in the mill.
- D. Visitors will be able to identify roller mills, turbines, gravity chutes and elevators.
- E. Visitors will understand that the design and architecture of the mill contribute to its function.

2. The 1880-1930 modernized mill allowed farmers to move from subsistence to surplus farming practices.

Objectives

- A. Visitors will appreciate the increased productivity of the mill following its conversion.
- B. Visitors will understand how farming practices changed as the result of increased production at mills.
- C. Visitors will be able to cite economic impacts due to reduced manpower and increased production.

3. The mechanized mill supported a community, its residents, businesses and consumers.

Objectives

Recommendations

General Recommendations

Upon entering the Historic Mansfield Roller Mill, a visitor's first impression is overwhelming. The building is one machine filled with equipment, belts, chutes and gears. Although a few of the items were brought in later, most of them are a part of the original process.

Having so much original equipment provides a wonderful opportunity for interpretation. It also brings a few challenges:

Complexity. Explaining how each piece of equipment, chute and elevator fits into the complex milling process is difficult. Added to this is the fact that portions of the mill (critical to explaining the process) are off-limits to the public for safety reasons. If visitation to the upper floors is planned in a future phase, keep ADA requirements and safety in mind. See Appendix A: Conceptual Exhibit Plan for details.

Space and Traffic Flow. The mill is the epitome of function when it comes to the milling process. When it comes to *interpreting* the milling process, the facility is a challenge. Space is at a premium. There is little room for new exhibits that would help explain the process. There is also a potential for congested areas due to the layout of the equipment.

With these constraints in mind, some general recommendations:

1. Orientation. A method for orienting visitors to the process is needed:

- A. *Diagram of Process.* This could take the form of a simplified diagram that includes the path of the grain from start to finish. In addition to being available as a sign or handout, this diagram would appear on each equipment label with a "You Are Here" highlight.
- B. *Icons.* Each equipment label should also include an icon that describes its function. There would be a cleaning icon, a sifting icon, a grinding icon, a transportation icon, etc. At a glance, visitors could get a sense of the general function of each piece of equipment.

2. Remove Extraneous Equipment. There are a few pieces of equipment that, while enhancing the site, are not critical to understanding the process. They take valuable space. Each item should be evaluated to make sure that its value in the mill exceeds the need for space. Could the space be better used for exhibits or traffic flow? **Some pieces worth evaluating:**

- A. *Large display case.* The display case, while antique, is not original to the site. In addition to housing smaller artifacts (buckets, flour bags), a large replica of the mill rests upon it. (See Appendix A: Conceptual Exhibit Plan, case will be removed)
- B. *Jacob Rohm's Desk.* This is an original and valuable piece. It is currently by the entry door and is used for handouts and pamphlets. While original to the mill, its location would have been in the office (now the gift shop). (See Appendix A: Conceptual Exhibit Plan, B-3)
- C. *Bag Truck.* This is also original to the site and would have been in the mill. The cart moved bagged flour out of the mill for loading onto wagons. (See Appendix A: Conceptual Exhibit Plan, B-4)

3. Interpretive Center. One solution to the dilemma of converting a functioning mill into a functioning interpretive site is to have an interpretive center adjacent to the mill. This building would provide critical exhibit space and a gathering area for groups. A small program area would help orient visitors (via a video or other media) before they entered the mill. Artifacts such as the desk, bag truck, ice saw, etc. would be housed there and get more emphasis than in their current locations (where they are obstacles to traffic flow). Historical information on the Rohm Family and Oliver Evans's inventions, critical to the

Interpretive Media Recommendations

Theme: The Historic Mansfield Roller Mill demonstrates technological innovations that led to changes in how people work and live.

Phases

Phase I uses the existing mill and its perimeter for interpretation. It does not include constructing an interpretive center. Phase II incorporates an interpretive center and also addresses some long-term projects.

Phase I

A. Exhibits

Isaac Newton would have loved the Historic Mansfield Roller Mill. The technology and physical processes demonstrated at the mill make it perfect for interactive exhibits. Some physical principles that can be incorporated into exhibits:

Turbines vs. waterwheels

Elevators and chutes (using gravity)

Conveyors (Archimedes screw)

Roller grinding vs. stone grinding

To understand the history and impact of the technology, the following exhibits are also included:

Oliver Evans: devices, floor plan, mill manual

Jacob Rohm: new technology, gradual reduction, history

The Historic Mansfield Roller Mill

Theme Title: The Historic Mansfield Roller Mill: An Indiana Innovation

Location: Entry area

Exhibit Topic: Oliver Evans

Exhibit Goal: Conveys the significance of Oliver Evans's technology and how it changed the Historic Mansfield Roller Mill

Pertains to Exhibits: A-1, A-2, A-3, A-4, A-5, B-1, D-4, E-1, E-2, E-5, F-1, F-2, F-3, F-5

Copy Outline:

A. Oliver Evans's story, "He that studies and writes on the improvements of the arts & sciences labors to benefit generations yet unborn, for it is improbable that his contemporaries will pay any attention to him."

B. Devices

1. Elevator
2. Chutes
3. Conveyor

C. Floor plan – arrangement of devices to maximize efficiency

D. Book "The Young Mill-Wrights and Miller's Guide" – first technical manual

1. Removed the mystery of milling
2. Success

E. Benefits

1. Cut labor
2. Less water power needed
3. Produced better flour



The complex mechanics of the mill all helped to create a more efficient process.

The Historic Mansfield Roller Mill

Theme Title: The Historic Mansfield Roller Mill: An Indiana Innovation

Location: Front entry

Exhibit Topic: Jacob Rohm

Exhibit Goal: Conveys the innovative spirit of Jacob Rohm

Pertains to Exhibits: A-3, A-6, B-2, B-3, B-4, C-1, D-1, E-1, E-2, E-3, E-4, F-1, F-2, F-3, F-5

Copy Outline:

A. History time line of Jacob Rohm

B. Conversion of the mill

1. Rollers

2. Building Structure

a. lighting—no interior walls, roof, tall and narrow allowed more window light to reach center,
fire
hazard from lanterns

b. height—more light, gravity chutes

c. removable floors

d. layout of equipment to maximize chutes

The Historic Mansfield Roller Mill

Theme Title: The Historic Mansfield Roller Mill: An Indiana Innovation

Location: Ground floor near turbine control

Exhibit Topic: Turbines versus Waterwheels

Exhibit Goal: Demonstrates the two technologies, explains the advantages of turbines and stresses the use of a turbine at the Historic Mansfield Roller Mill throughout its history.

Pertains to Exhibits: A-3, D-2, D-3

Copy Outline:

A. History and types of wheels, the Historic Mansfield Roller Mill always used turbine

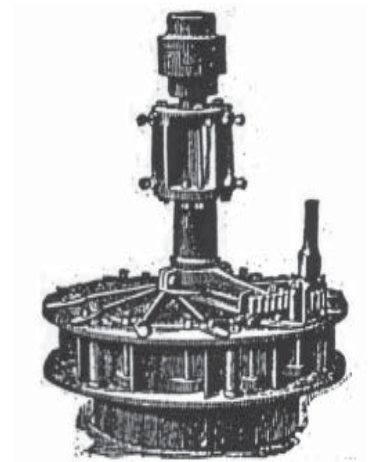
B. Transfer of energy when wheel orientation is changed from vertical to horizontal

C. Advantage of turbine

1. Less cumbersome
2. Fewer maintenance problems
3. Less likely to freeze in the winter
4. Allowed uniformity of construction

D. 1970s vertical wheel at the Historic Mansfield Roller Mill

Addresses the following objectives: 1.A., 1.D.



The turbine that powers the mill is under water, unseen by the visitors.

The Historic Mansfield Roller Mill

Theme Title: The Historic Mansfield Roller Mill: An Indiana Innovation

Location: Near bucket elevators

Exhibit Topic: Elevators and Chutes

Exhibit Goal: Demonstrates the automation and gravity used to move grain and flour through the mill.

Pertains to Exhibits: A-5, C-2, D-3, D-4, E-5, F-4

Copy Outline:

A. Advantages of elevators

1. Less manpower, manpower shortage in Indiana at the time
2. No more need to carry sacks of grain up steps

B. Mechanics – moved by pulleys at top and bottom, pulleys powered by water turbine

Addresses the following objectives: 1B., 1.C., 1.D., 2.A.

The Historic Mansfield Roller Mill

Theme Title: The Historic Mansfield Roller Mill: An Indiana Innovation

Location: Near conveyor

Exhibit Topic: Conveyors

Exhibit Goal: Demonstration of the technology used to move grain horizontally through the mill.

Pertains to Exhibits: A-4, E-5

Copy Outline:

A. Old idea with a new application

1. Archimedes

2. Archimedes screw

B. Eliminated labor

Addresses the following objectives: 1.C., 2.A

The Historic Mansfield Roller Mill

Theme Title: The Historic Mansfield Roller Mill: An Indiana Innovation

Location: Near roller mill

Exhibit Topic: Roller grinding versus stone grinding

Exhibit Goal: Demonstrated the efficiency of rollers over stones

Pertains to Exhibits: A-6, A-7, C-2

Copy Outline:

A. Introduction of rollers

1. History of rollers

2. Installation at the Historic Mansfield Roller Mill

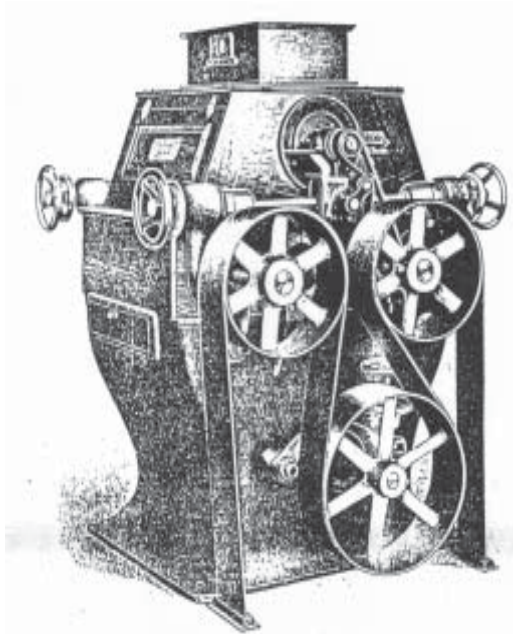
B. Increased productivity

1. Mill could keep up with farmers' production potential

2. Farmers could produce more and move beyond subsistence farming

C. Roller process, gradual reduction

Addresses the following objectives: 1.D., 2.A.



The move from stone wheels to rollers was another innovation of the time.



B. Signs

Interior Signs and Labels.

The interior signs are smaller than the exterior signs with brief text and graphics. Their primary function is to identify equipment and bring the visitor's notice to building features. Among the signs:

1. Identification of the equipment and their function. These signs would give a brief explanation of the equipment and where it fits in the process. It would include icons identifying function and "You are Here" on the mill diagram.

2. Interior building features. These signs point out interesting features that might otherwise be missed. Some suggested features.

- *Calculations on door.* The door on the stairway is covered with penciled calculations. This is pre-calculator and scrap paper was scarce. It is recommended that the calculations be covered with plexiglass to prevent someone from erasing them.
- *Fire warnings.* Mill fires were devastating and common. A warning about refraining from smoking appears in the mill.
- *Cart mark on the front door.* Finished bags were loaded on a wheeled cart and pulled out the front door to be loaded on wagons. The front door has marks from the cart axils.
- *Scale.* Large workable scales are located at the building entry.

Fulfills the following objectives: 1.C., 1.D., 1.E.



Exterior Signs.

Exterior signs will be 24" x 36" fiberglass embedded with a mounting structure adaptable to the location (wall mount, railing mount, poured concrete, etc.)

Exterior Sign 1. Waterwheel vs. turbine (See Appendix A: Conceptual Exhibit Plan, G-2, G-3)

Location: at the waterwheel

Concepts to cover in text and graphics:

- a. The mill has always been turbine driven.
- b. The efficiency of turbines
- c. How turbines work

Fulfills the following objectives: 1.A., 1.E.

Exterior Sign 2. The Mill Community (See Appendix A: Conceptual Exhibit Plan, I-2, J-1, J-3)

Location: front porch

Concepts to cover:

When in operation, the mill supported and was supported by several businesses

Types of businesses

Families came to grind grain and purchase supplies.

Fulfills the following objectives: 2.C., 3.A., 3.B.

Exterior Sign 3. Exterior Building Features (See Appendix A: Conceptual Exhibit Plan, H-1)

Location: back deck

Features identified:

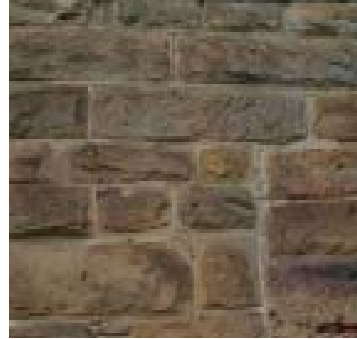
Increased building height

Solid rock foundation

Windows

Roof design

Fulfills the following objectives: 1.B., 1.E., 2.A.



The solid foundation of the mill was locally quarried.

C. Brochures

Brochure 1. Changes resulting from new technology

The technology and socioeconomic implications of the Historic Mansfield Roller Mill are complex. The exhibits and signs help visitors understand the basic principles. For those who wish in-depth information, a brochure is available. The brochure allows visitors to read longer text at their leisure.

The concepts covered in the brochure include:

The impact of the new mill technology on farming practices (John Deere, Cyrus McCormick)

The economics of moving from subsistence to surplus

The implications of automation on manpower

Fulfills the following objectives: 2.A., 2.B., 2.C., 3.A., 3.B.

Brochure 2. Walking tour of mill

A self-guided tour of the interior and exterior of the mill provides detailed information on the mill process, equipment and architecture. The brochure would go beyond what the individual signs and labels can provide. Stops would be inside and outside the mill. The brochure would be available in the mill. It could also be available at other sites when the mill is closed, allowing people to tour the exterior of the mill during the off-season.

Fulfills the following objectives: 1.A - E.

D. Programs

Public

The current visitors to the Historic Mansfield Roller Mill tend to be older couples, attending one of the regional festivals. As opposed to other State properties with campgrounds or inns, these visitors are passing through.

This group tends not to attend scheduled programs, as they are on their way to other activities (shopping, touring bridges, etc.). The challenge is to encourage people to stay a bit and learn about the site. The *roving interpreter* is a great way to get information to people who wander into the building.

Offering *demonstrations* during festivals has also worked well. It is recommended to offer more demonstrations at the mill. These would be scheduled and posted on the bulletin board. People who are in Mansfield for an hour or two could take a few moments to watch for awhile. Demonstrations are not as structured as a formal program and are perceived as less of a commitment. They are still interpretive programs in that they are provoking interest in the site and helping tell the story. The interpreter has an opportunity to go into more depth for those who pose questions.

Demonstrations that have been conducted include operating the Meadows Mill and opening the gates. Other demonstrations of equipment or aspects of the mill operation should be scheduled during the festivals.

Groups

There is a desire to promote and offer interpretive programs on request to schools, scouts, trade technology students (from Ivy Tech and ISU) and other organizations. Promoting the site's theme and how this theme meets the goals of the school or organization offers greater success. For example, developing programs based on existing curriculum requirements (thereby helping teachers meet their objectives) is more likely to be embraced.

History is the obvious subject area that the mill can cover. Indiana history is required in the fourth grade curriculum. There are other subjects that should be considered. The mill can go a long way in teaching about agriculture, physics and economics. Local schools as well as Purdue University (which houses Ag Extension) could be consulted on the best approaches for field trips. Programs can be developed and marketed to meet 4-H and scout badge requirements.

Some helpful web sites when developing programs to meet requirements:

E. Staff

Currently the full-time interpreter works between two sites: Raccoon SRA and the Historic Mansfield Roller Mill. Seasonal employees work at the mill during busy seasons. Volunteers provide needed assistance and support.

In order to expand interpretive efforts staff must increase. In particular, if programs for schools and groups are developed and marketed, there needs to be a trained interpreter to conduct them. This requires not only training in interpretation, but also training about the mill.

At a minimum, an interpreter could be available on an “as needed” basis when programs are requested. The interpreter would be paid for preparation time, travel expenses and conducting the program.

In the future, a full-time mill manager/historian position will be needed. The position would be similar to other interpretive positions in the DNR, but would include technical expertise in the operation of the mill and experience in cultural interpretation.

A full-time interpreter would be responsible for:

- the daily building operation and administration
- promoting, scheduling and conducting programs
- supervising the gift shop
- recruiting and supervising volunteers
- maintaining and updating interpretive media at the mill

If an interpretive center is built, the interpreter would be responsible for those operations and would have an office there.

Phase II

Introduction

Items in Phase II are recommendations for the grounds and exterior of the Historic Mansfield Roller Mill. Items addressed in Appendix A: Conceptual Exhibit Plan are noted.

A. Interpretive Center

A long-term goal is to build an interpretive center adjacent to the mill. The building would permit an in-depth telling of the mill's story. Topics such as the Mansfield community, mill owners, social and economic aspects of the mill, and agricultural changes during this time would have space. All of these stories are related to the mill, but due to lack of space at the mill, they are given little space. An interpretive center would have space to display the extensive artifact collection. Items currently in the mill, but not crucial to understanding the mill, could be displayed at the center. It would allow the mill to focus only on what the mill originally looked like and how it operated.

An interpretive center also provides program and gathering space. It could accommodate school groups and other groups for an orientation before visiting the mill. A media program offered at regular intervals during festivals would attract the passive visitors to Mansfield Village.

B. Picnic Shelter

A picnic shelter near the mill would include interpretive panels related to the mill and related points of interest on the grounds.

C. Grain Garden (See Appendix A: Conceptual Exhibit Plan, I-1)

A garden with wheat, corn and crops important to the milling process will be located on the grounds. Interpretive panels will explain the grains and their uses and evolution from a wild to cultivated plant.

D. Outdoor Exhibits (See Appendix A: Conceptual Exhibit Plan, G-1))

Water-powered models of a turbine and a waterwheel will demonstrate the differences in operation.

E. Touch Screen Video Tour

For those unable to access the upper and basement floors of the mill, a touch screen video tour will be available. The tour explains the processes and equipment on the other floors and how it connects with the process.

F. Live Video Feed from the Turbine

The turbine is crucial to the correct understanding of how the mill works. Unfortunately, it is difficult



A live video feed of the turbine would help visitors understand how it powers the mill.