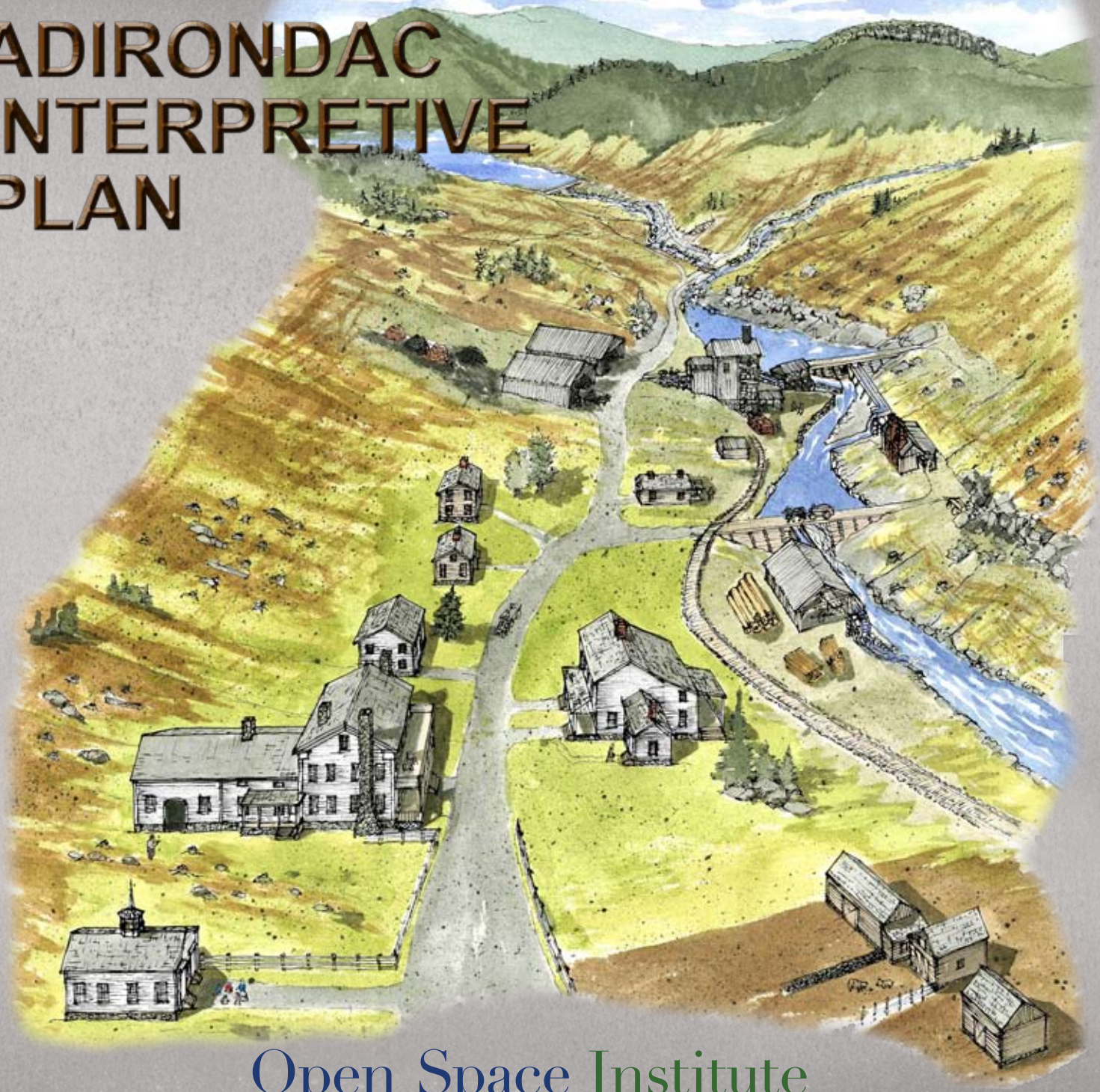


ADIRONDAC INTERPRETIVE PLAN



Open Space Institute

AUGUST 2013

PROJECT TEAM

Interpretive design consultant The Art of Wilderness has been hired to design the interpretive products. This team consists Robert McNamara, principal designer and artist, Philip Terrie, historian and writer, Fred Wilhelm, surveyor, Brenda Ko, facilitator, and Erin Zehr, graphic artist.

We have been assisted by the following team of stakeholders, historians, and experts:

Charles Vandrei	NYS Department of Environmental Conservation (NYSDEC) Historic Preservation Officer
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Dave Staley	NYS Museum
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Dell Jeffrey	NYSDEC Forest Ranger
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Clive Friend	NYSDEC Operations Supervisor
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Austin O'Brien	NYS Office of Parks, Recreation, and Historic Preservation
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Paul Hai	Adirondack Ecological Center
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Hallie Bond	Adirondack Museum
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Bob Quinn	SUNY College of Environmental Science and Forestry
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George Canon	Town of Newcomb Supervisor
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Mark Yandon	Town of Newcomb Highway Superintendent
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Jenifer Kuba	Essex County Historical Society
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Ellen Ryan	Adirondack Architectural Heritage
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We met with this group at three key points in the process; at a kick-off meeting where we brainstormed topics that could be interpreted at the site, at a presentation of the preliminary designs for the interpretive panels for the blast furnace site, and at the presentation of the preliminary interpretive plan for the entire site. Feedback from the group was incorporated after each successive step.

From this large group of stakeholders, we selected a core group of experts to form a working group, and met with them at a theme work session where we distilled the long list of themes into a priority list that would actually be interpreted on site.

Members of the working group are:

Charles Vandrei	NYSDEC Historic Preservation Officer
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Austin O'Brien	NYSOPRHP
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Paul Hai	Adirondack Ecological Center
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Hallie Bond	Adirondack Museum
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We have also coordinated the work with the Essex County Highway Department, NYSDEC engineers, and the Adirondack Park Agency.

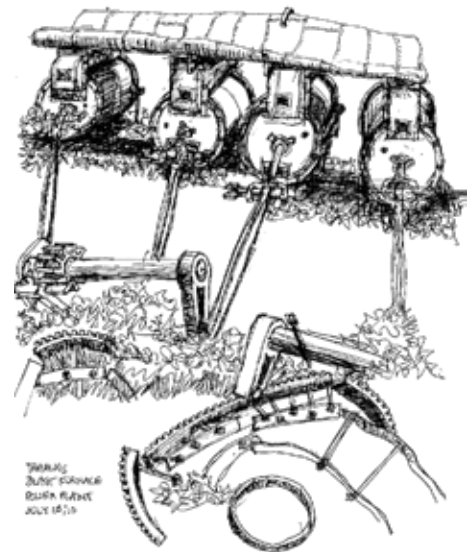
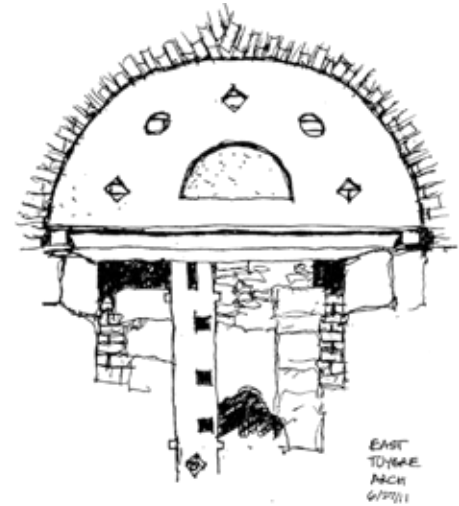
Thanks to the following supporters for helping to make this project possible:

New York State Council on the Arts
Overhills Foundation

The Prospect Hill Foundation
The Walbridge Fund, Ltd.

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Rising over the Upper Works Road where it has stood for over 150 years is a remarkable stone structure, passed by early adventurers looking for the “ghost town” of Adirondac, passed by some of the first hunting club members in the Adirondacks, passed by Theodore Roosevelt on his way to be sworn in as President of the United States, passed by mine workers going home after a hard day’s work at the Titanium mine, and more recently passed by countless hikers on their way to the Upper Works trailhead; the “New” McIntyre Furnace.

Sunken behind the monumental furnace, along the Hudson River is a tangle of old machinery that once powered the furnace. Covered up by a blanket of regenerated forest are many other structures and objects associated with 50 years worth of efforts to produce iron in this high valley along the headwaters of the Hudson River.

The furnace still stands as a tribute to the Herculean efforts of a determined group of people but the details of the story are buried,

unavailable to the quizzical passersby, almost every one of whom pauses alongside and wonders; “What is that structure,” and “What is it for.” Once introduced to the story, many other questions follow; “How was it built ... who built it? ... how old is it? ... how did it work ... why was it abandoned?” Other facets of this fascinating place are waiting to be revealed, like the connection between the “ghost town” and the furnace, the network of supporting facilities, and the legacy of a progression of earlier efforts that are no longer evident at all to the Upper Works traveler.



THE PROCESS

RESEARCH *(see bibliography for a list of resources)*

Background materials were gathered from a variety of sources: the Adirondack Ecological Center provided a collection of historical accounts and photographs, and Paul Hai contributed much personal knowledge on many topics. Charles Vandreli guided site visits to the obvious and hidden historic features which were part of the operation. Dave Staley from the State Museum provided the archeological survey conducted under his supervision in November 2004. Collected artifacts were viewed at the State Museum and the Adirondack Museum, and the Adirondack Museum provided historic maps and photographs. The drawings produced by the Historical American Engineering Record (HAER) were a critical source for the artist's conceptions of the blast furnace complex and details.

These materials form the foundation for the themes, topics, and interpretive designs presented here.

ANALYZE AUDIENCE

Casual visitors were interviewed informally on site to determine the extent of their current knowledge about the relics and to find out what they wished to know about the operation. The people represented a broad demographic, including students from grade school to college level, former residents, history buffs, and hikers, hailing from local communities to surrounding states.

Dell Jeffrey and Clive Friend provided statistical data and anecdotal accounts of the DEC trailhead users. Trailhead use is growing and it is expected to continue to grow as the northeastern trailheads become more crowded.

SUNY Potsdam, SUNY Plattsburgh, St. Lawrence University, and other educational institutions bring history and engineering classes to the site.

The Adirondack Interpretive Center leads walks and programs on site for a broad variety people.

The site is well known among architectural heritage, early American industry, and historical societies and enthusiasts, but it is not well known to the general populace.

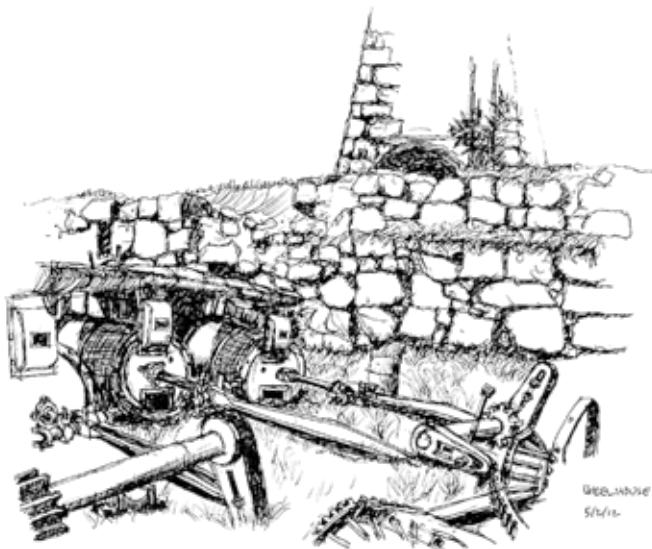
DESIGN

Using the Sasaki master plan as a point of departure, a plan was developed for interpretive materials for first and future project phases. A design vocabulary and styles were established to guide first and future phases of interpretive panel production so that consistency is maintained.

This document contains a plan for development of interpretive products that will provide answers to the questions and provide on-site documentation of important episodes in the history of human interaction with this corner of the Adirondack region.

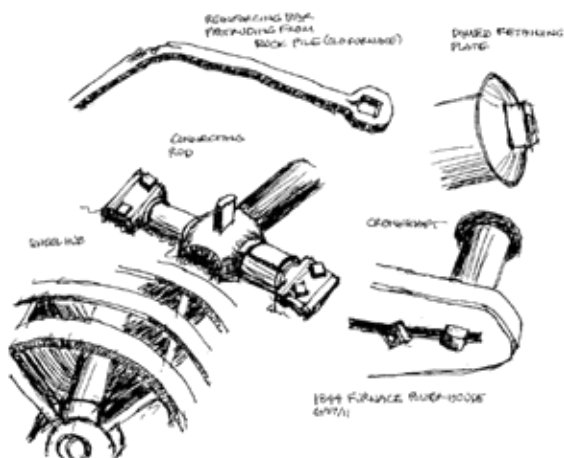
The scope of the project under contract currently is for an interpretive plan for the ultimate site interpretation and access in the Upper and Lower Works vicinity, and a series of interpretive panels for the blast furnace site.

PRODUCTS



The first phase of interpretive panel design will result in installation of storytelling panels for the 1850s blast furnace vicinity including (3) 30" x 40" panels, (1) 20" x 24" panel, (4) 12" x 12" label signs. These panels will be designed and manufactured as part of the current contract. In addition, there will be one large panel (36" x 48") presenting an overview of the entire community circa 1854. This panel will be mounted on a temporary support structure and later moved to a "welcome kiosk" near the McNaughton cottage.

The second phase of the interpretive panel project is prescribed by this interpretive plan and will complete the story of the Adirondac community, earlier ironmaking activities, and the breadth of the support operations along the Hudson River. The Phase 2 project will involve design, artwork, digital files, and manufacture of approximately 16 interpretive panels, 4 wayfinding signs, and several small label signs. The exact size and configuration of those panels will be determined as part of the design process. The proposed themes and topics are detailed below.



This page will be a fold down map of the interpretive trail and panel layout for the Adirondac village vicinity.

MAJOR PANELS

1.1 Adirondac

Title: Adirondac 1826 - 1858

▼
Phase 1 (four major panels and four label signs for the “new furnace” area, and one major panel for the village area were designed and manufactured as part of the current contract).



Theme: A community once occupied this valley, with all the facilities necessary to produce iron and to support the people who worked and lived here.

Message details: Physical layout, provisions, daily life in a mining town, self-sufficiency vs dependence.

Layout: Birdseye view from south.

This panel will include a directory of the other panels.

1.2 Complex

Title: An Ironmaking Complex



Theme: The ruins here were part of a larger complex of facilities necessary to produce iron, built with great effort but only operated for a short time.

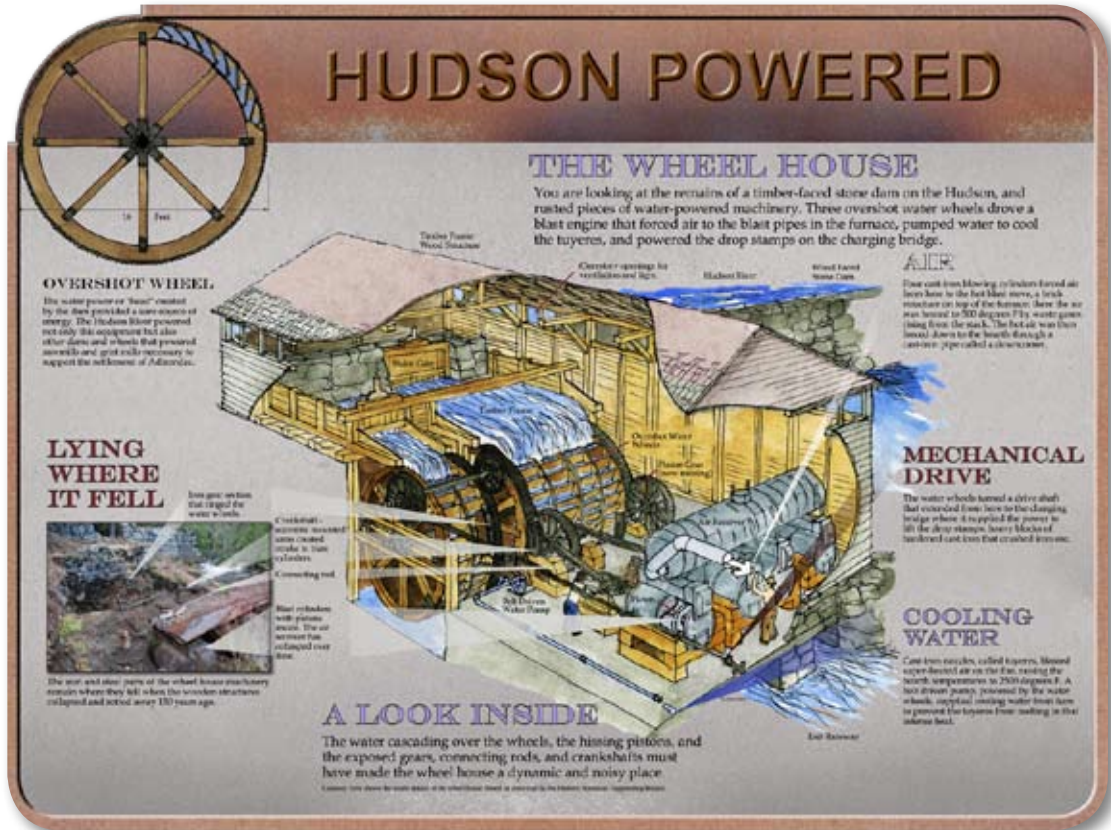
Message details: Complete facility layout, location in valley context, lifespan.

Layout: Birdseye cutaway view of reconstructed complex, area map, timeline.

MAJOR PANELS

1.3 Water Power

Title: Hudson Powered



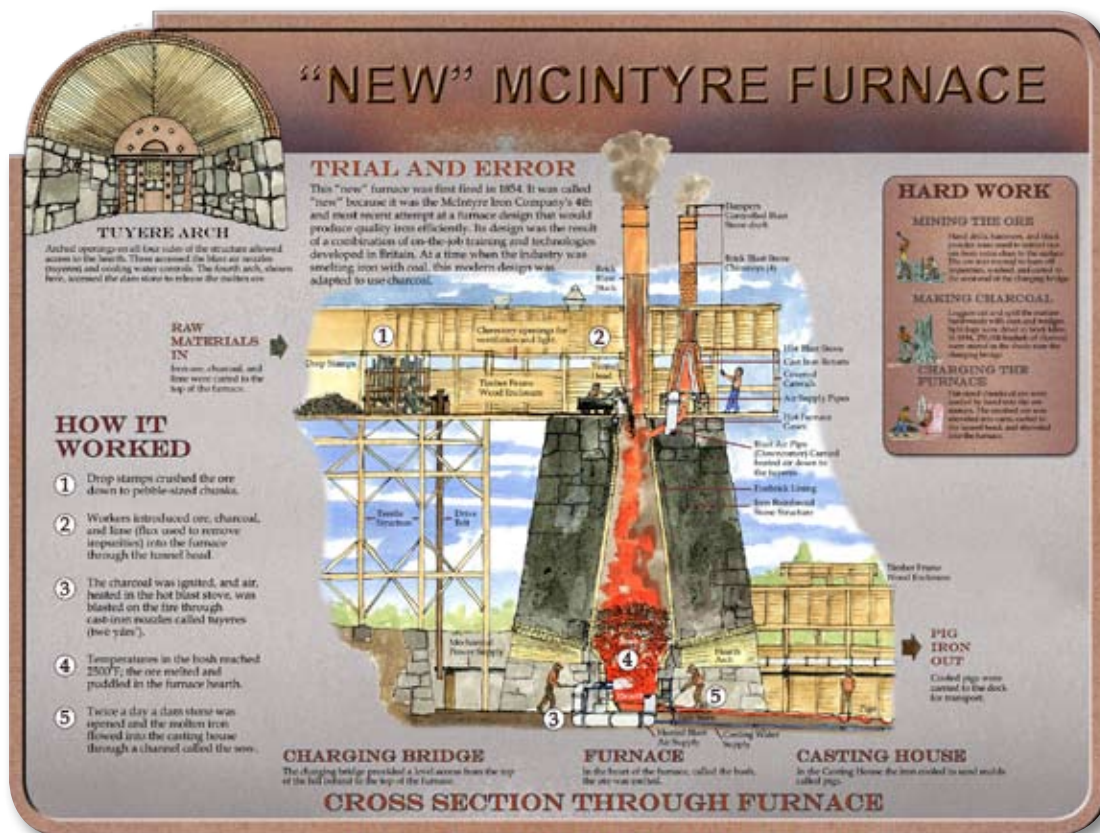
Theme: The equipment lying here was once assembled in a wheelhouse, powered by water from the Hudson River, providing the operating infrastructure necessary to run the furnace.

Message details: Provision of air, mechanical drive, and cooling water, comparison of ruin to components in place during operation.

Layout: Reconstructed cutaway perspective view of equipment as originally positioned, photo of ruins today.

1.4 “New” Furnace

Title: “New” McIntyre Furnace



Theme: The mechanics, materials, and methods used at the furnace, how it worked, and the hard labor involved.

Message details: Internal workings of the furnace, technical details, tasks.

Layout: Cross-section through furnace complex.

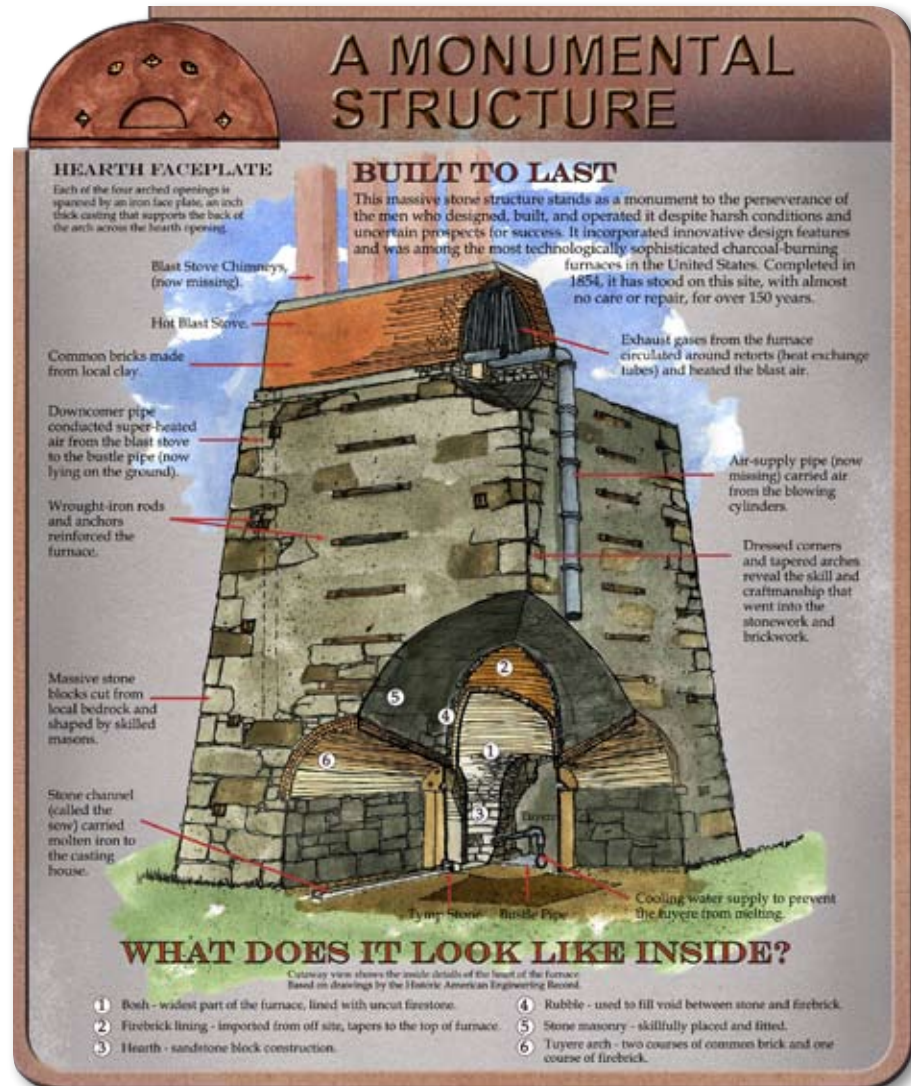
1.5 Furnace Perspective

Title: A Monumental Structure

Theme: The construction and craftsmanship were so sound that the structure has withstood the test of time.

Message details: Construction details, building materials.

Layout: Cutaway perspective view.





The following panels will be designed and manufactured as part of a future contract(s).

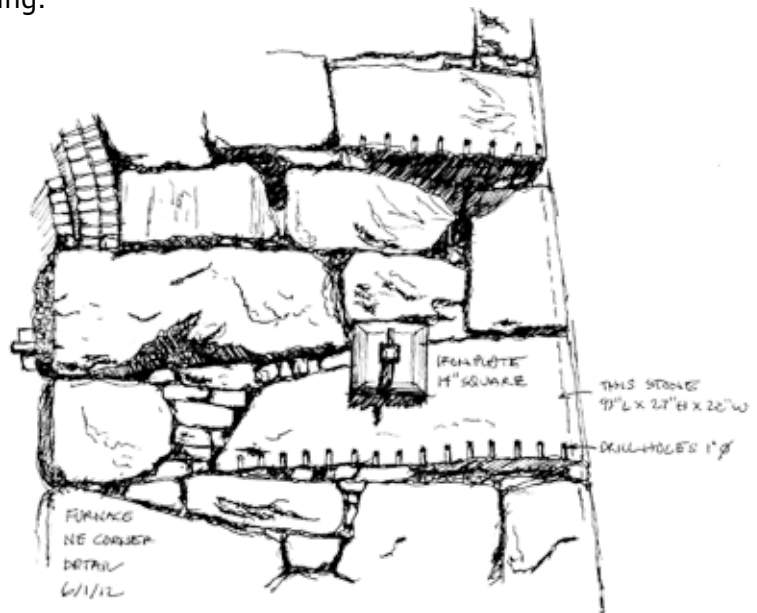
2.1 Furnace Construction

Title: A Herculean Effort

Theme: Using only primitive mechanical devices and horsepower, massive stones were shaped and placed to form the furnace structure.

Message details: Construction methods, materials statistics, materials sources.

Layout: Details of assembly and mechanical devices with character of a construction drawing.



2.2 McNaughton Cottage

Title: Through It All



Theme: This cottage has stood through every era of the multi-faceted history of Adirondac.

Message details: Building functions through the centuries, Theodore Roosevelt connection, Burroughs, Hunter.

Layout: Historic photos, building and people, timeline.

2.3 The Process (Big Picture)

Title: From Forest to Furnace

Theme: The entire valley was occupied and exploited to feed the furnace, many supporting operations were required.

Message details: Infrastructure, logistics, transportation, waterpower, charcoal, brickmaking, impact on the landscape

Layout: Valley wide plan view showing all components and the flow of materials, with vignettes of major facets.

2.4 The Backers

Title: The Money Men, McIntyre, McMartin, McNaughton

Theme: Financial backers and influential businessmen worked in Albany and New York City to develop the operation.

Message details: Who these men were, their role, personal involvement, dreams, legacy.

Layout: Portraits, graphic chain of command, their visions.

2.5 Transportation

Title: Missing Link

Theme: The iron was discovered, mined, and processed, now it had to be transported to foundries in the east, and that presented a fatal flaw.

Message details: The path from rock to foundry, the physical dimensions, the political maneuvering, transport methods.

Layout: Map showing origin, destination, and key intermediate points, images of transport vehicles.

2.6 The Villages

Title: Twice Abandoned

Theme: The ruins here are a second generation “ghost town,” built for different purposes and abandoned in two different centuries.

Message details: Original mining community, caretaker era, club era, mine worker era.

Layout: Timeline with historic photos.



2.7 The Club Era

Title: From Work to Play

Theme: The deteriorating buildings you see today were built on the foundations of Adirondac but were used for a much different purpose.

Message details: Hunting club history, how it came about, who was involved, what were the activities, notable visitors. Sidebar on Roosevelt connection.

Layout: Birdseye view of the club community similar to the Adirondac birdseye graphic, with buildings identified and details presented on ownership, when built, etc. Roosevelt image.

2.8 Taming the Wilderness

Title: Human Alterations

Theme: Mining operations in this valley drastically changed the virgin forest plant communities and even altered the flow of the Hudson, but today the forest has reclaimed the land and re-established the native ecosystem.

Message details: Dam locations, tributaries, Henderson's efforts to divert flow to Calamity Brook. Clearing, quarrying, farming.

Layout: Map of upper watershed and relationship to Upper Works, Tahawus, and Lower Works, showing the extent of affected area.

2.9 Henderson

Title: David Henderson
1807-1845

Theme: Henderson was an important driving force behind the operations on site, resourceful, energetic, and smart, but he met with a calamitous untimely death that was a blow to the whole effort.

Message details: Henderson biography, role in the operation, calamity.

Layout: Henderson portrait, monument image, timeline of accomplishments, quotes from correspondence.



2.10 Making Iron

Title: Smelting Iron Ore

Theme: In spite of the isolation, the experimentation here was part of a worldwide effort to improve the efficiency of making iron.

Message details: Experimentation, expositions, European connections, artisans (Dixon, Portious), impurities.

2.11 1844 Furnace

Title: Trial and Error

Theme: This mound is all that is left of one of several generations of furnaces, each becoming larger and more complex.

Message details: What it looked like and how it worked, supporting components and their functions.

Layout: Reconstructed view showing the complete furnace complex.

2.12 Charcoal, Charcoal Kiln

Title: Fueling the Furnace

Theme: Providing fuel in the form of charcoal for the furnace was a major undertaking that culminated in processing the wood in a kiln.

Message details: Cutting the trees, stats on quantities, process. Environmental impact.

Layout: Images of step by step process, schematic of kiln.

2.13 Quarrying

Title: Solid Bedrock

Theme: The iron ore here was close to the surface so deep mines weren't required but the ore still had to be split and blasted out of solid bedrock formations by back-breaking hand labor.

Message details: Methods, tools, quantities, sizes.

Layout: Images of tools and process.

2.14 Brickmaking

Title: Baking the Bricks

Theme: Bricks needed for chimneys and other structures were made on site.

Message details: Process, materials, equipment, end product.

Layout: Images of step by step process, schematic of kiln, photos of surviving pieces of equipment (and/or location by the actual equipment if possible).

2.15 The Ore

Title: Iron Dam

Theme: Rich ore was discovered here, elaborate plans were made to mine it, and intense efforts were undertaken to smelt it into iron.

Message details: Discovery, extraction, physical characteristics.

Layout: Images of steps in the process from extraction to smelting.

LABEL SIGNS

FURNACE



This photograph, taken from the opposite side of the furnace in 1888 by Seneca Ray Stoddard, shows some of the wooden structures still in place. The trestle-like structure on the left is the charging bridge that once extended across the road from the hill to your right.

LABEL SIGNS

Label signs should be used to identify significant features and provide an introductory level of information, for example; the name of a cottage ruin and a text sentence indicating when it was built and by whom, and/or a historic photograph. These signs will be approximately 12" square.

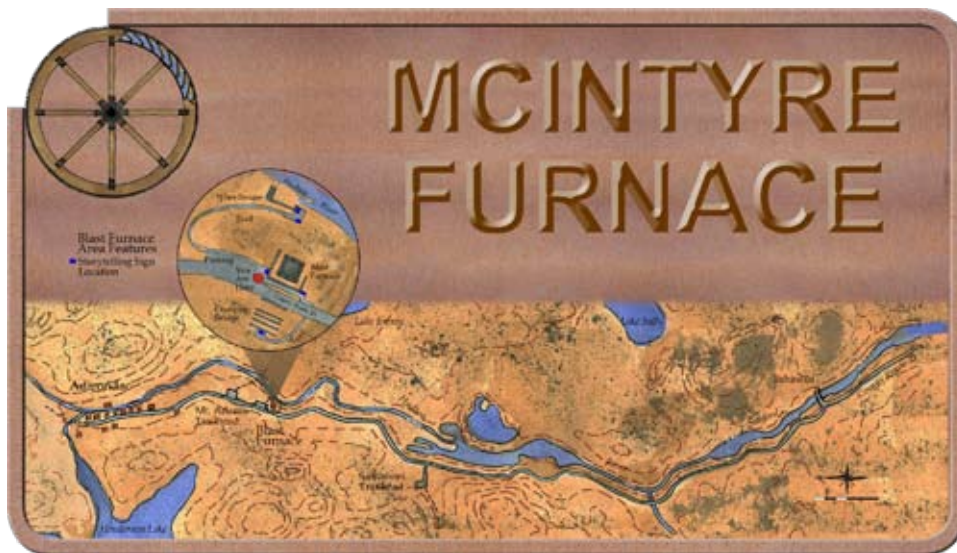
LABEL SIGNS

Small panels will identify major components of the complex:

- ▶ Blast Furnace
- ▶ Wheel House
- ▶ Casting House
- ▶ Charging Bridge

WAYFINDING SIGNS

Wayfinding signs should be located at key decision points, starting at the intersection of Lower Works Road and Blue Ridge Road. Signs at intersections will show the entire stretch of the Hudson River from Upper Works to Lower Works, and include major points of interest, parking areas, and “You Are Here” indicators. Other signs will be located at parking areas and will include a detailed local map inset for visitor orientation.



Example of a Wayfinding Sign

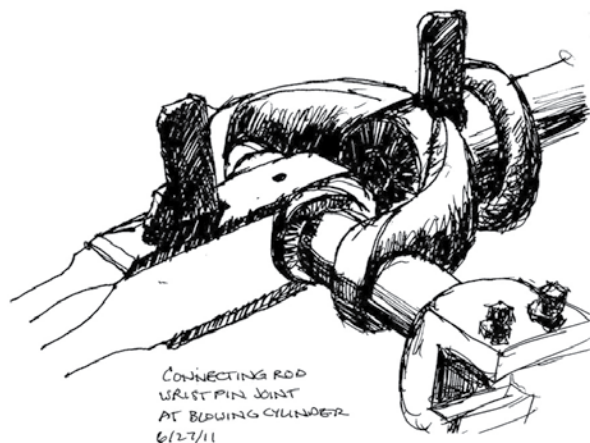
- ▶ 16. Intersection of Lower Works Road and Blue Ridge Road
- ▶ 17. Intersection of Lower Works Road and Upper Works Road
- ▶ 18. Blast Furnace vicinity
- ▶ 19. Village vicinity

MCNAUGHTON COTTAGE EXHIBIT

The Sasaki Associates master plan recommended that the McNaughton Cottage be reused as a Site Visitor Center and Museum. This interpretive plan recommends the museum exhibits focus on the following themes:

- ▶ A timeline for human use of the upper Hudson River watershed resources, highlighting the charismatic people from all eras.
- ▶ The Teddy Roosevelt connection.
- ▶ Environmental impact and recovery from discovery to the present.
- ▶ Movement to preserve open space.

The museum exhibits should focus on broad topics that connect the valley to the outside world and global events, and bring the viewer all the way to the present day, whereas the site exhibits should focus on the ironmaking era, with a secondary focus on the existing deteriorating buildings.



RECOMMENDATIONS

- ▶ Archaeological survey – before any construction is started, or concurrent with it, areas to be impacted should be investigated by a qualified archaeologist.
- ▶ Trail development – final trail layout should be done by a landscape architect or other qualified professional, in the presence of an archaeologist and a historian.
- ▶ A historic resources management plan should be developed for discovery, protection, and disposition of site artifacts.
- ▶ Site interpretation should be coordinated with other organizations such as the Adirondack Museum, the Adirondack Interpretive Center, Newcomb and Essex County Historians, Adirondack Architectural Heritage, and Kronos, Inc. to explore other opportunities, to prevent overlapping messages, and match themes with the most appropriate venues.

The panels are produced by embedding digital prints in a high pressure laminate substrate, ½” thick.

STYLES:

Major panels

- ▶ Round corners, themed shape cutout on upper left corner.
- ▶ Header band color and texture – rusted iron.
- ▶ Background color and texture – stone.
- ▶ Embossed border.
- ▶ Font – Book Antiqua.

Minor panels

Background shape and color taken from blast furnace reinforcing plates.

Wayfinding panels

Same style as major panels.

Support structures

Heavy timbers and steel brackets, square bolted connections reminiscent of the era.

DESIGN CONCEPTS:

- ▶ Build viewing decks and barriers with heavy timbers configured to mimic methods and materials used on the structures of the era.
- ▶ Locate trails to access major features, including Phase I ruins and scattered objects, and Phase III deteriorating buildings (as documented in the NYS Museum Survey) while maintaining separation sufficient for viewer safety and artifact protection.
- ▶ Locate major panels at site features being interpreted where appropriate, otherwise concentrate panels presenting global concepts close to the McNaughton Cottage and along the former Upper Works Road.
- ▶ Identify significant features with minor panels used as labels.
- ▶ Expose scattered objects not sensitive to disturbance in archaeologically appropriate manner, label with minor panels.
- ▶ Surface high traffic trails with crusher dust, low traffic trails with wood chips only as necessary.
- ▶ Design and designate walks and facilities between the parking area and McNaughton Cottage, and along the former Upper Works Road as accessible to mobility impaired.

The Phase 1 project produced interpretive panels for the blast furnace and an interpretive plan for the whole Upper and Lower Works area. This contract was amended to include construction oversight for work to be done by Town of Newcomb forces, and to develop contract documents for construction work required for site access and safety.

A project is currently under way to construct permanent wood barriers, and viewing nodes required for site access and safety at the blast furnace site.

Budget costs for Phase 2 of the interpretive panel project, which would complete the work envisioned for the whole Upper and Lower Works area as prescribed by the Adirondac Interpretive Plan, are as follows:

ADIRONDAC INTERPRETIVE
PLAN COST ESTIMATE

March 4, 2013

INTERPRETIVE PANELS

13 Major Panels

WAYFINDING SIGNS

4 Panels

LABEL SIGNS 18

DELIVERY AND INSTALLATION

TOTAL PROJECT COST

The above work includes interpretive design, artwork and images, digital files, production management, mounting supports, delivery and installation.

Sitework is not included, the assumption is that all of the panels can be installed without the need for disturbance of the surrounding terrain. Trail development may be required but should be limited to clearing and mowing that could be done with volunteer labor. No trail surfacing is anticipated initially, future high traffic volume could create the need for surfacing in certain areas. Surfacing should be done on an ‘as needed’ basis.

No archaeological investigation of artifact stabilization or protection is included in this estimate but should be considered and may be required in some areas.

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THEMES DISTILLED

Themes and Sub-themes distilled from stakeholder input.

Items in blue are topics proposed to be interpreted at the blast furnace/Adirondac site, other items could be interpreted at other facilities.

Mining/Ironmaking- Why Here?

- Features/layout/function of furnaces and support operations
 - o Adirondac site
 - o Entire operation from Upper to Lower Works
- Evolution of Iron-making process
 - o On site
 - o Worldwide
- Transportation
 - o Materials and ideas
 - o Road and railroad
- Titanium Era
 - o National Lead story
 - o Tahawus Village/move

Adirondac Village/Tahawus Club

- Daily life in mining town
 - o Self-sufficiency vs. dependence
- Timeline of occupation
 - o Iron era
 - o Hunter/cemetery
 - o Club era
 - o Titanium era
- Club Era/Wilderness Movement
 - o Preston Ponds Club
 - o Tahawus Club
- Twice Abandoned
 - o Demise of iron era
 - o Move to Newcomb

People

- Teddy Roosevelt
 - o McNaughton Cottage
 - o Club connection
- Henderson – Importance on site, accidental death
- McMartin/MacIntyre
- Cheney
- Burroughs

- Durant
- Masten
- Crocker
- Hunter
- Dixon
- Portious
- Emmons

Natural History/Ecology

- Geology
 - o Initial reason for occupation
- Hudson headwaters
 - o Alteration/diversion
- Exploitation of resources
 - o Water Power
 - o Iron ore
 - o Timber
 - o Wildlife
- Environmental Impact
 - o Iron era
 - o Titanium era
 - o Recovery/regeneration
- Movement to Preserve Open Space
 - o Club era
 - o Modern times

Notes:

- Focus on bringing the mid-1800s mining operations back to life for the visitors.
- Blue items under the third and fourth themes will be treated as sidebars or supporting sub-topics on panels that present a topic to which they are related.
- If the existing deteriorating buildings are removed, interpretation of the village would focus on the mining era, up to the time Hunter left. If they remain, interpretation will extend to the time of second abandonment.
- Roosevelt and others could be the focus of future exhibits in the McNaughton Cottage.
- General Natural History/Ecology and Environmental Impact and Movement could be presented at the A.I.C.
- The Titanium Era could be presented by the mine owners.
- Broader presentation of mining and hunting clubs in the Adirondacks could be done at the Adirondack Museum.

Open Space Institute

Protecting Our Heritage

The Open Space Institute protects scenic, natural and historic landscapes to provide public enjoyment, conserve habitat and sustain communities. Founded in 1974 to protect significant landscapes in New York State, OSI has been a partner in the protection of nearly 2.2 million acres in North America. A leader in environmental conservation, OSI leverages our knowledge and attracts resources for strategic investments to make innovative land conservation happen.

In addition to the direct benefits gained by protecting open space for environmental and recreational significance, OSI also places great value in historical preservation. We preserve these sites, and the viewsheds that surround them, in honor of the past and for the enjoyment and education of current and future generations.

This furnace complex and the other historical resources in the Upper Works area are among the best remaining examples of early iron making facilities in the country, and they present a tangible link to the history of exploration, industry, and settlement of the Adirondacks.

If you would like to help support this project, or for more information about OSI, please visit our website at www.osiny.org or call 518-427-1564.

Robert McNamara
The Art of Wilderness
www.artofwilderness.com