

## Chapter VI: Treatment Alternatives

### Overview

Recommendations for the treatment of the historic landscapes within the Quincy Unit are provided in this chapter. At a broad scale, general management recommendations are provided for the overall Quincy Unit. At a more detailed scale, conceptual design treatment alternatives are presented for the Historic Industrial Core of the Quincy Unit. These adhere to the boundaries of the Quincy Unit and the Historic Industrial Core, which are described in Chapter V. Features shown on the plans are conceptual, providing general locations and layouts. Specific locations and layouts for proposed features need to be developed at schematic and detailed levels before implementation of the recommendations.

Four alternative landscape treatments are presented for the Historic Industrial Core of the Quincy Unit. The treatment alternative descriptions include the current management (no action alternative) and three “action” alternatives providing proposals for changes to the management of the landscapes. The action alternatives are titled Treatment Alternative A, Treatment Alternative B, and Treatment Alternative C. The current management / no action alternative reflects the current use of the landscape and provides a baseline for evaluation of potential impacts from each action alternative.

The current management / no action alternative is presented first, followed by an overview of the action alternatives including a vision statement, goals and objectives that are shared by all of the recommendations. Next, treatment guidelines for the Quincy Unit (common to all alternatives) are presented. These are followed by treatments common to all of the Historic Industrial Core alternatives and descriptions of the three treatment alternatives for the Historic Industrial Core. Design and management alternatives for the areas that are owned by the National Park Service, Quincy Mine Hoist Association and Michigan Technological University are more detailed and substantive than those related to privately owned land. It is recommended that the National Park Service and their partners work with the other land owners to achieve the design and management goals.

Following the descriptions of the treatment alternatives, a quantified summary of the extent to which each alternative meets the project objectives is provided in Table 6-2. Next, a summation of the environmental impacts associated with each alternative is presented in Table 6-3 and the section titled “Environmentally Preferred Alternative.” Table 6-3 is a condensed presentation of the detailed analysis and conclusions of potential impacts provided in **Chapter VII: Treatment Impacts/Environmental Consequences**. Using the Council on Environmental Quality’s (CEQ’s) interpretations and the treatment alternatives impact analysis provided in Chapter VII of this Cultural Landscape Report, it was determined that the combination of **Treatments Common to all Alternatives and Historic Industrial Core Alternative C is the environmentally preferred alternative**. The combination of Treatments Common to all Alternatives and Historic Industrial Core Alternative C would implement the highest level of rehabilitation, restoration and preservation of all the alternatives.

After the summary of the environmentally preferred alternative, a list of mitigation measures that have been developed to minimize adverse effects with the implementation of Alternative C, the Preferred Alternative, is provided. Finally, descriptions of treatment alternatives that were considered and dismissed are supplied at the end of the chapter.

## Quincy Historic Industrial Core Current Management Approach

### (No Action Treatment Alternative):

The historic landscapes at the Historic Industrial Core of the Quincy Unit would continue to be managed as they are currently and no new policies would be implemented. The no-action alternative provides a baseline for evaluating changes and impacts associated with the three action treatment alternatives (see Figure 6-1: Current Management (No Action Alternative)).

With this treatment alternative, the primary historic landscape resources, including the major in-tact buildings, large building ruins, and limited landscape features, would be preserved and interpreted. The remainder of the resources, including an extensive collection of landscape features, would be left to molder. This would eventually result in the loss of significant resources. Successional vegetation would fill in where not impeded, decreasing historic integrity while increasing wildlife habitat and creating a more naturalistic environment in the Historic Industrial Core. The emphasis of this treatment alternative is on maintaining existing features.

### Historic Industrial Core of the Quincy Unit, Current Management (No Action Alternative)

- **Vegetation:** Remove vegetation that is impacting structures in the No. 2 Area, the No.4 Area, and the Dryhouse Area. Hands-off management for vegetation in other areas.
- **Archaeological Resources:** Preserve and allow visitors to explore as discovery sites throughout Historic Industrial Core. Address protection of resources and mitigation of impacts from visitors traversing the surface at archaeological sites through interpretive and archaeological plans for the Dry House area.
- **Mine Shafts:** Maintain existing bat structures at shaft entrances.
- **No. 2 Adit:** Continue to utilize the adit for underground tours.
- **Poor Rock Piles:** Hands-off management.
- **Views:** Hands-off management.
- **Circulation:**
  - **Vehicular:** Provide access road and parking lot at Supply House (NPS Visitor Center), A.E. Seaman Mineral Museum, and No. 2 Hoist Houses (QMHA Visitor Center).
  - **Pedestrian:** Allow pedestrians to explore the site and discover resources present.

- **Buildings and Structures:**
  - **A.E. Seaman Mineral Museum Area:**
    - Utilize the Blacksmith's Shop and Machine Shop for the A.E. Seaman Mineral Museum.
  - **Former Miner Residences:**
    - Stabilize the three residences on the northwest side of U.S. 41.
  - **Campus Drive Area:**
    - Maintain this area with the existing sign and scattered vegetation.
  - **No. 2 and No. 4 Area:**
    - Stabilize and preserve the Captain's Office.
    - Maintain the Quincy/Franklin Fire Hall.
    - Maintain the residence on Lower Pewabic Road near the Martin House as a private residential property.
    - Maintain the Supply House as the Quincy Mine Hoist Association gift shop, ticket sales, and National Park Service contact station.
    - Maintain Oil House and use for restrooms (above) and blacksmith demonstrations (below).
    - Preserve the No. 2 Shaft-Rockhouse and interpret its historic use.
    - Use the Old No. 2 Hoist House (1860) for storage and interpret.
    - Preserve the Martin House and interpret miner's housing.
    - Preserve the No. 2 Hoist House (1918-1920) interpret with tours.
    - Preserve No. 2 Hoist House (1894-1895) and use for Quincy Mine Hoist Association exhibits focused on the Quincy Mine, offices, theater, restrooms, and tour staging.
    - Preserve the ruin of the No. 5 Boiler Plant (1912).
  - **No. 7 and RR Corridor Area:**
    - Stabilize and preserve the Covered Water Tank.
    - Rehabilitate the Engine House (1889), house rolling stock and exhibits within it and interpret its historic use.
  - **Mine Management Area:**
    - Utilize the Superintendent's Residence for multi-unit rental housing.
    - Preserve the Quincy Mine Office and utilize for professional offices.
    - Stabilize the Assay Office.
    - Stabilize Captain White's Residence (South of Frenchtown Road).

Next page:

**Figure 6 - 1: Historic Industrial Core Current Management (No Action Treatment Alternative)**

**No.6 Area:**

1. Hands-off management for cultural resources;
2. Hands-off management for vegetation;
3. Discovery site.

**A.E. Seaman Mineral Museum Area:**

1. Utilize Blacksmith Shop and Machine Shop for the A.E. Seaman Mineral Museum;
2. Provide parking for the A.E. Seaman Mineral Museum.

**Former Miner's Residences Area:**

1. Preserve exterior of historic buildings.

**Campus Drive Area:**

1. Stabilize and Preserve historic resources, including building ruins and small scale features.

**Dryhouse Area:**

1. Stabilize and Preserve historic resources including building ruins and small scale features;
2. Remove vegetation impacting historic resources.

**Mine Management Area:**

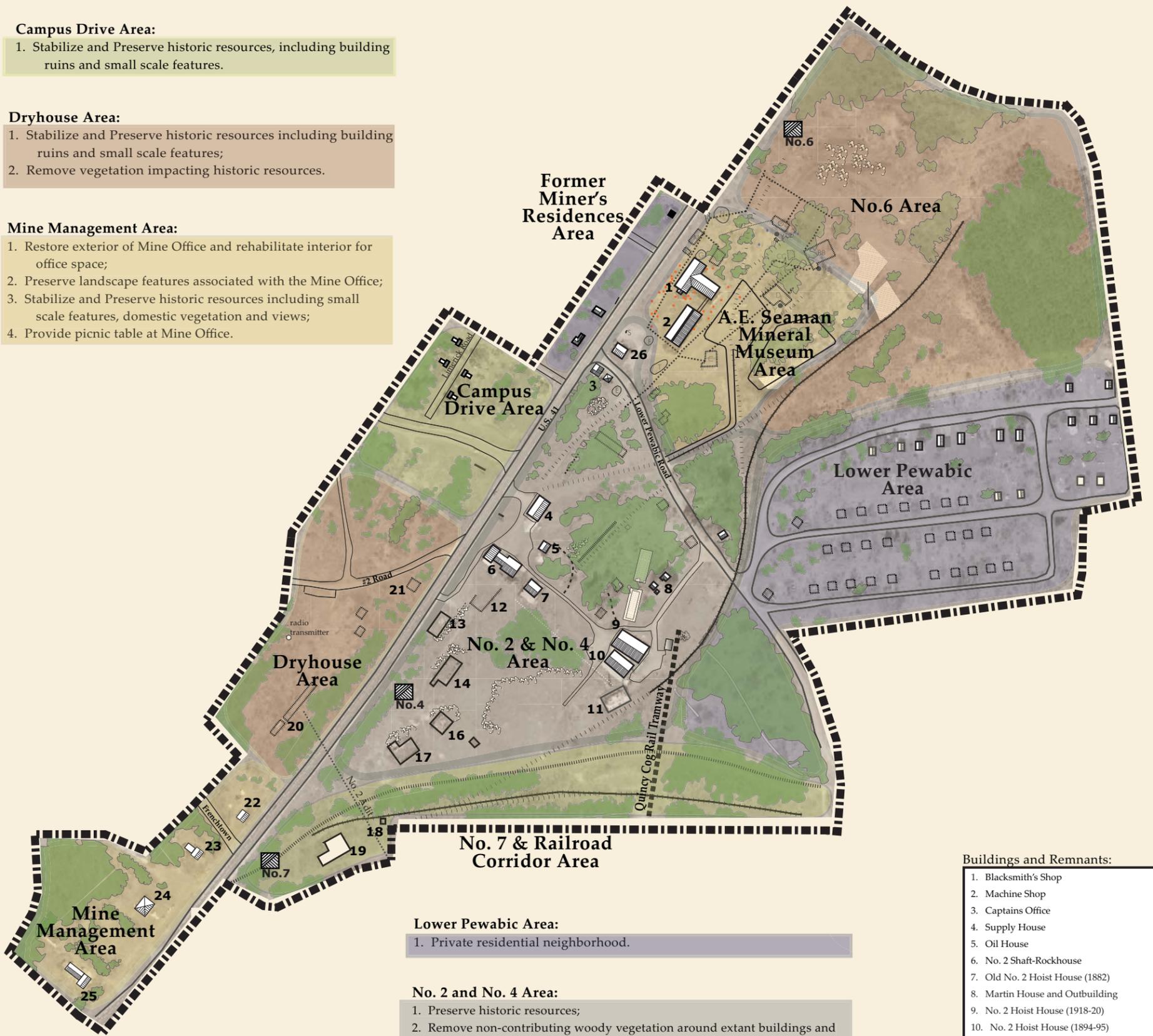
1. Restore exterior of Mine Office and rehabilitate interior for office space;
2. Preserve landscape features associated with the Mine Office;
3. Stabilize and Preserve historic resources including small scale features, domestic vegetation and views;
4. Provide picnic table at Mine Office.

**Overall Historic Core:**

1. Selectively remove woody vegetation that impacts key historic resources;
2. Preserve historic shafts.

**Legend**

	Historic Industrial Core Boundary		Conceptual Pedestrian Route
	Extant Historic Building		Historic Railroad Grade
	Remnant of Historic Building		Extant Railroad Track
	Contemporary/Modified Building		Vegetation
	Landscape Management Zone		Rock Piles
	Artifact pile		Cog Rail Tramway
			No.6 Mine Shaft Location



**Lower Pewabic Area:**

1. Private residential neighborhood.

**No. 2 and No. 4 Area:**

1. Preserve historic resources;
2. Remove non-contributing woody vegetation around extant buildings and foundations;
3. Utilize Supply House for QMHA gift shop, ticket sales, and small NPS contact station;
4. Utilize Hoist Houses for QMHA tours, underground mine tour staging, office, restrooms, and museum;
5. Provide interpretation of No. 2 Shaft-rockhouse;
6. Preserve and interpret the Martin House;
7. Retain Quincy Fire Hall.

**No. 7 & Railroad Corridor Area:**

1. Restore exterior of Roundhouse and install rolling stock exhibits.

**Buildings and Remnants:**

1. Blacksmith's Shop
2. Machine Shop
3. Captains Office
4. Supply House
5. Oil House
6. No. 2 Shaft-Rockhouse
7. Old No. 2 Hoist House (1882)
8. Martin House and Outbuilding
9. No. 2 Hoist House (1918-20)
10. No. 2 Hoist House (1894-95)
11. No. 5 Boiler Plant (1912)
12. Ruin of Diamond Drill Core House
13. Remnant of Compressor Building
14. Remnant of No. 4 Boiler House (1882)
16. Remnant of No.4 Hoist House (1885)
17. Remnant of No. 7 Boiler House (1898)
18. Quincy & Torch Lake R.R. Water Tank
19. Remnant of Engine House (1889)
20. Dryhouse Foundation
21. Mine Captain's Office
22. Assay Office
23. Captain White's Residence
24. Pay Office/Mine Office
25. Superintendent's Residence
26. Quincy Fire Hall

**Base Sources:**

1. Aerial photography, prepared for Keweenaw National Historical Park by Ayres Associates, Inc., of Madison, Wisconsin, May 2002.
2. Eric M. Hanson, "Quincy Mining Company Maps," HAER Heritage, Conservation and Recreation Service, 1978.
3. Land ownership information provided by Keweenaw National Historical Park.
4. Larry Mishkar, "Land Use History and Archaeological Survey, Seaman Mineral Museum Project, Quincy Mine National Historic Landmark, Houghton County, Michigan," Industrial Archaeology Laboratory, Michigan Technological University, Houghton, Michigan, 2005.
5. Period of Change Plans, Chapter II, Landscape History, Quincy Unit Cultural Landscape Report.
6. Smithgroup and Hitch, Inc., "A.E. Seaman Mineral Museum Master Plan Report," 20 January 2006.

SCALE: NORTH

QUINN EVANS | ARCHITECTS

## **Treatment Recommendations and Alternatives for the Quincy Unit and the Historic Industrial Core**

The Current Management /No Action Treatment Alternative described in the previous section reflects the current use of the landscape and provides a baseline for evaluating potential impacts related to each action treatment alternative. The treatment guidelines for the Quincy Unit and treatment alternatives for the Historic Industrial Core described in the next section provide proposals for changes to the current management of the landscapes. The three action treatment alternatives all respond to a common vision statement, goals, and objectives.

### **Vision Statement for all Action Treatment Alternatives**

Rehabilitate the landscape of the Historic Industrial Core so that it may serve as the foundation for a cohesive visitor experience that includes interpretation of mining operations and how they changed over time, mine management, housing locations and the day to day life of the mining community.

### **Goals Common to all Action Treatment Alternatives**

- 1) Improve the ability of the landscape to convey and represent its historic significance.
- 2) Improve the connectedness of all of the park historic landscapes.
- 3) Improve the understanding and elevate the importance of the cultural landscapes within the Quincy Unit for visitors and park staff.
- 4) Provide expanded opportunities for visitors to experience the park's cultural landscapes in context with their historical significance.
- 5) Enhance visual and physical connections within the Quincy Unit.

### **Objectives Common to all Action Treatment Alternatives**

- 1) Preserve contributing cultural landscape features within the boundaries of the Quincy Unit.
- 2) Restore and stabilize selected significant cultural landscape features.
- 3) Rehabilitate selected historic landscape elements.
- 4) Restore historic physical and visual connections.
- 5) Preserve known and potential archaeological resources.
- 6) Provide sustainable solutions that include energy conservation measures.

### **Quincy Unit Landscape Treatment Guidelines (common to all alternatives)**

At a broad scale, general management recommendations are provided for the overall Quincy Unit, addressing unit-wide themes including overall issues, views and new development, vegetation, and interpretation. In addition, general management recommendations are provided for the historic housing locations, the U.S. 41 corridor, the MDOT/Portage Lake Overlook, archaeological resources, and the Quincy Smelting Works. All of the planning and implementation efforts related to the resources within the Quincy Unit need to be coordinated with the property owners and regulatory agencies.

#### **Quincy Unit Overall Issues (Treatment Guidelines)**

- Preserve contributing historic resources through stabilization, preservation, rehabilitation and restoration. In particular, preserve the scale and form of the contributing landscape features.
- Conduct thorough analysis of historic structures by preparing Historic Structures Reports before undertaking treatment actions.
- Allow specific additions or alterations that are compatible with the historic character of the landscape and that meet contemporary needs.
- Evaluate the extant resources associated with Torch Lake to ascertain their significance and to determine if they contribute to the Quincy Mining Company National Historic Landmark district.
- Finalize the boundary of the Quincy Unit of Keweenaw National Historic Park.

#### **Quincy Unit Views and New Development (Treatment Guidelines)**

- Preserve significant historic views to and from the Quincy Unit (see Figure 6-2 and Chapter VIII, Project B).
  - Develop visual connections to downtown Houghton by maintaining selected views through pruning vegetation and/or planting vegetation that will not interfere with views from the road and trails.
  - The most important views in the Unit that are not within the Historic Industrial Core are those between Houghton and Quincy Hill; work with property owners to preserve views.
  - Work with state agencies, local governments, local stakeholder groups and property owners to establish a non-motorized trail that connects resources in the Quincy unit with a developing regional recreational trail network.
- The Quincy Unit includes substantial private property holdings. In particular, the land at the crest of Quincy Hill has a high potential for development that would likely impact these views. Since much of the hill was developed for housing and industrial uses during the historic period, new development that is undertaken with careful consideration of historic character and visual impacts could enhance the ability of the landscape to reflect the historic period (Chapter VIII, Project B).
  - Work closely with local governments to enact historic preservation or zoning ordinances to avoid incompatible development. Consider preparing sample ordinances for local governments.

- Consider establishing management areas based on views and the potential for new development.
  - While adhering to 16 U.S.C. §410yy-3(c) of the park's enabling legislation, consider purchasing scenic easements for land that is within primary views.<sup>1</sup>
  - While adhering to 16 U.S.C. §410yy-3(c) of the park's enabling legislation, consider purchasing land that is within primary views.<sup>2</sup>
  - Consider developing partnerships with landowners to help guide development within primary views to ensure it is compatible with the historic character of the Unit.
  - Strengthen the technical assistance outreach program. Consider publicizing the opportunities available by creating a brochure or catalogue of technical assistance that is available for landowners.
  - Provide one-on-one technical assistance to individuals to help with specific issues.
  - Consider conducting workshops and presentations focused on issues that will help landowners meet their needs while preserving the historic landscapes.
  - Encourage people who approach the NPS staff with questions about structures to consider the historic landscape as well.
  - Provide assistance and guidance to landowners to encourage compatible development.
  - Develop design guidelines for the Historic Housing Locations within the Quincy Unit. Provide examples of compatible and non-compatible new development to help owners.
  - Provide education about tax credits or other financial incentives for adhering to guidelines.
- Work to ensure that the number of billboards within the Quincy Unit does not increase.
  - Remove billboards within the Quincy Unit, when opportunities arise.
  - Where billboards exist currently, work with owners to ensure that any impacts from their presence are minimized. Work with owners to ensure that the size and materials of the billboards do not change.

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<sup>1</sup>16 U.S.C. §410yy-3(c). Section 4(c) of the park's enabling legislation states: "CONSENT- No lands or interests therein within the boundaries of the park may be acquired without the consent of the owner, unless the Secretary determines that the land is being developed, or is proposed to be developed in a manner which is detrimental to the natural, scenic, historic, and other values for which the park is established.

<sup>2</sup> Ibid.

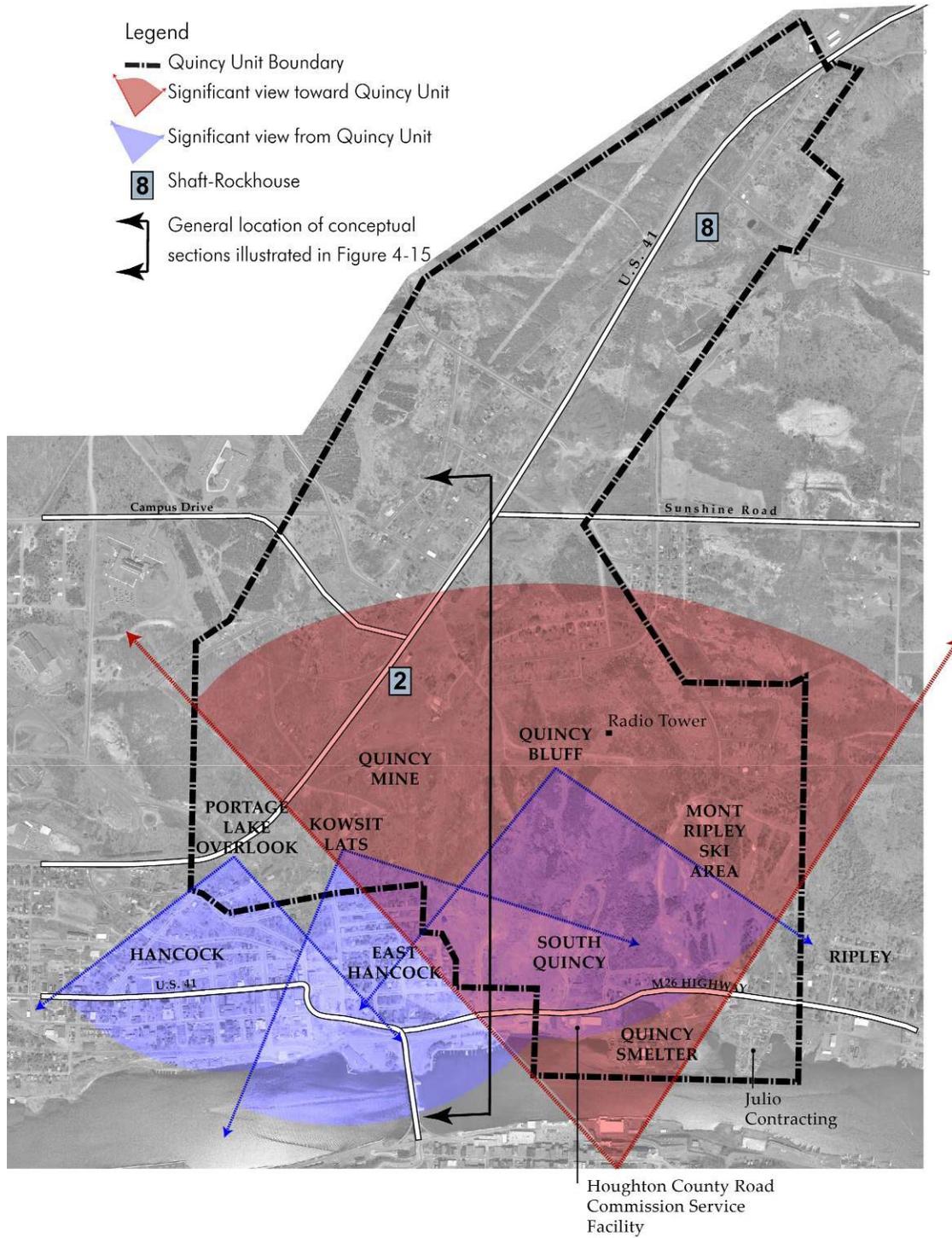


Figure 6 - 2: Quincy Unit Significant Views

Quincy Unit Vegetation (Treatment Guidelines)

- Remove woody vegetation that impact historic resources, including views. See Views and New Development for more details regarding this recommendation (see Chapter VIII, Projects C-1, C-2, D, E, F, G, H, I and W).
- Preserve historic domestic species including:
  - Apple trees
  - Lilac
  - Daylily
  - Asparagus
  - Lilly of the Valley
- Discourage the spread of invasive or noxious species within the Quincy Unit. An invasive species is a plant whose presence is likely to cause economic or environmental harm or harm to human health.
- Table 6-1 provides a list of federal noxious weeds and indicates if they have been identified in Houghton or Keweenaw County. Although some of the plants have not been identified in the area, the entire list is included since the nature of these plants is to spread quickly. All of the plants on the list should be removed when possible. These plants should not be planted in the landscape.

Table 6-1: Federal Noxious Weeds (\* indicates the plant is also a Michigan Noxious Weed)

Scientific Name	Common Name	Present in Houghton County	Present in Keweenaw County
<i>Abutilon theophrasti</i>	Velvetleaf		
<i>Allium vineale</i>	Field Garlic		
<i>Avena fatua</i>	Wild Oats	Y	
<i>Barbarea vulgaris</i> *	Yellow Rocket	Y	Y
<i>Berteroa incana</i> *	Hoary Alyssum		
<i>Brassica juncea</i>	Indian Mustard		Y
<i>Brassica nigra</i> *	Black Mustard		Y
<i>Cardaria draba</i>	Hoary Cress		
<i>Cardaria pubescens</i>	White-Top		
<i>Carduus acanthoides</i> *	Plumeless Thistle		
<i>Carduus nutans</i> *	Musk Thistle		
<i>Centaurea maculosa</i> *	Spotted Bluet	Y	Y
<i>Centaurea repens</i>	Russian Knapweed		
<i>Cirsium arvense</i> *	Canadian-Thistle	Y	Y
<i>Cirsium vulgare</i> *	Bull-Thistle	Y	Y
<i>Convolvulus arvensis</i> *	Field Bindweed	Y	Y
<i>Cuscuta epilinum</i>	Flax Dodder		
<i>Cuscuta epithymum</i>	Clover Dodder		
<i>Datura stramonium</i>	Jimson-Weed		
<i>Daucus carota</i> *	Queen-Anne's-Lace	Y	Y
Scientific Name	Common Name	Present in Houghton County	Present in Keweenaw County
<i>Euphorbia esula</i> *	Leafy Spurge	Y	
<i>Galega officinalis</i>	Professor-Weed		
<i>Heracleum mantegazzianum</i>	Giant Hogweed		
<i>Ipomoea hederacea</i>	Ivy-Leaved Morning Glory		
<i>Ipomoea purpurea</i>	Common Morning Glory		
<i>Ipomoea xmultifida</i>	Cardinal Climber		
<i>Ipomopsis rubra</i>	Standing-Cypress		
<i>Lythrum hyssopifolia</i>	Hyssop Loosestrife		
<i>Lythrum salicaria</i> *	Purple Loosestrife	Y	Y
<i>Plantago lanceolata</i>	English Plantain	Y	

<i>Raphanus raphanistrum</i>	Wild Radish		
<i>Rumex crispus</i> *	Curly Dock	Y	Y
<i>Solanum carolinense</i> *	Horse Nettle	Y	
<i>Solanum dulcamara</i> *	Bittersweet Nightshade	Y	Y
<i>Solanum physalifolium</i> (s. <i>sarachoides</i> )*	Hairy Nightshade		
<i>Sonchus arvensis</i> (s. <i>uliginosus</i> )	Perennial Sow Thistle	Y	
<i>Sorghum halepense</i> *	Johnson Grass		
<i>Thlaspi arvense</i>	Penny Cress	Y	Y
<i>Tribulus terrestris</i>	Caltrop		
<i>Xanthium strumarium</i>	Common Cocklebur		

**Sources:** Michigan Invasive Plants Council (<http://invasiveplantsmi.org>) and the Michigan State University Extension lists of plants in Keweenaw and Houghton Counties (<http://michigansaf.org/ForestInfo/MSUElibrary/CountyPlantLists>).

Quincy Unit Interpretation (Treatment Guidelines)

Throughout the Quincy Unit, landscape resources that provide interpretive opportunities to convey the significance of the region and the purpose of the park include the Historic Housing Locations, transportation corridors including U.S. 41, the historic railroad corridor that runs along the crest of Quincy Hill, traces of the Streetcar Route that extend from Sing Sing through the Historic Industrial Core and north to Mesnard, poor rock piles and other industrial remnants. Many of these resources are owned by entities other than the National Park Service. All of the treatment guidelines require close consultation and approval by the property owners.

- Interpretation throughout the Quincy Unit
  - Develop a unit-wide wayside exhibit plan incorporating collaboration among all partners (NPS, QMHA, A.E. Seaman Mineral Museum, Michigan Department of Transportation, and Franklin Township). See Chapter VIII, Project J.
- Interpretation of Historic Housing Locations
  - Consider developing a self-guided brochure that describes the housing locations, a route to follow to visit them, protocol necessary when visiting these privately owned resources, and information about their historic significance (see Chapter VIII, Project K).
  - Consider providing small site identifier signs indicating the locations of the Historic Housing Locations. The signs should be simple and compatible with the historic character of the area (see Chapter VIII, Project L).
  - Consider utilizing alternative media formats for interpretation of the historic housing locations throughout the Quincy Unit.
  - Consider providing interpreter-led tours of the Historic Housing Locations.
- Interpretation along the U.S. 41 Corridor
  - Develop sign guidelines for visitor orientation and interpretation within the Unit that include a hierarchy of sign sizes and a standard design that reflects the historic character of the Unit as well as National Park Service sign standards.
  - Implement signs along the U.S. 41 corridor indicating key visitor opportunities and directional information after developing sign guidelines for the Unit.
  - Provide information that describes the importance of the U.S. 41 corridor as a historic transportation route and as an indicator of the underground location of the Pewabic Lode and the historic mining operations. This information should be provided at the visitor orientation facility that informs visitors about the region (see Chapter VIII, Project K).
  - Consider providing vertical visual cues at each of the historic shaft locations within the Quincy Unit to help visitors visualize the historic scale of the mining operations on the landscape (see Chapter VIII, Project BB).

- Remove vegetation throughout the U.S. 41 corridor that interrupts views of historic poor rock piles and other remnants of the mining activities (see Chapter VIII, Projects D and W).
- Interpretation of the Streetcar Route
  - Provide a pedestrian trail that links the Mine Management Area, Dryhouse Area, Campus Drive Area, and Former Miner's Residences Area. Consider developing a brochure to inform visitors about the resources in this area. Include a section that addresses the Streetcar Route and indicates its location. See Chapter VIII, Projects O and K.
  - Provide information at a wayside or visitor center that describes the historic use of the Streetcar Route as a transportation route for the community (see Chapter VIII, Project J).
  - Consider marking the Streetcar Route on the pavement in locations where it is now a street (see Chapter VIII, Project O).
  - Consider providing small, simple markers that indicate locations where traces of the Streetcar Route are extant (see Chapter VIII, Project O).
  - Consider selectively pruning vegetation along the streetcar route to open views and help visitors visualize and understand the historic route (see Chapter VIII, Project O).
- Interpretation of the Poor Rock Piles
  - Provide information at the visitor center and a wayside that describes the historic extent of poor rock piles, their relationship to the mining industry and their visual impact on the regional landscape. Possible locations for the wayside are the Portage Lake Overlook and on U.S. 41 near the Quincy No. 6 location (see Chapter VIII, Projects J and K).
  - Consider providing interpreter-led tours that visit the poor rock pile at the No. 6 Area.
  - Encourage visitors to explore the poor rock pile at the No. 6 Area.
  - Wherever possible, reveal Poor Rock Piles throughout the Unit by removing vegetation and opening views from transportation corridors and other visitor areas (see Chapter VIII, Project W).
- Interpretation of other Industrial Remnants
  - Provide information at a wayside or visitor center that describes the historic extent of industrial remnants in the landscape, their relationship to the mining industry and their visual impact on the regional landscape (see Chapter VIII, Projects J and K).
  - Continue to conduct ranger-guided interpretive tours of the industrial remnants within the Quincy Unit.
  - Consider expanding interpretive programs of the industrial remnants with partner cooperation.
  - Encourage visitors to explore the industrial remnants that are located on land owned by the NPS or its partners throughout the Unit.
  - Wherever possible, reveal industrial remnants throughout the Unit by removing vegetation and opening views from transportation corridors and other visitor areas (see Chapter VIII, Projects C-1, C-2, D, E, F, G, H, I and W).

- Consider developing a guidebook for visitors to the Quincy Unit that includes information about the industrial remnants (see Chapter VIII, Project K).

### Quincy Unit Historic Housing Locations (Treatment Guidelines)

Many of the Historic Housing Location resources are owned by entities other than the National Park Service. All of the treatment guidelines require close consultation and approval by the property owners.

- Historic Housing Locations associated with the Quincy Unit are identified in Figure 6-3. Descriptions of each area are provided in Chapter III.
- For recommendations related to the interpretation of the Historic Housing Locations, refer to the “Quincy Unit Interpretation” section.
- Conduct research to fill gaps in knowledge about the historic landscape conditions at the Historic Housing Locations, specifically addressing their chronology of development and physical changes (see Chapter VIII, Projects A-1, A-2, and A-4).
- Evaluate the Historic Housing Locations to determine their significance (see Chapter VIII, Projects A-1, A-2 and A-4).
- Where research indicates the Historic Housing Locations are historically significant, consider amending the National Historic Landmark nomination to include these resources, or preparing a separate multiple property nomination for the Historic Housing Locations in the region.
- Consider developing partnerships with landowners to help guide development within the Historic Housing Locations to ensure that it is compatible with the historic character of the Unit (see Chapter VIII, Project B).
- Provide assistance and guidance to landowners to encourage compatible development.
  - Develop design guidelines for the Historic Housing Locations within the Quincy Unit to help communicate goals and provide tools for preservation. Provide examples of compatible and non-compatible new development to help owners. Include general treatment guidelines for specific topics including vegetation, buildings, small scale features, and appropriate approaches for infill (see Chapter VIII, Project CC).
  - Provide education about tax credits or other financial incentives for adhering to guidelines.
  - Strengthen the technical assistance outreach program. Consider publicizing the opportunities available by creating a brochure or catalogue of technical assistance that is available for landowners.
  - Provide one-on-one technical assistance to individuals to help with specific issues.
  - Consider conducting workshops and presentations focused on issues that will help landowners meet their needs while preserving the historic landscapes.
  - Encourage people who approach the NPS staff with questions about structures to consider the historic landscape as well.
- Work closely with local governments to enact historic preservation or zoning ordinances to avoid incompatible development (see Chapter VIII, Project B).

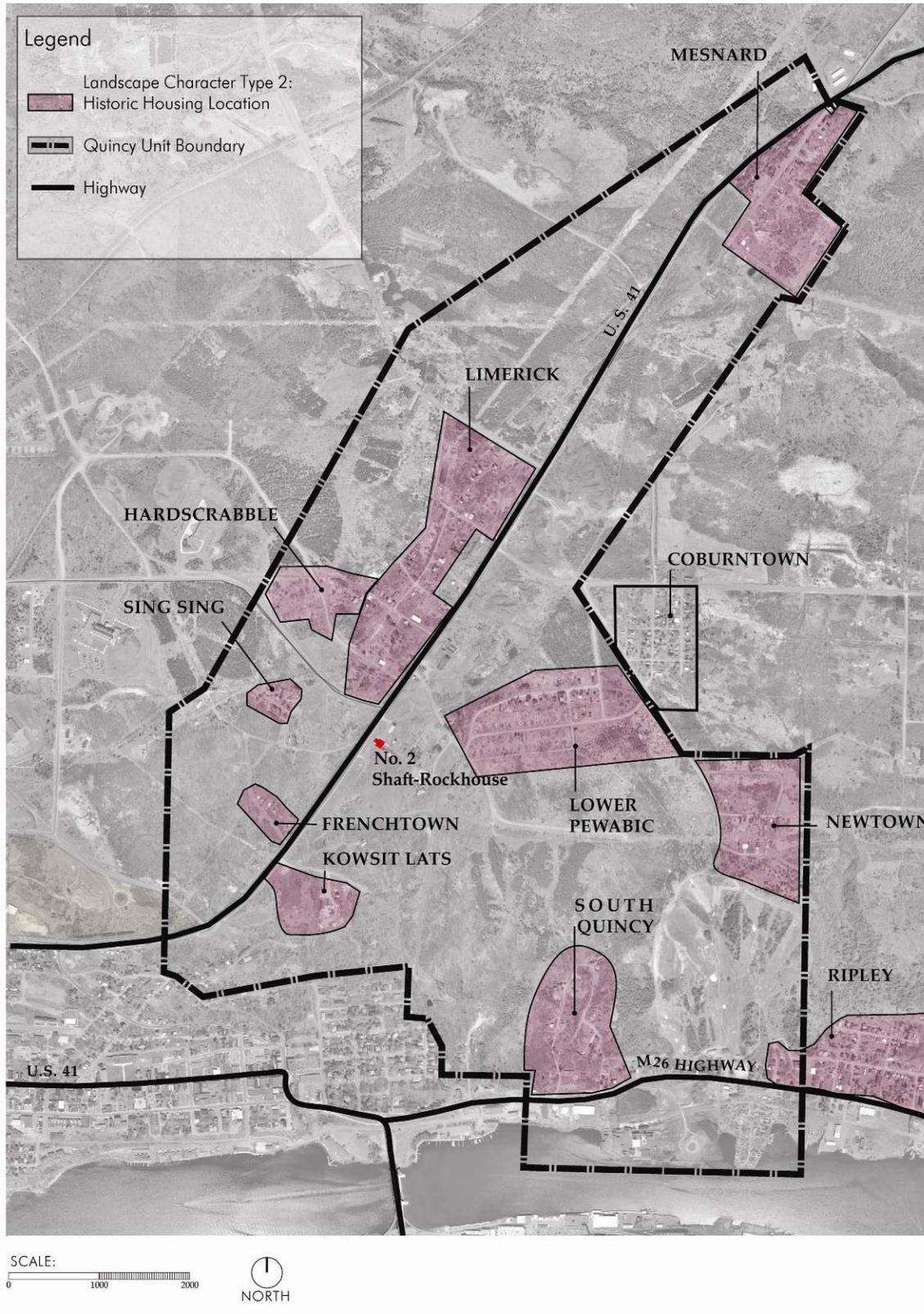


Figure 6 - 3: Quincy Unit Historic Housing Locations

Quincy Unit U.S. 41 Corridor (Treatment Guidelines)

Many of these resources within the U.S. 41 Corridor are owned by entities other than the National Park Service. All of the treatment guidelines require close consultation and approval by the property owners and MDOT.

- Recommendations related to the interpretation of the Quincy Unit U.S. 41 Corridor are provided in the “Quincy Unit Interpretation” section.
- This area includes substantial private property holdings. In particular, the land at the crest of Quincy Hill has a high potential for development that would be likely to impact these views. Since much of the hill was developed for housing and industrial uses during the historic period, new development that is undertaken with careful consideration of historic character could enhance the ability of the landscape to reflect the historic period (see Chapter VIII, Project B).
  - Work closely with local governments to enact historic preservation or zoning ordinances to deter incompatible development.
  - Consider establishing management areas based on views and potential for new development.
  - While adhering to 16 U.S.C. §410yy-3(c) of the park’s enabling legislation, consider purchasing scenic easements for land that is within primary views.<sup>3</sup>
  - While adhering to 16 U.S.C. §410yy-3(c) of the park’s enabling legislation, consider purchasing land that is within primary views.<sup>4</sup>
  - Consider developing partnerships with landowners to help guide development within primary views to ensure that it is compatible with the historic character of the Unit.
  - Provide assistance and guidance to landowners to encourage compatible development.
  - Provide education about tax credits or other financial incentives for adhering to guidelines.
- Work with MDOT to minimize non-compatible new development within the U.S. 41 corridor (see Chapter VIII, Project B).

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<sup>3</sup> 16 U.S.C. §410yy-3(c). Section 4(c) of the park’s enabling legislation states: “CONSENT- No lands or interests therein within the boundaries of the park may be acquired without the consent of the owner, unless the Secretary determines that the land is being developed, or is proposed to be developed in a manner which is detrimental to the natural, scenic, historic, and other values for which the park is established.

<sup>4</sup> Ibid.

*\*MDOT / Portage Lake Overlook (Treatment Guidelines)*

Located near the Quincy Unit entrance, the Portage Lake overlook is a popular stop for passing motorists. It provides a valuable opportunity to introduce visitors to the region and the park. Owned by the Michigan Department of Transportation (MDOT), this overlook also provides a potential partnership opportunity to make improvements beneficial to its users. Any proposed treatment action by the National Park Service (NPS) requires close consultation and approval from MDOT. Site planning and design is proposed to address landscape treatment at this site and is common to all action treatment alternatives considered. The NPS proposes to work with MDOT to improve the existing site. This effort can begin with a thoughtful evaluation of the existing site and identification of user needs and desired improvements. The intended outcome of this effort will be a site master plan that both agencies can work to cooperatively implement. Within this partnership effort the agencies will consider input from the Copper Country Trail National Byway Committee and the public about the following site features and characteristics.<sup>5</sup> See Chapter VIII, Project DD.

- MDOT / Portage Lake Overlook Signage
  - The agencies will work to design and install three types of updated signs to assist visitors.
    - Motorist guidance signs to help motorists find the overlook safely and to replace the existing signs.
    - A park entrance sign to inform motorists they are entering the park and to provide a photographic opportunity for visitors.
    - Interpretation signs to effectively communicate important regional information and to introduce park resources to visitors.
- MDOT / Portage Lake Overlook Access
  - The agencies will provide safe ingress and egress from the site for motorists and non-motorists. They will improve site circulation to safely accommodate a variety of motor vehicles. Accessibility will be improved throughout the site to accommodate visitors with varied interests and needs.
- MDOT / Portage Lake Overlook Vegetation and Views
  - The agencies will work to selectively remove vegetation to retain important views to local points of interest. These may include the Huron Mountains, Portage Lake, Houghton, Hancock and Portage Lake Lift Bridge.
- MDOT / Portage Lake Overlook Site features and furnishings
  - The agencies will remove or replace non-historic site features that do not enhance the visitor experience by reinforcing visitor understanding of the overlook and the surrounding regional landscape. This may include developing alternative designs for site features like bollards, guardrails, signage and sidewalks. It may also include the installation of benches, picnic tables, trash receptacles and site lighting.
- MDOT / Portage Lake Overlook Restrooms
  - Restrooms would benefit motorists in this location. The agencies will evaluate the need for public restrooms and determine the feasibility of providing this service at the overlook.

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<sup>5</sup> The Copper Country Trail is a national byway along U.S. 41 from the Portage Lake lift bridge to Copper Harbor. Additional information about the trail may be found at [www.coppercountrytrail.com](http://www.coppercountrytrail.com).

**Quincy Unit Archaeological Resources (Treatment Guidelines)**

- Prepare an Inventory of Archaeological Resources for Keweenaw National Historical Park. The current five-year plan indicates that the Inventory of Archaeological Resources is scheduled for 2013-2014. Determine sites within the Quincy Unit that have the greatest potential to yield new information of value and are likely to inform the management of the landscapes (see Chapter VIII, Project A-2).
- Based on the Inventory of Archaeological Resources, develop a list of projects that will help to address gaps in knowledge regarding the historic industrial resources, pre-industrial resources, and pre-contact resources.
- Where surface archaeological deposits are present, work to preserve them on site and consider interpreting them.
- Consider developing a research permit program to allow qualified archaeologists to conduct field work within the Quincy Unit. Ensure that the projects have oversight from the NPS to coordinate and monitor the work. Provide an educational / interpretive component for projects to share the process with the public (see Chapter VIII, Project EE).
- Consider working with Michigan Technological University to enhance opportunities for fieldwork and research by industrial archaeology faculty and students.

**Quincy Smelting Works (Treatment Guidelines)**

The Quincy Smelting Works is located on the northern shore of Portage Lake east of Hancock, Michigan and owned by Franklin Township. The site offers excellent views of the adjacent waterway and downtown Houghton. It also features more than thirty historic structures and site features that represent the smelting process that once operated on the site. The site provides a potential partnership opportunity to provide access for visitors. Any proposed treatment action by the National Park Service for this site requires close consultation and approval from Franklin Township. Site recommendations for this site are common to all action treatment alternatives considered. The NPS proposes to work with Franklin Township to provide visitor access to the site.

- Complete an inventory documenting the conditions of the historic landscape features, structures, and industrial artifacts at the site (see Chapter VIII, Projects A-1, A-2, A-5).
- Evaluate the integrity of the extant industrial features at the site.
- Conduct thorough analysis of historic structures by preparing Historic Structures Reports before undertaking treatment actions.
- Stabilize and preserve the significant historic resources at the site (see Chapter VIII, Project A-6).
- As soon as possible, prepare treatment guidelines for the Quincy Smelting Works. Utilize previous planning efforts to guide the process, including the plans prepared by the Environmental Protection Agency and the Quincy Smelting Works Stabilization and Re-Use Study that was prepared in 2003.
- Create a safe environment for the public to use.
- Educate visitors about the history and significance of the site (see Chapter VIII, Project K).

- Preserve significant views associated with the Quincy Smelting Works (see Figure 6-4).
- Facilitate public engagement and work with site owners and potential users related to site planning activities.
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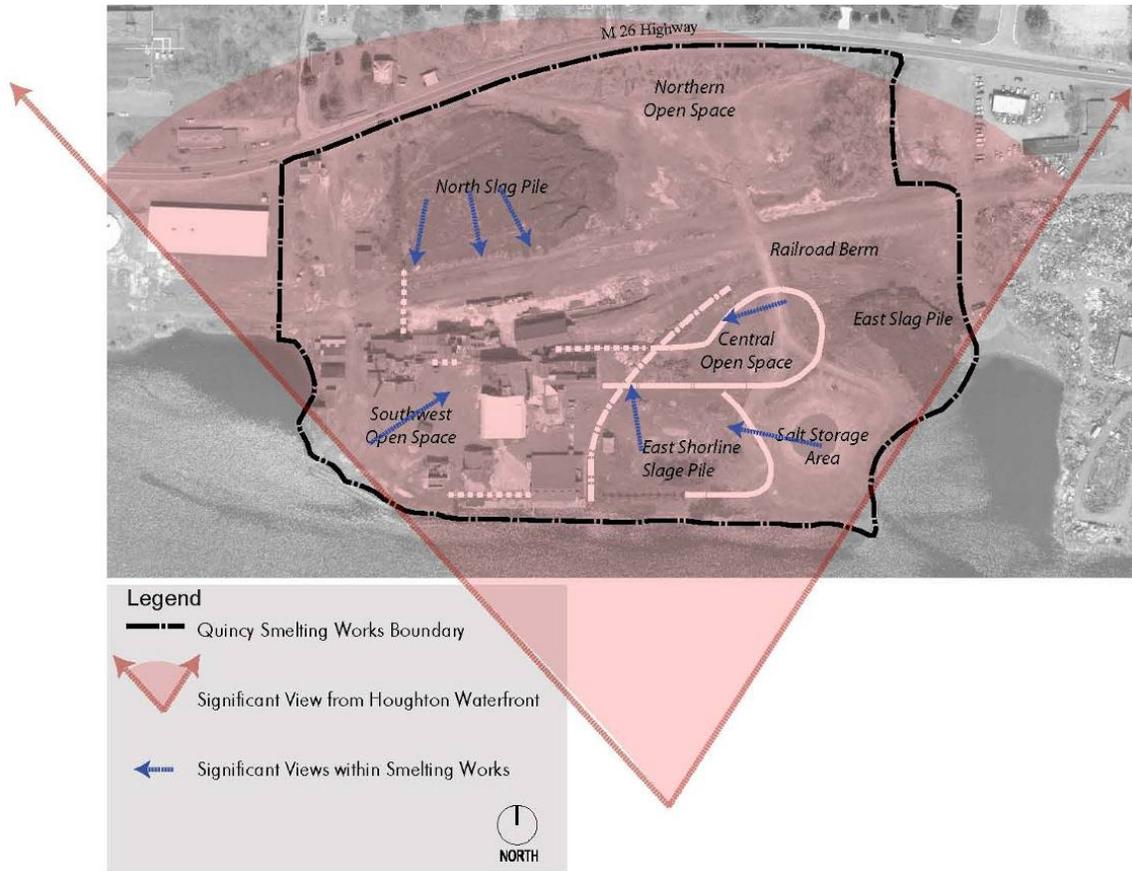


Figure 6 - 4: Quincy Smelting Works Significant Views

### **Treatments Common to all Historic Industrial Core Action Alternatives:**

Treatments common to all action alternatives are listed here and repeated in the descriptions of treatment alternatives A, B and C. When presented with treatment alternatives A, B, and C, the common treatments include a (\*) to indicate the directive is the same for all of the action treatment alternatives. Many of these resources are owned by entities other than the National Park Service. All of the treatment guidelines require close consultation and approval by the property owners.

#### **Overall Historic Industrial Core (Common to all Action Treatment Alternatives)**

- **Archaeological Resources:** Conduct professional archaeological research and investigations to address gaps in knowledge, preserve known archaeological deposits, and provide interpretation of these activities (see Chapter VIII, Project A-2).
- **Poor Rock Piles:** Preserve and interpret as historic landscape features (see Chapter VIII, Projects K and W).
- **Mine Shafts:** Maintain existing bat structures at shaft entrances.
- **Circulation:**
  - **Alternative:** In the long term, implement a universally accessible multi-use trail and alternative transportation system linking the site elements, in the short term, develop hubs and primary connections that will be part of the system (see Chapter VIII, Projects M and N).
  - **Pedestrian:** Provide interpretive pedestrian routes (using brochures or small signs on site) between Supply House, No. 2 Shaft-Rockhouse, Cooling Ponds, Martin House and No. 2 Hoist Houses. Utilize the multi-use trail for pedestrians, providing links throughout the Historic Industrial Core. Encourage visitors to explore all areas within the Historic Industrial Core (see Chapter VIII, Projects J, K, M and N).

#### **No. 6 Area (Common to all Action Treatment Alternatives)**

Coordinate all planning and implementation efforts related to this area with the A.E. Seaman Mineral Museum, Quincy Mine Hoist Association, and Franklin Township.

- Stabilize and preserve ruins of industrial activities.
- Remove woody vegetation to provide views of rock piles and other historic landscape features (see Chapter VIII, Project W).
- Provide multi-use trail into the area (see Chapter VIII, Projects M and N).
- Encourage exploration and provide occasional tours.

#### **A.E. Seaman Mineral Museum Area (Common to all Action Treatment Alternatives)**

Coordinate all planning and implementation efforts related to this area with the A.E. Seaman Mineral Museum.

- Utilize the Blacksmith Shop and Machine Shop for the A.E. Seaman Mineral Museum.
- Provide a strong visual connection between this area and the No. 2 and No. 4 area (see Chapter VIII, Projects G, H, and I).

- Preserve remnants of historic industrial activities.
- Provide a picnic area for visitor use (see Chapter VIII, Project Z).

**Former Miner's Residences Area (Common to all Action Treatment Alternatives)**

Coordinate all planning and implementation efforts related to this area with property owners.

- Conduct thorough analysis of historic structures by preparing Historic Structures Report before undertaking treatment actions (see Chapter VIII, Project A-3).
- If the Historic Structures Report indicates it is appropriate, restore the exterior of the historic buildings
- Provide access and parking on side streets.

**Campus Drive Area (Common to all Action Treatment Alternatives)**

Coordinate all planning and implementation efforts related to this area with property owners (see Chapter VIII, Project B).

- Remove non-contributing elements that are impacting the historic character of the Historic Industrial Core or improve their compatibility.
  - Work with private property owners to restore or maintain landscape elements compatible with the historic core.
  - Work with private property owners to negotiate the relocation or redevelopment of incompatible infill to restore or maintain landscape elements compatible with the historic core.
- Stabilize and preserve historic resources including building ruins, small scale features, domestic vegetation and views toward the No. 2 and No. 4 area (see Chapter VIII, Project A-6).
- Restore and interpret the miner's residence on Limerick Road that is owned by the Quincy Mine Hoist Association.
- Link this area to the Former Miner's Residences Area and the Dryhouse Area with a self-guided walking trail route (see Chapter VIII, Projects K, L and O).

**Dryhouse Area (Common to all Action Treatment Alternatives)**

Coordinate all planning and implementation efforts related to this area with property owners.

- Stabilize and preserve historic resources including building ruins, small scale features, domestic vegetation, archaeological surface scatters and views toward the No. 2 and No. 4 area (see Chapter VIII, Projects A-6, C and H).
- Provide a pedestrian trail linking this area to the Mine Management Area, Campus Drive Area, and Former Miner's Residence Area (see Chapter VIII, Project O).
- Provide small parking lot along No. 2 Road (see Chapter VIII, Project P).
- Provide a wayside at the trailhead near the parking area. Include information about the historic relationships between this site and the rest of the Historic Industrial Core as well as logistical information (see Chapter VIII, Project J).
- Relocate the radio tower so that it is not within the view of the Historic Industrial Core.
- Encourage visitors to explore the area around the dryhouse.
- Provide a picnic table for visitor use (see Chapter VIII, Project P).

No. 7 & Railroad Corridor Area (Common to all Action Treatment Alternatives)

Coordinate all planning efforts in this area with the Quincy Mine Hoist Association (QMHA). The QMHA has begun the planning process related to the Roundhouse/Enginehouse and their efforts should serve to guide future plans for this site.

- Conduct thorough analysis of the Roundhouse by preparing a Historic Structures Report before undertaking treatment actions.
- If the Historic Structures Report indicates it is appropriate, restore the exterior of the Roundhouse and install rolling stock exhibits.
- Extend the restoration out from the building to the landscape with railroad tracks, and connections to other tracks and the water tank. Reveal the historic grades and connections to the No. 2 and No. 4 Area.
- Rehabilitate the water tank and interpret its historic use.
- Provide a pedestrian route along the railroad corridor along the crest of the hill.
- Provide picnic tables near the Roundhouse and along the crest of the hill.

Mine Management Area (Common to all Action Treatment Alternatives)

Coordinate all planning and implementation efforts related to this area with property owners. See Chapter VIII, Project Q.

- **Archaeological investigation** – Systematically investigate the entire property including the shallow depression, and adjacent pile of unknown origin and scattered debris, to determine the significance of these features and to reveal new information about the historic use of this site.
- Restore the landscape features associated with the Quincy Mine Office.
- Stabilize and preserve historic resources including small scale features, domestic vegetation and views.
- Provide a pedestrian trail linking this area to the Dryhouse Area, Campus Drive Area, and Former Miner’s Residence Area.
- Provide a picnic table at the Mine Office.
- Improve the conditions at the Quincy Mine Office and increase visitor understanding and appreciation for the resources found in this area of the park (see Figure 6-5).
- **Remove non-historic features:** Remove items that do not contribute to the historic integrity of the mine office landscape. These include a freestanding sign fixture located in the north yard and a piece of concrete in the northwest corner of the rear yard.
- **Improve foundation drainage** – The basement and foundation of the mine office building is currently affected by seasonal wetness. Install new foundation drain tile to move water away from the foundation and allow the historic roof gutter drains to be restored.
- **Restore lawn** – The lawn surrounding the mine office is rutted, in poor condition and contains many weeds. Grade, place additional topsoil and seed the area to improve its condition and appearance.
- **Provide barrier free access** – A preferred method to provide barrier free access has yet to be determined but several preliminary alternatives have been discussed. At this time it is believed the access route that least impacts the historic building and setting will use the sidewalk to the north and the rear entrance. While further study is required to evaluate a complete range of alternatives, it is assumed that any preferred solution will

require integration with the surrounding landscape through minor changes in sidewalks or installation of a ramp.

- **Reconstruct front fence** – A prominent feature through much of the building’s history was a distinctive wood fence and gates separating the front yard from the road. Reconstruct the wood fence and gates based on historic documentation.
- **Restore stone curb/wall** – Another prominent landscape element adjacent to the front fence was a stone curb/retaining wall made of locally quarried Jacobsville sandstone. The low curb defined the lawn edge and separated it from the adjacent sidewalk. At its south end the curb transitioned to a low retaining wall where the grade changed. The feature is in poor condition, and parts of it are missing. Restore the stone curb/wall.
- **Reconstruct front walk** – The concrete sidewalk once present in front of the mine office is now missing. Reconstruct the concrete sidewalk to provide a safe walking surface outside of the vehicular traffic area for visitors and employees.
- **Resurface historic road trace** – The historic road trace currently serves as an access road and parking area for visitors to the mine office. Resurface the road trace to preserve its position in the landscape while accommodating current vehicle access and circulation.
- **Vegetation management** – Replace mature historic trees along the alley and in the rear yard when suffering from poor health. Replacements are to be large specimens of the same genus and species as practicable. Selectively thin trees and vegetation along side yard fencerows and at the rear yard of the mine office and the adjacent lot.
- **Reconstruct side yard fences** – Fences once existed along the side yards of the property. Reconstruct the side yard fences to aid visitors with understanding this historic mine management property.
- **Preserve masonry ruins** – Preserve the small masonry foundation and utility trench to help visitors understand this property and its historic functions.

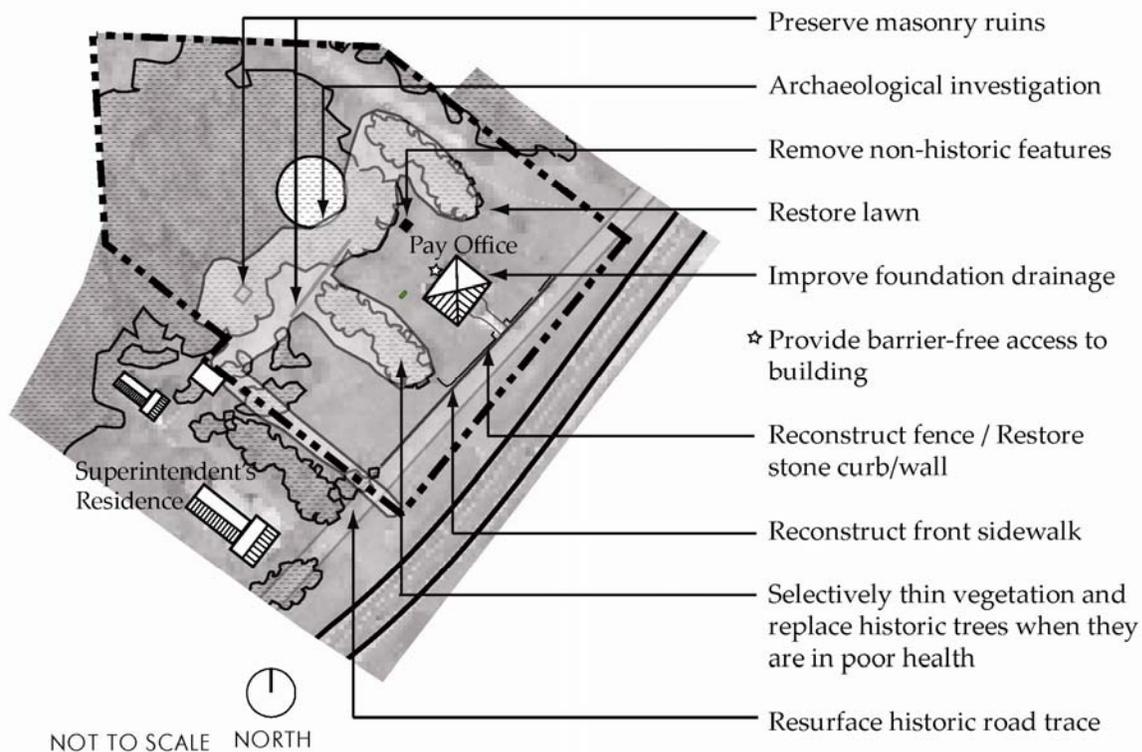


Figure 6 - 5: Treatment Recommendations, Mine Management Area

No. 2 and No. 4 Area (Common to all Action Treatment Alternatives)

Coordinate all planning and implementation efforts related to this area with the Quincy Mine Hoist Association.

- Conduct thorough analysis of historic structures by preparing Historic Structures Reports before undertaking treatment actions (see Chapter VIII, Project A-3).
- Preserve historic resources and interpret the historic landscape (see Chapter VIII, Projects A-6, J and K).
- Establish pedestrian links throughout the area (see Chapter VIII, Projects M and N).
- In the short term, develop hubs for pedestrian / non-motorized transportation and a way to transition to a long term alternative transportation system for the Historic Industrial Core (see Chapter VIII, Projects M and N).
- If the Historic Structures Report indicates it is appropriate, preserve and interpret the No. 2 Hoist House (1918-20), and establish it as a principal destination in the Historic Industrial Core.
- If the Historic Structures Report indicates it is appropriate, preserve and interpret the ruins of buildings with a self-guided walking tour and occasional interpretive programs (see Chapter VIII, Project K).
- Provide picnic areas in the vicinity of the building ruins in the No. 4 area and to the east of the parking lot near the No. 2 Hoist Houses (see Chapter VIII, Project S).

Lower Pewabic Area (Common to all Action Treatment Alternatives)

Coordinate all planning and implementation efforts related to this area with property owners.

- Advocate for the restoration of historic building exteriors and preservation of extant historic landscape features including domestic plants, building foundations, roads, traces of former roads, views, and small scale features (see Chapter VIII, Projects A-1 and A-6).
- Interpret the housing location at a landscape scale focusing on the overall patterns of the roads, and placement of the buildings, gardens, outhouses, etc (see Chapter VIII, Project K).
- Provide a picnic area east of the No. 2 Hoist Houses (see Chapter VIII, Project S).

## Historic Industrial Core Treatment Alternative A:

**Rehabilitation with an emphasis on Landscape Preservation and a National Park Service Visitor Center at the Supply House. Figure 6-6 illustrates Treatment Alternative A.**

### Overall Historic Industrial Core (Treatment Alternative A)

- **Vegetation:** Selectively remove woody vegetation to open significant views.
- **\*Archaeological Resources:** Conduct professional archaeological research and investigations to address gaps in knowledge, preserve known archaeological deposits, and provide interpretation of these activities.<sup>6</sup>
- **Mine Shafts:** Preserve, monitor and interpret historic shafts as landscape features, erect simple vertical elements to help visitors to visualize the historic resources and the broad landscape patterns that were present historically. Maintain and interpret bat structures at shaft entrances.
- **No. 2 Adit:** Continue to utilize the adit for underground tours. Provide above ground vertical markers identifying the alignment of the adit.
- **\*Poor Rock Piles:** Preserve and interpret as historic landscape features.
- **Views:** Preserve historic views by discouraging inappropriate development within significant view areas. Manage vegetation to preserve and restore selected historic views.
- **Circulation:**
  - **Vehicular:** Provide access road and parking lot at Supply House (NPS Visitor Center), A.E. Seaman Mineral Museum, and No. 2 Hoist Houses (QMHA Visitor Center).
  - **\*Alternative transportation system:** In the long term, implement a multi-use trail with a motorized alternative transportation system linking the site elements, in the short term, develop hubs and key links that will be part of the system.
  - **\*Pedestrian:** Provide self-guided interpretive routes (using brochures or small signs on site) between Supply House, No. 2 Shaft-Rockhouse, Cooling Ponds, Martin House and No. 2 Hoist Houses. Utilize the multi-use trail for pedestrians, providing links throughout the Historic Industrial Core. Encourage visitors to explore all areas within the Historic Industrial Core.

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<sup>6</sup> When presented with alternatives A, B and C, the common treatments include a \* to indicate the directive is the same for all of the action alternatives.

No. 6 Area (Treatment Alternative A)

- \*Stabilize and preserve ruins of industrial activities.<sup>7</sup>
- \*Remove woody vegetation to provide views of rock piles and other historic landscape features.
- \*Provide multi-use trail into the area.
- \*Encourage exploration and provide occasional tours.
- \*Encourage visitors to use the area for casual picnicking.

A.E. Seaman Mineral Museum Area (Treatment Alternative A)

- Utilize the Blacksmith Shop and Machine Shop for the A.E. Seaman Mineral Museum.
- Provide parking for the A.E. Seaman Mineral Museum.
- \*Provide a strong visual connection between this area and the No. 2 and No. 4 area.
- \*Preserve remnants of historic industrial activities.
- \*Provide picnic area for visitor use.

Former Miner's Residences Area (Treatment Alternative A)

- \* Conduct thorough analysis of historic structures by preparing Historic Structures Reports before undertaking treatment actions.
- \*If the Historic Structures Report indicates it is appropriate, restore the exterior of the historic buildings
- If the Historic Structures Report indicates it is appropriate, restore the interior of one of the historic buildings and interpret the domestic life of the mining community.
- If the Historic Structures Report indicates it is appropriate, rehabilitate the interior of two historic buildings for adaptive reuse.
- \*Provide access and parking on side streets.
- \*Provide a pedestrian route linking this area to Limerick Road, the Campus Drive Area, Dryhouse Area, and Mine Management Area.

Campus Drive Area (Treatment Alternative A)

- \*Remove non-contributing elements that are impacting the historic character of the Historic Industrial Core or improve their compatibility.
  - Work with private property owners to restore or maintain landscape elements compatible with the historic core.
  - Work with private property owners to negotiate the relocation or redevelopment of incompatible infill to restore or maintain landscape elements compatible with the historic core.
- \*Stabilize and preserve historic resources including building ruins, small scale features, domestic vegetation and views toward the No. 2 and No. 4 area;

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<sup>7</sup> When presented with alternatives two, three and four, the common treatments include a \* to indicate the directive is the same for all of the action alternatives.

- \* Conduct thorough analysis of the miner's residence on Limerick Road that is owned by the Quincy Mine Hoist Association by preparing a Historic Structures Report.<sup>8</sup>
- \*If the Historic Structures Report indicates it is appropriate, restore and interpret the miner's residence on Limerick Road that is owned by the Quincy Mine Hoist Association;
- \*Link this area to the Former Miner's Residences Area and the Dryhouse Area with a self-guided walking trail.

*Dryhouse Area (Treatment Alternative A)*

- \*Stabilize and preserve historic resources including building ruins, small scale features, domestic vegetation, archaeological surface scatters and views toward the No. 2 and No. 4 area.
- Remove vegetation impacting historic resources and thin non-historic vegetation to strengthen views.
- \*Provide a pedestrian trail linking this area to the Mine Management Area, Campus Drive Area, and Former Miner's Residence Area.
- \*Provide small parking lot along No. 2 Road.
- \*Provide a wayside at the trailhead near the parking area. Include interpretive information about the historic relationships between this site and the rest of the Historic Industrial Core as well as orientation information.
- Interpret the No. 2 Adit location from this site. Provide aboveground visual cues to help orient visitors to the underground resources.
- \*Relocate the radio tower when it is technologically feasible so that it is not within the view of the Historic Industrial Core.
- \*Encourage visitors to explore the area around the dryhouse.
- Provide a picnic table for visitor use near the dryhouse foundation.

*No. 7 & Railroad Corridor Area (Treatment Alternative A)*

- \* Conduct thorough analysis of the Roundhouse by preparing a Historic Structures Report before undertaking treatment actions.
- \*If the Historic Structures Report indicates it is appropriate, restore the exterior of the Roundhouse and the service pits, track, and wood floor and install rolling stock exhibits.
- \*Extend the restoration out from the building to the landscape with railroad tracks, and connections to other tracks and the water tank. Reveal the historic grades and connections to the No. 2 and No. 4 Area.
- \*Rehabilitate the water tank and interpret its historic use.
- \*Provide a pedestrian route along the railroad corridor along the crest of the hill.
- Manage vegetation to enhance views of the broader landscape.
- \*Provide an interpretive wayside near the Roundhouse and another one along the crest of the hill near the cog tram route.

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<sup>8</sup> When presented with alternatives two, three and four, the common treatments include a \* to indicate the directive is the same for all of the action alternatives.

Mine Management Area (Treatment Alternative A)

- \*Preserve the Quincy Mine Office and continue its use as offices and a meeting room.
- \*Conduct thorough analysis of historic structures by preparing Historic Structures Reports before undertaking treatment actions.<sup>9</sup>
- \*If the Historic Structures Report indicates it is appropriate, work with property owners to restore the exterior of the historic buildings.
- \*If the Historic Structures Report indicates it is appropriate, restore the interior of selected spaces in selected buildings and interpret their historic functions.
- \*If the Historic Structures Report indicates it is appropriate, rehabilitate the interior of other buildings and use adaptively.
- \*Work with property owners to provide a pedestrian trail linking this area to the Dryhouse Area, Campus Drive Area, and Former Miner's Residence Area.
- \*Improve the conditions at the Quincy Mine Office and increase visitor understanding and appreciation for the resources by implementing the following treatment recommendations for the Mine Management Area.
  - \*Restore the landscape features associated with the Quincy Mine Office.
  - \*Stabilize and preserve historic resources including small scale features, domestic vegetation and views.
  - \*Provide a picnic table at the Mine Office.
  - \*Improve the conditions at the Quincy Mine Office and increase visitor understanding and appreciation for the resources found in this area of the park (see Figure 6-5).
  - **\*Remove non-historic features:** Remove items that do not contribute to the historic integrity of the mine office landscape. These include a freestanding sign fixture located in the north yard and a piece of concrete in the northwest corner of the rear yard.
  - **\*Improve foundation drainage** – The basement and foundation of the mine office building is currently affected by seasonal wetness. Install new foundation drain tile to move water away from the foundation and allow the historic roof gutter drains to be restored.
  - **\*Restore lawn** – The lawn surrounding the mine office is rutted, in poor condition and contains many weeds. Grade, place additional topsoil and seed the area to improve its condition and appearance.
  - **\*Provide barrier free access** – A preferred method to provide barrier free access has yet to be determined but several preliminary alternatives have been discussed. At this time it is believed the access route that least impacts the historic building and setting will use the sidewalk to the north and the rear entrance. While further study is required to evaluate a complete range of alternatives, it is assumed that any preferred solution will require integration with the surrounding landscape through minor changes in sidewalks or installation of a ramp.

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<sup>9</sup> When presented with alternatives two, three and four, the common treatments include a \* to indicate the directive is the same for all of the action alternatives.

- **\*Reconstruct front fence** – A prominent feature through much of the building’s history was a distinctive wood fence and gates separating the front yard from the road. Reconstruct the wood fence and gates based on historic documentation.
- **\*Restore stone curb/wall** – Another prominent landscape element adjacent to the front fence was a stone curb/retaining wall made of locally quarried Jacobsville sandstone. The low curb defined the lawn edge and separated it from the adjacent sidewalk. At its south end the curb transitioned to a low retaining wall where the grade changed. The feature is in poor condition, and parts of it are missing. Restore the stone curb/wall.<sup>10</sup>
- **\*Reconstruct front walk** – The concrete sidewalk once present in front of the mine office is now missing. Reconstruct the concrete sidewalk to provide a safe walking surface outside of the vehicular traffic area for visitors and employees.
- **\*Resurface historic road trace** – The historic road trace currently serves as an access road and parking area for visitors to the mine office. Resurface the road trace to preserve its position in the landscape while accommodating current vehicle access and circulation.
- **\*Vegetation management** – Replace mature historic trees along the alley and in the rear yard when suffering from poor health. Replacements are to be large specimens of the same genus and species as practicable. Selectively thin trees and vegetation along side yard fencerows and at the rear yard of the mine office and the adjacent lot.
- **\*Reconstruct side yard fences** – Fences once existed along the side yards of the property. Reconstruct the side yard fences to aid visitors with understanding this historic mine management property.
- **\*Preserve masonry ruins** – Preserve the small masonry foundation and utility trench to help visitors understand this property and its historic functions.
- **\*Archaeological investigation** – Systematically investigate the entire property including the shallow depression, and adjacent pile of unknown origin and scattered debris, to determine the significance of these features and to reveal new information about the historic use of this site.

**No. 2 and No. 4 Area (Treatment Alternative A)**

- \*Preserve historic resources and interpret the historic landscape.
- \* Conduct thorough analysis of historic structures by preparing Historic Structures Reports before undertaking treatment actions.
- Reveal traces of industrial activities by selectively removing non-contributing woody vegetation.
- \*Establish pedestrian links throughout the area.
- \*In the short term, develop hubs for pedestrian / non-motorized transportation and a way to transition to a long term alternative transportation system for the Historic Industrial Core.

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<sup>10</sup> When presented with alternatives two, three and four, the common treatments include a \* to indicate the directive is the same for all of the action alternatives.

- \*If the Historic Structures report indicates it is appropriate, preserve and interpret the No. 2 Hoist House (1918-20).
- If the Historic Structures report indicates it is appropriate, rehabilitate the Supply House for a National Park Service Visitor Center. Include an initial visitor contact station, regional exhibits, theater, and restrooms.
- If the Historic Structures report indicates it is appropriate, rehabilitate the No. 2 Hoist House (1894-95) to serve as a Visitor Center for the Quincy Mine Hoist Association. Include exhibits related to the Quincy Mine Company, an office, tour staging area, restrooms, and ticket sales area.
- If the Historic Structures report indicates it is appropriate, preserve and interpret the No. 2 Shaft-rockhouse and provide visitor access to upper levels with exhibits, interpretation, and opportunities for views of the surrounding area.
- \*Preserve and interpret the ruins of buildings with a self-guided walking tour and interpretive programs.
- If the Historic Structures report indicates it is appropriate, preserve and interpret the No. 5 Boiler Plant.
- If the Historic Structures report indicates it is appropriate, preserve and interpret the Captain's Office, Martin House, Oil House, Old No. 2 Hoist House (1860) and residence.
- If the Historic Structures report indicates it is appropriate, acquire and rehabilitate the Quincy Fire Hall and use it for a community room, interpretive programs, or as a commercial space. This would be undertaken by either the NPS or a partner.
- \*Provide picnic areas in the vicinity of the building ruins in the No. 4 area, near the cooling ponds, and to the east of the parking lot near the No. 2 Hoist Houses.<sup>11</sup>

Lower Pewabic Area (Treatment Alternative A)

- \*Advocate for the restoration of historic building exteriors and preservation of extant historic landscape features including domestic plants, building foundations, roads, traces of former roads, views, and small scale features.
- \*Interpret the housing location at a landscape scale focusing on the overall patterns of the roads, and placement of the buildings, gardens, outhouses, etc.
- \*Provide a picnic area east of the No. 2 Hoist Houses.

Next page:

Figure 6 - 6: Treatment Alternative "A"

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<sup>11</sup> When presented with alternatives two, three and four, the common treatments include a \* to indicate the directive is the same for all of the action alternatives.

**No.6 Area:**

1. Stabilize and preserve ruins of industrial activities;
2. Remove woody vegetation to provide views of rock piles and other historic landscape features;
3. Provide multi-use trail into the area;
4. Encourage exploration and provide occasional tours.

**A.E. Seaman Mineral Museum Area:**

1. Utilize Blacksmith Shop and Machine Shop for the A.E. Seaman Mineral Museum;
2. Provide parking for A.E. Seaman Mineral Museum;
3. Provide a strong visual connection between this area and the No. 2 & No. 4 Area;
4. Preserve remnants of historic industrial activities.

**Former Miner's Residences Area:**

1. Restore exterior of historic buildings;
2. Restore interior of one historic building and interpret;
3. Rehabilitate interior of two historic buildings for adaptive reuse;
3. Provide access and parking on side streets.

**Campus Drive Area:**

1. Stabilize and preserve historic resources, including building ruins, small scale features, domestic vegetation and views toward the No. 2 & No. 4 Area;
2. Restore and interpret a miner's residence on Limerick Road;
3. Link this area to the Former Miner's Residences Area and the Dryhouse Area with a self-guided walking trail.

**Dryhouse Area:**

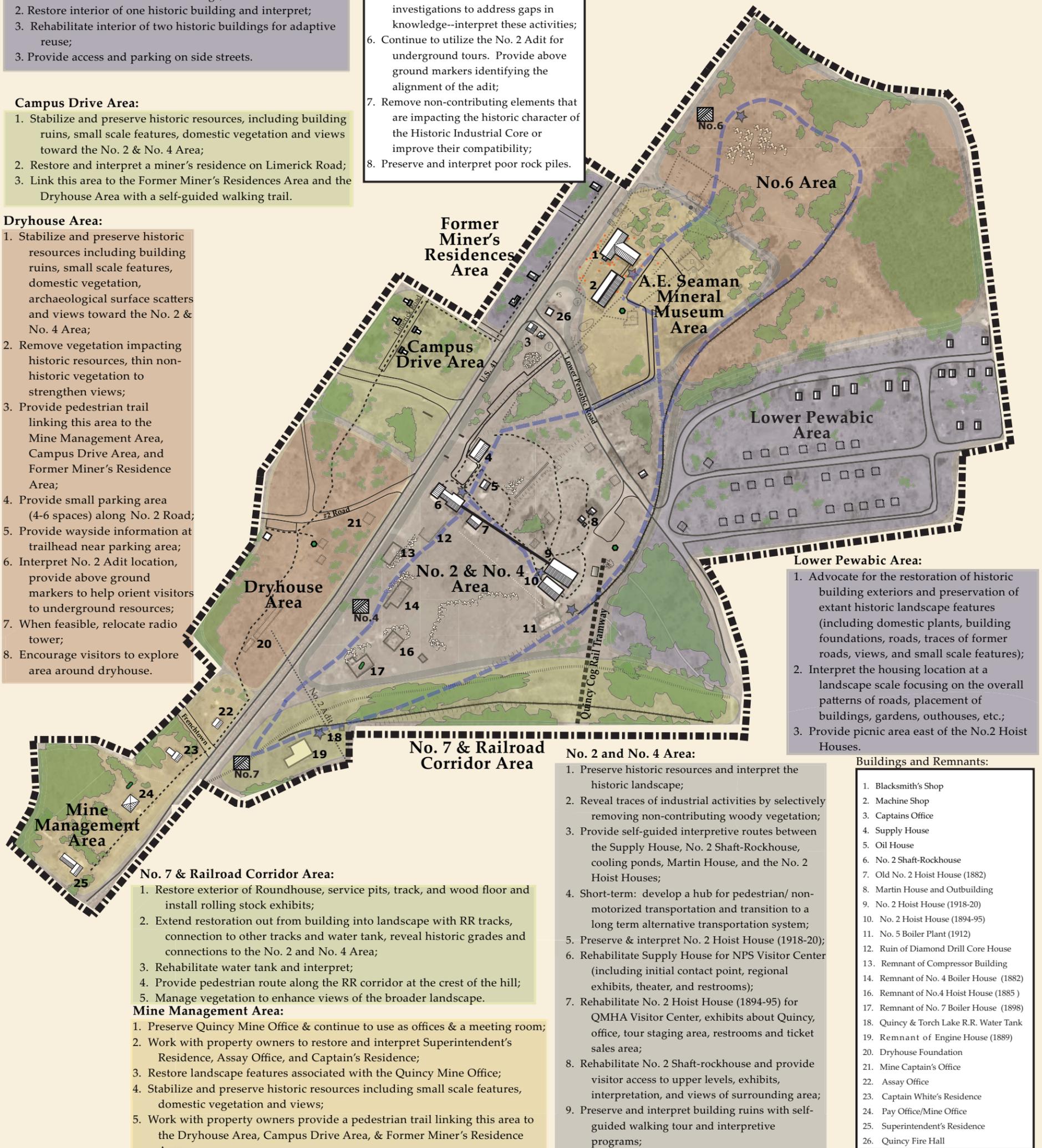
1. Stabilize and preserve historic resources including building ruins, small scale features, domestic vegetation, archaeological surface scatters and views toward the No. 2 & No. 4 Area;
2. Remove vegetation impacting historic resources, thin non-historic vegetation to strengthen views;
3. Provide pedestrian trail linking this area to the Mine Management Area, Campus Drive Area, and Former Miner's Residence Area;
4. Provide small parking area (4-6 spaces) along No. 2 Road;
5. Provide wayside information at trailhead near parking area;
6. Interpret No. 2 Adit location, provide above ground markers to help orient visitors to underground resources;
7. When feasible, relocate radio tower;
8. Encourage visitors to explore area around dryhouse.

**Overall Historic Core:**

1. In the long term, implement a multi-use trail with a motorized alternative transportation system linking the site elements, in the short term, develop hubs and key links that will be part of the system;
2. Selectively remove woody vegetation to open significant views;
3. Preserve, monitor and interpret historic shafts as landscape features, erect simple vertical elements to help visitors visualize the historic resources;
4. Encourage visitors to explore areas within the Historic Core;
5. Conduct professional archaeological investigations to address gaps in knowledge--interpret these activities;
6. Continue to utilize the No. 2 Adit for underground tours. Provide above ground markers identifying the alignment of the adit;
7. Remove non-contributing elements that are impacting the historic character of the Historic Industrial Core or improve their compatibility;
8. Preserve and interpret poor rock piles.

**Legend**

	Historic Industrial Core Boundary		Conceptual Pedestrian Route
	Extant Historic Building		Historic Railroad Grade
	Remnant of Historic Building		Extant Railroad Track
	Contemporary/Modified Building		Vegetation
	Landscape Management Zone		Rock Piles
	Conceptual Route for Visitor Tram and Stops		Cog Rail Tramway
	Artifact pile		Mine Shaft Location
			Proposed Picnic Table
			Proposed Picnic Area



- Lower Pewabic Area:**
1. Advocate for the restoration of historic building exteriors and preservation of extant historic landscape features (including domestic plants, building foundations, roads, traces of former roads, views, and small scale features);
  2. Interpret the housing location at a landscape scale focusing on the overall patterns of roads, placement of buildings, gardens, outhouses, etc.;
  3. Provide picnic area east of the No.2 Hoist Houses.

- No. 2 and No. 4 Area:**
1. Preserve historic resources and interpret the historic landscape;
  2. Reveal traces of industrial activities by selectively removing non-contributing woody vegetation;
  3. Provide self-guided interpretive routes between the Supply House, No. 2 Shaft-Rockhouse, cooling ponds, Martin House, and the No. 2 Hoist Houses;
  4. Short-term: develop a hub for pedestrian/ non-motorized transportation and transition to a long term alternative transportation system;
  5. Preserve & interpret No. 2 Hoist House (1918-20);
  6. Rehabilitate Supply House for NPS Visitor Center (including initial contact point, regional exhibits, theater, and restrooms);
  7. Rehabilitate No. 2 Hoist House (1894-95) for QMHA Visitor Center, exhibits about Quincy, office, tour staging area, restrooms and ticket sales area;
  8. Rehabilitate No. 2 Shaft-rockhouse and provide visitor access to upper levels, exhibits, interpretation, and views of surrounding area;
  9. Preserve and interpret building ruins with self-guided walking tour and interpretive programs;
  10. Rehabilitate and partially restore the No. 5 Boiler Plant, use for exhibits, office & interpret;
  11. Restore and interpret Captain's Office, Martin House, Oil House, Old No. 2 Hoist House (1860), and residence;
  12. NPS or partner to acquire and rehabilitate the Quincy Fire Hall and use for a community room, interpretive programs, or as commercial space;
  13. Provide picnic area.

- No. 7 & Railroad Corridor Area:**
1. Restore exterior of Roundhouse, service pits, track, and wood floor and install rolling stock exhibits;
  2. Extend restoration out from building into landscape with RR tracks, connection to other tracks and water tank, reveal historic grades and connections to the No. 2 and No. 4 Area;
  3. Rehabilitate water tank and interpret;
  4. Provide pedestrian route along the RR corridor at the crest of the hill;
  5. Manage vegetation to enhance views of the broader landscape.

- Mine Management Area:**
1. Preserve Quincy Mine Office & continue to use as offices & a meeting room;
  2. Work with property owners to restore and interpret Superintendent's Residence, Assay Office, and Captain's Residence;
  3. Restore landscape features associated with the Quincy Mine Office;
  4. Stabilize and preserve historic resources including small scale features, domestic vegetation and views;
  5. Work with property owners provide a pedestrian trail linking this area to the Dryhouse Area, Campus Drive Area, & Former Miner's Residence Area;
  6. Provide a picnic table at the Mine Office;
  7. Improve barrier free access to the Mine Office.

- Buildings and Remnants:**
1. Blacksmith's Shop
  2. Machine Shop
  3. Captains Office
  4. Supply House
  5. Oil House
  6. No. 2 Shaft-Rockhouse
  7. Old No. 2 Hoist House (1882)
  8. Martin House and Outbuilding
  9. No. 2 Hoist House (1918-20)
  10. No. 2 Hoist House (1894-95)
  11. No. 5 Boiler Plant (1912)
  12. Ruin of Diamond Drill Core House
  13. Remnant of Compressor Building
  14. Remnant of No. 4 Boiler House (1882)
  16. Remnant of No.4 Hoist House (1885)
  17. Remnant of No. 7 Boiler House (1898)
  18. Quincy & Torch Lake R.R. Water Tank
  19. Remnant of Engine House (1889)
  20. Dryhouse Foundation
  21. Mine Captain's Office
  22. Assay Office
  23. Captain White's Residence
  24. Pay Office/Mine Office
  25. Superintendent's Residence
  26. Quincy Fire Hall

**Base Sources:**

1. Aerial photography, prepared for Keweenaw National Historical Park by Ayres Associates, Inc., of Madison, Wisconsin, May 2002.
2. Eric M. Hanson, "Quincy Mining Company Maps," HAER Heritage, Conservation and Recreation Service, 1978.
3. Land ownership information provided by Keweenaw National Historical Park.
4. Larry Mishkar, "Land Use History and Archaeological Survey, Seaman Mineral Museum Project, Quincy Mine National Historic Landmark, Houghton County, Michigan," Industrial Archaeology Laboratory, Michigan Technological University, Houghton, Michigan, 2005.
5. Period of Change Plans, Chapter II, Landscape History, Quincy Unit Cultural Landscape Report.
6. Smithgroup and Hitch, Inc., "A.E. Seaman Mineral Museum Master Plan Report," 20 January 2006.

SCALE: NORTH

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## Historic Industrial Core Treatment Alternative B:

Rehabilitation with an emphasis on Landscape Restoration and a National Park Service Visitor Center outside the Historic Industrial Core. Figure 6-7 illustrates treatment alternative B.

### Overall Historic Industrial Core (Treatment Alternative B)

- **Vegetation:** Remove all woody vegetation to provide an open landscape character similar to the earliest mining periods of significance.
- **\*Archaeological Resources:** Conduct professional archaeological research and investigations to address gaps in knowledge, preserve known archaeological deposits, and provide interpretation of these activities.<sup>12</sup>
- **Mine Shafts:** Preserve, monitor and interpret historic shafts as landscape features. Maintain and interpret bat structures at shaft entrances.
- **No. 2 Adit:** Continue to utilize the adit for underground tours. Above ground provide vertical markers identifying the alignment of the adit.
- **\*Poor Rock Piles:** Preserve and interpret as historic landscape features.
- **Views:** Preserve historic views by discouraging inappropriate development within significant view areas. Remove woody vegetation to partially restore historic views.
- **Circulation:**
  - **Vehicular:** Provide access road and parking lot at Supply House, A.E. Seaman Mineral Museum, and No. 2 Hoist Houses (QMHA Visitor Center).
  - **\*Alternative:** In the long term, implement multi-use trail and alternative transportation system linking the site elements, in the short term, develop hubs that will be part of the system.
  - **\*Pedestrian:** Provide self-guided interpretive routes (using brochures or small signs on site) between Supply House, No. 2 Shaft-Rockhouse, Cooling Ponds, Martin House and No. 2 Hoist Houses. Utilize the multi-use trail for pedestrians, providing links throughout the Historic Industrial Core. Encourage visitors to explore all areas within the Historic Industrial Core.

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<sup>12</sup> When presented with alternatives two, three and four, the common treatments include a \* to indicate the directive is the same for all of the action alternatives.

**No. 6 Area (Treatment Alternative B)**

- \*Stabilize and preserve ruins of industrial activities.<sup>13</sup>
- \*Remove woody vegetation to provide views of rock piles and other historic landscape features.
- \*Provide multi-use trail into the area.
- \*Encourage exploration and provide occasional tours.
- \*Provide a picnic table for visitor use.

**A.E. Seaman Mineral Museum Area (Treatment Alternative B)**

- Utilize the Blacksmith Shop and Machine Shop for the A.E. Seaman Mineral Museum.
- \*Provide parking for the A.E. Seaman Mineral Museum.
- \*Provide a strong visual connection between this area and the No. 2 and No. 4 area.
- \*Preserve remnants of historic industrial activities.
- \*Provide picnic areas for visitor use.

**Former Miner's Residences Area (Treatment Alternative B)**

- \*Conduct thorough analysis of historic structures by preparing Historic Structures Reports before undertaking treatment actions.
- \*If the Historic Structures Report indicates it is appropriate, restore the exterior of the historic buildings.
- If the Historic Structures Report indicates it is appropriate, restore the interior of the historic buildings and interpret their role in providing housing for miner's and their families.
- \*Provide access and parking on side streets.
- \*Provide a pedestrian route linking this area to Limerick Road, the Campus Drive Area, Dryhouse Area, and Mine Management Area.

**Campus Drive Area (Treatment Alternative B)**

- \*Remove non-contributing elements that are impacting the historic character of the Historic Industrial Core or improve their compatibility.
  - Work with private property owners to negotiate the relocation or redevelopment of incompatible infill and to restore or maintain landscape elements compatible with the historic core.
- \*Stabilize and preserve historic resources including building ruins, small scale features, domestic vegetation and views toward the No. 2 and No. 4 area;
- \*Restore and interpret the miner's residence on Limerick Road that is owned by the Quincy Mine Hoist Association;<sup>14</sup>

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<sup>13</sup> When presented with alternatives two, three and four, the common treatments include a \* to indicate the directive is the same for all of the action alternatives.

- \*Link this area to the Former Miner's Residences Area and the Dryhouse Area with a self-guided walking trail.

**Dryhouse Area (Treatment Alternative B)**

- \*Stabilize and preserve historic resources including building ruins, small scale features, domestic vegetation and views toward the No. 2 and No. 4 area.
- Remove woody vegetation.
- \*Provide multi-use trail linking this area to the Mine Management Area, Campus Drive Area, and Former Miner's Residence Area.
- \*Provide a small parking lot along No. 2 Road.
- \*Provide a wayside at the trailhead near the parking area. Include information about the historic relationships between this site and the rest of the Historic Industrial Core as well as logistical information.
- Interpret the No. 2 Adit location from this site. Provide above ground visual cues to help orient visitors to the underground resources.
- \*When feasible, relocate the radio tower so that it is not within the view of the Historic Core.
- \*Encourage visitors to explore the area around the dryhouse.
- \*Provide a picnic table for visitor use near the dryhouse foundation.

**No. 7 & Railroad Corridor Area (Treatment Alternative B)**

- \*Conduct thorough analysis of the Roundhouse by preparing a Historic Structures Report before undertaking treatment actions.
- \*If the Historic Structures Report indicates it is appropriate, restore the exterior of the Roundhouse and install rolling stock exhibits.
- \*Extend the restoration out from the building to the landscape with railroad tracks, and connections to other tracks and the water tank. Reveal the historic grades and connections to the No. 2 and No. 4 Area.
- \*Rehabilitate the water tank and interpret its historic use.
- \*Provide a pedestrian route along the railroad corridor along the crest of the hill.
- Remove woody vegetation.
- Provide a picnic table near the Roundhouse and one along the crest of the hill.

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<sup>14</sup> When presented with alternatives two, three and four, the common treatments include a \* to indicate the directive is the same for all of the action alternatives.

Mine Management Area (Treatment Alternative B)

- \*Preserve the Quincy Mine Office and continue its use as offices and a meeting room.<sup>15</sup>
- \*Conduct thorough analysis of historic structures by preparing Historic Structures Reports before undertaking treatment actions.
- \*If the Historic Structures Report indicates it is appropriate, work with property owners to restore the exterior of the historic buildings.
- \*If the Historic Structures Report indicates it is appropriate, restore the interior of selected spaces in selected buildings and interpret their historic functions.
- \*If the Historic Structures Report indicates it is appropriate, rehabilitate the interior of other buildings and use adaptively.
- \*Work with property owners to provide a pedestrian trail linking this area to the Dryhouse Area, Campus Drive Area, and Former Miner's Residence Area.
- \*Improve the conditions at the Quincy Mine Office and increase visitor understanding and appreciation for the resources by implementing the following treatment recommendations for the Mine Management Area.
  - \*Restore the landscape features associated with the Quincy Mine Office.
  - \*Stabilize and preserve historic resources including small scale features, domestic vegetation and views.
  - \*Provide a picnic table at the Mine Office.
  - \*Improve the conditions at the Quincy Mine Office and increase visitor understanding and appreciation for the resources found in this area of the park (see Figure 6-5).
  - **\*Remove non-historic features:** Remove items that do not contribute to the historic integrity of the mine office landscape. These include a freestanding sign fixture located in the north yard and a piece of concrete in the northwest corner of the rear yard.
  - **\*Improve foundation drainage** – The basement and foundation of the mine office building is currently affected by seasonal wetness. Install new foundation drain tile to move water away from the foundation and allow the historic roof gutter drains to be restored.
  - **\*Restore lawn** – The lawn surrounding the mine office is rutted, in poor condition and contains many weeds. Grade, place additional topsoil and seed the area to improve its condition and appearance.
  - **\*Provide barrier free access** – A preferred method to provide barrier free access has yet to be determined but several preliminary alternatives have been discussed. At this time it is believed the access route that least impacts the historic building and setting will use the sidewalk to the north and the rear entrance. While further study is required to evaluate a complete range of alternatives, it is assumed that any preferred solution will require integration with the surrounding landscape through minor changes in sidewalks or installation of a ramp.

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<sup>15</sup> When presented with alternatives two, three and four, the common treatments include a \* to indicate the directive is the same for all of the action alternatives.

- **\*Reconstruct front fence** – A prominent feature through much of the building’s history was a distinctive wood fence and gates separating the front yard from the road. Reconstruct the wood fence and gates based on historic documentation.<sup>16</sup>
- **\*Restore stone curb/wall** – Another prominent landscape element adjacent to the front fence was a stone curb/retaining wall made of locally quarried Jacobsville sandstone. The low curb defined the lawn edge and separated it from the adjacent sidewalk. At its south end the curb transitioned to a low retaining wall where the grade changed. The feature is in poor condition, and parts of it are missing. Restore the stone curb/wall.
- **\*Reconstruct front walk** – The concrete sidewalk once present in front of the mine office is now missing. Reconstruct the concrete sidewalk to provide a safe walking surface outside of the vehicular traffic area for visitors and employees.
- **\*Resurface historic road trace** – The historic road trace currently serves as an access road and parking area for visitors to the mine office. Resurface the road trace to preserve its position in the landscape while accommodating current vehicle access and circulation.
- **\*Vegetation management** – Replace mature historic trees along the alley and in the rear yard when suffering from poor health. Replacements are to be large specimens of the same genus and species as practicable. Selectively thin trees and vegetation along side yard fencerows and at the rear yard of the mine office and the adjacent lot.
- **\*Reconstruct side yard fences** – Fences once existed along the side yards of the property. Reconstruct the side yard fences to aid visitors with understanding this historic mine management property.
- **\*Preserve masonry ruins** – Preserve the small masonry foundation and utility trench to help visitors understand this property and its historic functions.
- **\*Archaeological investigation** – Systematically investigate the entire property including the shallow depression, and adjacent pile of unknown origin and scattered debris, to determine the significance of these features and to reveal new information about the historic use of this site.

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<sup>16</sup> When presented with alternatives two, three and four, the common treatments include a \* to indicate the directive is the same for all of the action alternatives.

No. 2 and No. 4 Area (Treatment Alternative B)

- \*Conduct thorough analysis of historic structures by preparing Historic Structures Reports before undertaking treatment actions.<sup>17</sup>
- \*Preserve historic resources and interpret the historic landscape.
- Remove woody vegetation.
- Provide self-guided interpretive routes between the Supply House, No. 2 Shaft-Rockhouse, cooling ponds, Martin House, and the No. 2 Hoist Houses.
- \*Establish pedestrian links throughout the area.
- \*In the short term, develop hubs for pedestrian / non-motorized transportation and a way to transition to a long term alternative transportation system for the Historic Industrial Core.
- \*If the Historic Structures Report indicates it is appropriate, preserve and interpret the No. 2 Hoist House (1918-20).
- If the Historic Structures Report indicates it is appropriate, rehabilitate the Supply House and interpret its historic use. Use the building for the Quincy Mine Hoist Association gift shop, ticket sales, and as a National Park Service contact station.
- If the Historic Structures Report indicates it is appropriate, rehabilitate the No. 2 Hoist House (1894-95) to serve as a Visitor Center for the Quincy Mine Hoist Association. Include exhibits related to the Quincy Mine Company, an office, tour staging area, theater and restrooms.
- Restore the pulley stands between the No. 2 Shaft-rockhouse and the Hoist House.
- If the Historic Structures Report indicates it is appropriate, rehabilitate the No. 2 Shaft-rockhouse and provide visitor access to upper levels with exhibits, interpretation, and opportunities for views of the surrounding area.
- \*Preserve and interpret the ruins of buildings with a self-guided walking tour and occasional interpretive programs.
- Preserve the ruins of buildings #11, 12, 13, 14, 16, and 17 and use them for programmed activities, including outdoor classrooms or picnic areas.
- If the Historic Structures Report indicates it is appropriate, rehabilitate and partially restore the No. 5 Boiler Plant and interpret its historic use.
- If the Historic Structures Report indicates it is appropriate, restore and interpret the Captain's Office, Martin House, Oil House, Old No. 2 Hoist House (1860) and residence. Consider using these buildings for interpretive or educational programs.
- If the Historic Structures Report indicates it is appropriate, work with owner to restore and interpret the historic use of the Quincy Fire Hall.
- \*Provide picnic areas in the vicinity of the building ruins in the No. 4 area, near the cooling ponds, and to the east of the parking lot near the No. 2 Hoist Houses.

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<sup>17</sup> When presented with alternatives two, three and four, the common treatments include a \* to indicate the directive is the same for all of the action alternatives.

Lower Pewabic Area (Treatment Alternative B)

- \*Advocate for the restoration of historic building exteriors and preservation of extant historic landscape features including domestic plants, building foundations, roads, traces of former roads, views, and small scale features.<sup>18</sup>
- Consider acquisition of vacant property in Lower Pewabic by NPS or partners to help achieve the preservation of extant landscape features.
- \*Interpret the housing location at a landscape scale focusing on the overall patterns of the roads, and placement of the buildings, gardens, outhouses, etc.
- \*Provide a picnic area east of the No. 2 Hoist Houses.

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<sup>18</sup> When presented with alternatives two, three and four, the common treatments include a \* to indicate the directive is the same for all of the action alternatives.

Next page:

**Figure 6 - 7: Treatment Alternative "B"**

**No.6 Area:**

1. Stabilize and preserve ruins of industrial activities;
2. Remove woody vegetation to provide views of rock piles and other historic landscape features;
3. Provide multi-use trail into the area;
4. Encourage exploration and provide occasional tours.

**A.E. Seaman Mineral Museum Area:**

1. Utilize Blacksmith Shop and Machine Shop for the A.E. Seaman Mineral Museum;
2. Provide parking for the A.E. Seaman Mineral Museum;
3. Develop a hub for pedestrian/non-motorized transportation that can transition to a long term alternative transportation system;
4. Provide a strong visual connection between this area and the No. 2 & No. 4 Area;
5. Preserve remnants of historic industrial activities;
6. Provide a picnic area for visitor use.

**Former Miner's Residences Area:**

1. Restore exterior of historic buildings;
2. Restore interior of historic buildings and interpret;
3. Provide access and parking on side streets.

**Campus Drive Area:**

1. Work with property owners to relocate or redevelop incompatible infill and restore/maintain compatible landscape features;
2. Stabilize and preserve historic resources, including building ruins, small scale features, domestic vegetation and views toward the No. 2 & No. 4 Area;
3. Restore and interpret a miner's residence on Limerick Road;
4. Link this area to the Former Miner's Residences Area and the Dryhouse Area with a self-guided walking trail.

**Dryhouse Area:**

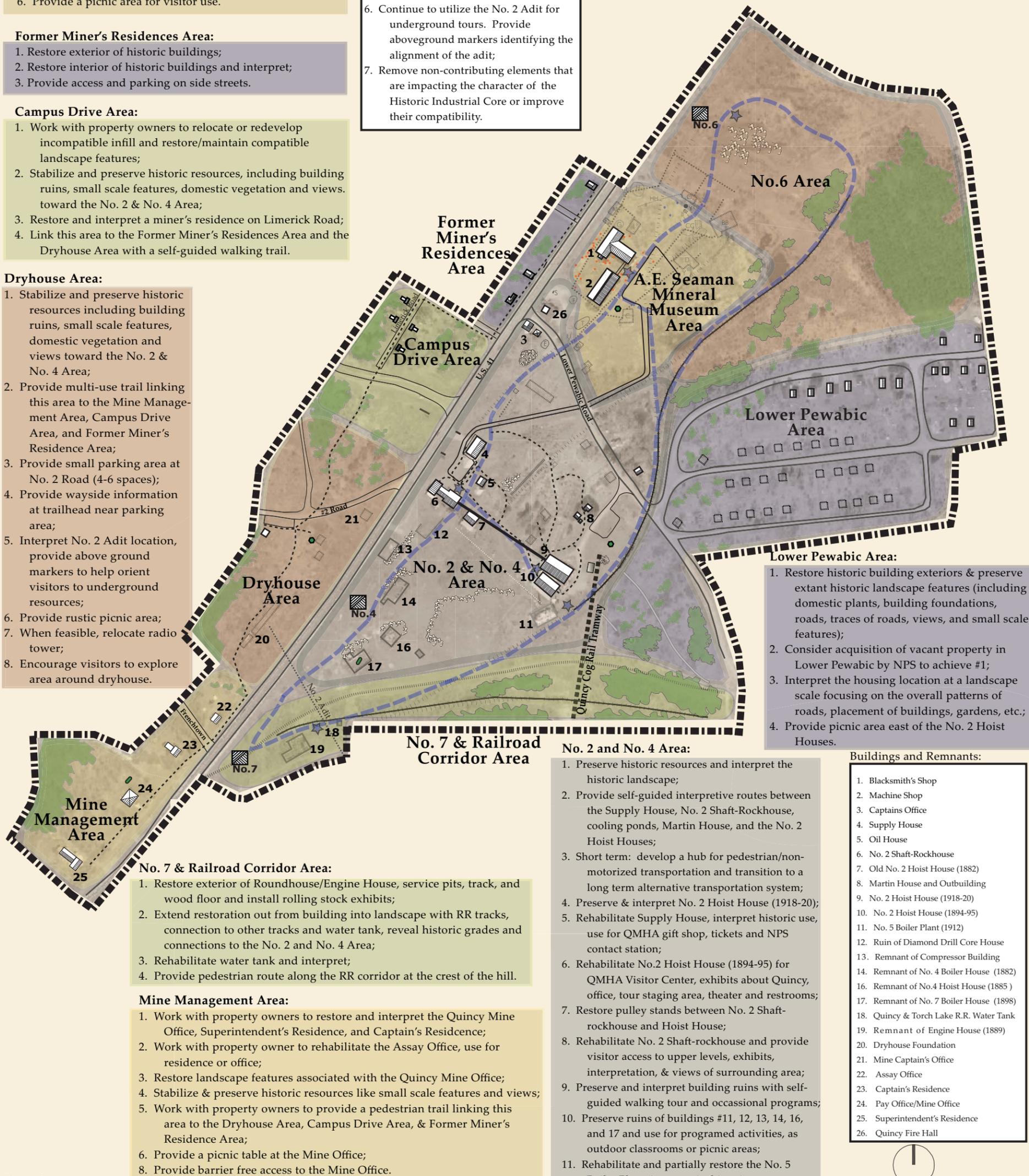
1. Stabilize and preserve historic resources including building ruins, small scale features, domestic vegetation and views toward the No. 2 & No. 4 Area;
2. Provide multi-use trail linking this area to the Mine Management Area, Campus Drive Area, and Former Miner's Residence Area;
3. Provide small parking area at No. 2 Road (4-6 spaces);
4. Provide wayside information at trailhead near parking area;
5. Interpret No. 2 Adit location, provide above ground markers to help orient visitors to underground resources;
6. Provide rustic picnic area;
7. When feasible, relocate radio tower;
8. Encourage visitors to explore area around dryhouse.

**Overall Historic Core:**

1. In the long term, implement multi-use trail with a motorized alternative transportation system linking the site elements, in the short term, develop hubs and key links that will be part of the system;
2. Remove all woody vegetation to restore industrial character to the landscape;
3. Preserve, monitor and interpret historic shafts and maintain and interpret bat structures at shaft entrances;
4. Encourage visitors to explore all areas within the Historic Industrial Core;
5. Conduct professional archaeological investigations to address gaps in knowledge--interpret these activities;
6. Continue to utilize the No. 2 Adit for underground tours. Provide aboveground markers identifying the alignment of the adit;
7. Remove non-contributing elements that are impacting the character of the Historic Industrial Core or improve their compatibility.

**Legend**

	Historic Industrial Core Boundary		Conceptual Pedestrian Route
	Extant Historic Building		Historic Railroad Grade
	Remnant of Historic Building		Extant Railroad Track
	Contemporary/Modified Building		Vegetation
	Landscape Management Zone		Rock Piles
	Conceptual Route for Visitor Tram and Stops		Cog Rail Tramway
	Artifact pile		Mine Shaft Location
			Proposed Picnic Table
			Proposed Picnic Area



- Lower Pewabic Area:**
1. Restore historic building exteriors & preserve extant historic landscape features (including domestic plants, building foundations, roads, traces of roads, views, and small scale features);
  2. Consider acquisition of vacant property in Lower Pewabic by NPS to achieve #1;
  3. Interpret the housing location at a landscape scale focusing on the overall patterns of roads, placement of buildings, gardens, etc.;
  4. Provide picnic area east of the No. 2 Hoist Houses.

- No. 2 and No. 4 Area:**
1. Preserve historic resources and interpret the historic landscape;
  2. Provide self-guided interpretive routes between the Supply House, No. 2 Shaft-Rockhouse, cooling ponds, Martin House, and the No. 2 Hoist Houses;
  3. Short term: develop a hub for pedestrian/non-motorized transportation and transition to a long term alternative transportation system;
  4. Preserve & interpret No. 2 Hoist House (1918-20);
  5. Rehabilitate Supply House, interpret historic use, use for QMHA gift shop, tickets and NPS contact station;
  6. Rehabilitate No.2 Hoist House (1894-95) for QMHA Visitor Center, exhibits about Quincy, office, tour staging area, theater and restrooms;
  7. Restore pulley stands between No. 2 Shaft-rockhouse and Hoist House;
  8. Rehabilitate No. 2 Shaft-rockhouse and provide visitor access to upper levels, exhibits, interpretation, & views of surrounding area;
  9. Preserve and interpret building ruins with self-guided walking tour and occasional programs;
  10. Preserve ruins of buildings #11, 12, 13, 14, 16, and 17 and use for programed activities, as outdoor classrooms or picnic areas;
  11. Rehabilitate and partially restore the No. 5 Boiler Plant, interpret its historic use;
  12. Restore and interpret Captain's Office, Martin House, Oil House, Old No. 2 Hoist House (1860), and residence, consider use for interpretive or educational programs;
  13. Work with owners to restore and interpret the historic use of the Quincy Fire Hall.

- Buildings and Remnants:**
1. Blacksmith's Shop
  2. Machine Shop
  3. Captains Office
  4. Supply House
  5. Oil House
  6. No. 2 Shaft-Rockhouse
  7. Old No. 2 Hoist House (1882)
  8. Martin House and Outbuilding
  9. No. 2 Hoist House (1918-20)
  10. No. 2 Hoist House (1894-95)
  11. No. 5 Boiler Plant (1912)
  12. Ruin of Diamond Drill Core House
  13. Remnant of Compressor Building
  14. Remnant of No. 4 Boiler House (1882)
  16. Remnant of No.4 Hoist House (1885)
  17. Remnant of No. 7 Boiler House (1898)
  18. Quincy & Torch Lake R.R. Water Tank
  19. Remnant of Engine House (1889)
  20. Dryhouse Foundation
  21. Mine Captain's Office
  22. Assay Office
  23. Captain's Residence
  24. Pay Office/Mine Office
  25. Superintendent's Residence
  26. Quincy Fire Hall

- No. 7 & Railroad Corridor Area:**
1. Restore exterior of Roundhouse/Engine House, service pits, track, and wood floor and install rolling stock exhibits;
  2. Extend restoration out from building into landscape with RR tracks, connection to other tracks and water tank, reveal historic grades and connections to the No. 2 and No. 4 Area;
  3. Rehabilitate water tank and interpret;
  4. Provide pedestrian route along the RR corridor at the crest of the hill.

- Mine Management Area:**
1. Work with property owners to restore and interpret the Quincy Mine Office, Superintendent's Residence, and Captain's Residence;
  2. Work with property owner to rehabilitate the Assay Office, use for residence or office;
  3. Restore landscape features associated with the Quincy Mine Office;
  4. Stabilize & preserve historic resources like small scale features and views;
  5. Work with property owners to provide a pedestrian trail linking this area to the Dryhouse Area, Campus Drive Area, & Former Miner's Residence Area;
  6. Provide a picnic table at the Mine Office;
  8. Provide barrier free access to the Mine Office.

- Base Sources:**
1. Aerial photography, prepared for Keweenaw National Historical Park by Ayres Associates, Inc., of Madison, Wisconsin, May 2002.
  2. Eric M. Hanson, "Quincy Mining Company Maps," HAER Heritage, Conservation and Recreation Service, 1978.
  3. Land ownership information provided by Keweenaw National Historical Park.
  4. Larry Mishkar, "Land Use History and Archaeological Survey, Seaman Mineral Museum Project, Quincy Mine National Historic Landmark, Houghton County, Michigan," Industrial Archaeology Laboratory, Michigan Technological University, Houghton, Michigan, 2005.
  5. Period of Change Plans, Chapter II, Landscape History, Quincy Unit Cultural Landscape Report.
  6. Smithgroup and Hitch, Inc., "A.E. Seaman Mineral Museum Master Plan Report," 20 January 2006.

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**Historic Industrial Core Treatment Alternative C, Preferred Alternative:**

*Rehabilitation with an emphasis on Landscape Restoration and a combined Visitor Center for the A.E. Seaman Mineral Museum, National Park Service, and Quincy Mine Hoist Association. Figure 6 – 8 illustrates Treatment Alternative C, Preferred Alternative.*

**Overall Historic Industrial Core (Treatment Alternative C, Preferred Alternative)**

- **Vegetation:** Remove woody vegetation that impacts historic resources within the Historic Industrial Core (including views). Selectively thin some areas to create a gradual transition from open spaces to wooded areas (see Chapter VIII, Projects C-1, D, E, F, G, H, and I).
- **\*Archaeological Resources:** Conduct professional archaeological research and investigations to address gaps in knowledge, preserve known archaeological deposits, and provide interpretation of these activities.<sup>19</sup> See Chapter VIII, Project A-2.
- **Mine Shafts:** Preserve, monitor and interpret historic shafts as landscape features. Maintain and interpret bat structures at shaft entrances.
- **No. 2 Adit:** Continue to utilize the adit for underground tours. Interpret its location on the surface from the Dryhouse Area, Roundhouse, and Adit entrance (see Chapter VIII, Projects C-1, C-2, J, and K).
- **Underground Features:** Consider interpreting the underground network of drifts and stopes on the surface. A brochure, wayside, or small sign with the drift number and depth is one possible approach (see Chapter VIII, Projects J, K, and II).
- **\*Poor Rock Piles:** Preserve and interpret as historic landscape features (see Chapter VIII, Projects A-1, A-6, J, K, and W).
- **Industrial Landscape Features and Artifacts:**
  - Utilize detailed information provided in the Industrial Artifact Inventory prepared by Scott See to guide placement and use of industrial artifacts in the landscape.<sup>20</sup> Consider placing artifacts near areas or elements related to their historic use and utilizing them as interpretive waysides.
  - Consider restoration of portions of railroad grades, tracks and trestles as extensions from selected structures when appropriate documentation exists.
  - Reveal extant grades and remnants of railroad tracks, and industrial features through removal of vegetation.
  - Refer visitors to the Quincy Smelting Works to view a more extensive extant network of trestles associated with other features.

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<sup>19</sup> When presented with alternatives two, three and four, the common treatments include a \* to indicate the directive is the same for all of the action alternatives.

<sup>20</sup> See, Keweenaw National Historical Park, Cultural Landscape Report, Quincy Unit – Industrial Artifact Inventory. 2006.

- **Views:**
  - Preserve historic views by discouraging inappropriate development within significant view areas (see Chapter VIII, Project B).
  - Selectively remove woody vegetation to partially restore historic views (see Chapter VIII, Projects C-1, D, E, F, G, H, I, and W).
  - Interpret views of Quincy Hill from the Houghton waterfront (see Chapter VIII, Project II).
- **Site Amenities:** Develop a palette for site furnishings, signs, waysides, and other features in the Historic Industrial Core that is compatible with the character of the historic landscape (see Chapter VIII, Project JJ).
- **Circulation:**
  - **Vehicular:** In the short term, provide access road and parking lot at Supply House, A.E. Seaman Mineral Museum, and No. 2 Hoist Houses (QMHA Visitor Center). In the long term, minimize the parking at the Hoist Houses and Supply House to necessary universal accessible spaces. Provide parking for all others at the Blacksmith Shop/Machine Shop (see Chapter VIII, Projects T, V, and Z).
  - **\*Alternative transportation route:** Develop a route that reflects locations of historic railroad tracks and locations within the Historic Industrial Core. Along the route, when appropriate evidence exists, expose portions of extant railroad resources and interpret. In the long term, implement multi-use trail and alternative transportation system linking the site elements, in the short term, develop hubs that will be part of the system.<sup>21</sup> See Chapter VIII, Projects M and N.
  - **\*Pedestrian:** Provide self-guided interpretive pedestrian routes (using brochures or small signs on site) between Supply House, No. 2 Shaft-Rockhouse, Cooling Ponds, Martin House and No. 2 Hoist Houses. Utilize the multi-use trail for pedestrians, providing links throughout the Historic Industrial Core. Encourage visitors to explore all areas within the Historic Industrial Core (see Chapter VIII, Projects K, M and N).

No. 6 Area (Treatment Alternative C, Preferred Alternative)

- \*Coordinate all planning and implementation efforts related to this area with the A.E. Seaman Mineral Museum, Quincy Mine Hoist Association, and Franklin Township.
- \*Stabilize and preserve ruins of industrial activities.
- \*Remove woody vegetation to provide views of rock piles and other historic landscape features (see Chapter VIII, Project W).
- \*Provide multi-use trail into the area (see Chapter VIII, Projects M and N).
- \*Encourage exploration and provide occasional tours.
- Provide interpretive waysides at the poor rock pile, No. 6 shaft site, and No. 6 building ruins (see Chapter VIII, Project J).

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<sup>21</sup> When presented with alternatives two, three and four, the common treatments include a \* to indicate the directive is the same for all of the action alternatives.

*A.E. Seaman Mineral Museum Area (Treatment Alternative C, Preferred Alternative)*

- \*Coordinate all planning and implementation efforts related to this area with the A.E. Seaman Mineral Museum.
- Utilize Blacksmith Shop and Machine Shop for the
  - A.E. Seaman Mineral Museum
  - National Park Service Visitor Center
  - Initial combined contact point for the A.E. Seaman Mineral Museum, Quincy Mine Hoist Association and National Park Service.
  - Provide regional exhibits, a theater, restrooms, tram and mine tour tickets.
- Provide parking for the majority of the Historic Core visitors.
- Provide a hub for pedestrian / non-motorized transportation that can transition to a long-term alternative transportation system.
- \*Provide a strong visual connection between this area and the No. 2 and No. 4 area.<sup>22</sup> See Chapter VIII, Projects G, H, and I).
- \*Preserve remnants of historic industrial activities.
- \*Provide a picnic area for visitor use (see Chapter VIII, Project Z).

*Former Miner's Residences Area (Treatment Alternative C, Preferred Alternative)*

- \*Coordinate all planning and implementation efforts related to this area with property owners (see Chapter VIII, Project B).
- \*Conduct thorough analysis of historic structures by preparing Historic Structures Reports before undertaking treatment actions (see Chapter VIII, Project A-3).
- \*If the Historic Structures Report indicates it is appropriate, restore the exterior of the historic buildings.
- If the Historic Structures Report indicates it is appropriate, restore or rehabilitate the interiors of the historic buildings and utilize for interpretation or adaptive re-use.
- \*Provide access and parking on side streets.
- \*Work with property owners to provide a pedestrian link to Limerick Road, the Campus Drive Area, Dryhouse Area, and Mine Management Area.

*Campus Drive Area (Treatment Alternative C, Preferred Alternative)*

- \*Coordinate all planning and implementation efforts related to this area with property owners (see Chapter VIII, Project B).
- \*Remove or revise non-contributing elements that are impacting the historic character of the Historic Industrial Core or improve their compatibility.
  - Work with private property owners to negotiate the relocation or redevelopment of incompatible infill and to restore or maintain landscape elements compatible with the historic core.

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<sup>22</sup> When presented with alternatives two, three and four, the common treatments include a \* to indicate the directive is the same for all of the action alternatives.

- \*Stabilize and preserve historic resources including building ruins, small scale features, domestic vegetation and views toward the No. 2 and No. 4 area (see Chapter VIII, Project A-6).
- \*Restore and interpret the miner's residence on Limerick Road that is owned by the Quincy Mine Hoist Association.
- Provide interpretive wayside on Limerick Road focused on early mining community domestic life (see Chapter VIII, Project J).
- \*Link this area to the Former Miner's Residences Area and the Dryhouse Area with a self-guided walking trail route (see Chapter VIII, Projects K, L and O).

**Dryhouse Area (Treatment Alternative C, Preferred Alternative)**

- \*Coordinate all planning and implementation efforts related to this area with property owners.
- \*Stabilize and preserve historic resources including building ruins, small scale features, domestic vegetation and views toward the No. 2 and No. 4 area (see Chapter VIII, Projects A-6, C, and H).
- Remove woody vegetation that impacts historic resources, thin other vegetation to strengthen views (see Chapter VIII, Project H).
- \*Provide pedestrian trail linking this area to the Mine Management Area, Campus Drive Area, and Former Miner's Residence Area (see Chapter VIII, Project O).
- \*Provide small parking lot along No. 2 Road (6-8 spaces). See Chapter VIII, Project P.
- Provide a vault toilet near the parking area (see Chapter VIII, Project P).
- Provide a small picnic area at the rock outcrop near the No. 2 Road (see Chapter VIII, Project P).
- \*Provide a wayside at the trailhead near the parking area. Include information about the historic relationships between this site and the rest of the Historic Industrial Core as well as logistical information (see Chapter VIII, Project J).
- Provide an interpretive wayside near the Dryhouse foundation with information about the historic activities related to the Dryhouse and the No. 2 Adit location (see Chapter VIII, Project J).
- \*When feasible, relocate the radio tower so that it is not within the view of the Historic Industrial Core.
- \*Encourage visitors to explore the area around the dryhouse.

**No. 7 & Railroad Corridor Area (Treatment Alternative C, Preferred Alternative)**

- \*Coordinate all planning and implementation efforts related to this area with the Quincy Mine Hoist Association (see Project GG).
- \*Conduct thorough analysis of historic structures by preparing Historic Structures Reports before undertaking treatment actions.
- \*If the Historic Structures Report indicates it is appropriate, restore the exterior of the Roundhouse, service pits, track, wood floor, and install rolling stock exhibits.
- \*Extend the restoration out from the building to the landscape with railroad tracks, and connections to other tracks and the water tank. Reveal the historic grades and connections to the No. 2 and No. 4 Area.

- \*Rehabilitate the water tank and interpret its historic use.
- \*Provide a pedestrian route along the railroad corridor at the crest of the hill.
- Remove selected woody vegetation to open historic view between the No. 7 area and Quincy Hill along the alignment of the No. 2 Adit.
- Provide an interpretive wayside near the Roundhouse focused on the Roundhouse and No. 2 Adit.
- Provide an interpretive wayside at the No. 7 Shaft location with information about the Pewabic Lode, shafts and historic views.

*Mine Management Area (Treatment Alternative C, Preferred Alternative)*

- \*Preserve the Quincy Mine Office and continue its use as offices and a meeting room.
- \*Conduct thorough analysis of historic structures by preparing Historic Structures Reports before undertaking treatment actions.<sup>23</sup>
- \*If the Historic Structures Report indicates it is appropriate, work with property owners to restore the exterior of the historic buildings.
- \*If the Historic Structures Report indicates it is appropriate, restore the interior of selected spaces in selected buildings and interpret their historic functions.
- \*If the Historic Structures Report indicates it is appropriate, rehabilitate the interior of other buildings and use adaptively.
- \*Work with property owners to provide a pedestrian trail linking this area to the Dryhouse Area, Campus Drive Area, and Former Miner's Residence Area.
- \*Improve the conditions at the Quincy Mine Office and increase visitor understanding and appreciation for the resources by implementing the following treatment recommendations for the Mine Management Area.
  - \*Restore the landscape features associated with the Quincy Mine Office.
  - \*Stabilize and preserve historic resources including small scale features, domestic vegetation and views.
  - \*Provide a picnic table at the Mine Office.
  - \*Improve the conditions at the Quincy Mine Office and increase visitor understanding and appreciation for the resources found in this area of the park (see Figure 6-5).
  - **\*Remove non-historic features:** Remove items that do not contribute to the historic integrity of the mine office landscape. These include a freestanding sign fixture located in the north yard and a piece of concrete in the northwest corner of the rear yard.
  - **\*Improve foundation drainage** – The basement and foundation of the mine office building is currently affected by seasonal wetness. Install new foundation drain tile to move water away from the foundation and allow the historic roof gutter drains to be restored.
  - **\*Restore lawn** – The lawn surrounding the mine office is rutted, in poor condition and contains many weeds. Grade, place additional topsoil and seed the area to improve its condition and appearance.

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<sup>23</sup> When presented with alternatives two, three and four, the common treatments include a \* to indicate the directive is the same for all of the action alternatives.

- **\*Provide barrier free access** – A preferred method to provide barrier free access has yet to be determined but several preliminary alternatives have been discussed. At this time it is believed the access route that least impacts the historic building and setting will use the sidewalk to the north and the rear entrance. While further study is required to evaluate a complete range of alternatives, it is assumed that any preferred solution will require integration with the surrounding landscape through minor changes in sidewalks or installation of a ramp.
- **\*Reconstruct front fence** – A prominent feature through much of the building's history was a distinctive wood fence and gates separating the front yard from the road. Reconstruct the wood fence and gates based on historic documentation.
- **\*Restore stone curb/wall** – Another prominent landscape element adjacent to the front fence was a stone curb/retaining wall made of locally quarried Jacobsville sandstone. The low curb defined the lawn edge and separated it from the adjacent sidewalk. At its south end the curb transitioned to a low retaining wall where the grade changed. The feature is in poor condition, and parts of it are missing. Restore the stone curb/wall. <sup>24</sup>
- **\*Reconstruct front walk** – The concrete sidewalk once present in front of the mine office is now missing. Reconstruct the concrete sidewalk to provide a safe walking surface outside of the vehicular traffic area for visitors and employees.
- **\*Resurface historic road trace** – The historic road trace currently serves as an access road and parking area for visitors to the mine office. Resurface the road trace to preserve its position in the landscape while accommodating current vehicle access and circulation.
- **\*Vegetation management** – Replace mature historic trees along the alley and in the rear yard when suffering from poor health. Replacements are to be large specimens of the same genus and species as practicable. Selectively thin trees and vegetation along side yard fencerows and at the rear yard of the mine office and the adjacent lot.
- **\*Reconstruct side yard fences** – Fences once existed along the side yards of the property. Reconstruct the side yard fences to aid visitors with understanding this historic mine management property.
- **\*Preserve masonry ruins** – Preserve the small masonry foundation and utility trench to help visitors understand this property and its historic functions.
- **\*Archaeological investigation** – Systematically investigate the entire property including the shallow depression, and adjacent pile of unknown origin and scattered debris, to determine the significance of these features and to reveal new information about the historic use of this site.

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<sup>24</sup> When presented with alternatives two, three and four, the common treatments include a \* to indicate the directive is the same for all of the action alternatives.

No. 2 and No. 4 Area (Treatment Alternative C, Preferred Alternative)

- \*Conduct thorough analysis of historic structures by preparing Historic Structures Reports before undertaking treatment actions (see Chapter VIII, Project A-3).
- \*Preserve historic resources including landscape features, artifacts, buildings and building ruins and interpret with self-guided walking tours and hands-on activities (see Chapter VIII, Projects A-6, J and K).
- Reveal traces of industrial activities by removing non-contributing woody vegetation.
- \*Establish pedestrian links throughout the area (see Chapter VIII, Projects M and N).
- \*In the short term, develop hubs for pedestrian / non-motorized transportation and a way to transition to a long term alternative transportation system for the Historic Industrial Core (see Chapter VIII, Projects M and N).
- \*If the Historic Structures Report indicates it is appropriate, preserve and interpret the No. 2 Hoist House (1918-20).
- \*If the Historic Structures Report indicates it is appropriate, utilize the No. 2 Hoist House (1894-1895) for the Quincy Mine Hoist Association Visitor Center, office, tour staging area, restrooms, museum, and artifact display area.
- Restore the missing pulley stands between the No. 2 Shaft-rockhouse and the No. 2 Hoist Houses.
- When adequate documentation exists, restore portions of railroad grades, tracks, and trestles adjacent to the No. 2 Shaft-rockhouse and other significant structures and interpret them as reconstructed parts of the historic mining operations (see Chapter VIII, Project X).
- \*If the Historic Structures Report indicates it is appropriate, rehabilitate, partially restore, and interpret the No. 2 Shaft-rockhouse and provide visitor access to the upper levels. Interpret the historic operations of the historic building and views of the surrounding landscape.
- If the Historic Structures Report indicates it is appropriate, rehabilitate and partially restore the No. 5 Boiler Plant and adjacent trestle remnant. Interpret the building and use for exhibits and office space.
- \*Preserve and interpret the ruins of buildings with a self-guided walking tour and occasional interpreter-led programs (see Chapter VIII, Project K).
- Preserve the ruins of buildings #11, 12, 13, 14, 16, and 17 and use them for programmed activities, including outdoor classrooms or picnic areas.
- If the Historic Structures Report indicates it is appropriate, restore and interpret the Captain's Office and Martin House.
- If the Historic Structures Report indicates it is appropriate, restore the exterior and adaptively use the Oil House and residence.
- If the Historic Structures Report indicates it is appropriate, rehabilitate the Supply House for adaptive use.
- If the Historic Structures Report indicates it is appropriate, Quincy Fire Hall to be acquired by NPS or partner for rehabilitation and adaptive reuse as part of the proposed visitor center complex, as a community room, for interpretive programs or as a commercial space.
- \*Provide a picnic table near the building ruins in the No. 4 area, and a picnic area to the east of the parking lot near the No. 2 Hoist Houses (see Chapter VIII, Project S).

- Provide interpretive waysides at the following locations:
  - Near the ruins north of the Supply House.
  - On the south side of the No. 2 Shaft-rockhouse.
  - At the No. 4 shaft location.
  - Near the No. 2 Hoist Houses.
  - Near the cooling ponds.
  - At the Martin House.
  - In the area between the Supply House and the Martin House.

***Lower Pewabic Area (Treatment Alternative C, Preferred Alternative)***

- \*Advocate for the restoration of historic building exteriors and preservation of extant historic landscape features including domestic plants, building foundations, roads, traces of former roads, views, and small scale features (see Chapter VIII, Projects A-1 and A-6).
- Work with residents and property owners to determine an appropriate approach for managing vegetation.
- \*Interpret the housing location at a landscape scale focusing on the overall patterns of the roads, and placement of the buildings, gardens, outhouses, etc. See Chapter VIII, Project K.
- \*Provide interpretive waysides at key locations (see Chapter VIII, Project J).

Next page:

**Figure 6 - 8: Treatment Alternative "C" (Preferred Alternative)**

**No.6 Area:**

1. Stabilize and preserve ruins of industrial activities;
2. Remove woody vegetation to provide views of rock piles and other historic landscape features as desired;
3. Provide multi-use trail into the area;
4. Encourage exploration and provide occasional tours.

**A.E. Seaman Mineral Museum Area:**

1. Utilize Blacksmith Shop and Machine Shop for the \*A.E. Seaman Mineral Museum \*NPS Visitor Center \*QMHA, NPS & A.E. Seaman Mineral Museum combined initial visitor contact point offering, for example, regional exhibits, theater, restrooms, tram and mine tour tickets;
2. Provide parking for majority of Historic Core visitors;
3. Develop a hub for pedestrian/non-motorized transportation that can transition to a long term alternative transportation system;
4. Provide a strong visual and pedestrian connection between this area and the No. 2 & No. 4 Area;
5. Provide picnic area for visitor use.

**Former Miner's Residences Area:**

1. Restore exterior of historic buildings;
2. Restore or rehabilitate interior of historic buildings for interpretation or adaptive re-use;
3. Provide access and parking from side streets.

**Campus Drive Area:**

1. Remove or revise non-contributing impacting elements;
2. Stabilize and preserve historic resources, including building ruins, small scale features, domestic vegetation and views. toward the No. 2 & No. 4 Area;
3. Restore and interpret a miner's residence on Limerick Road.

**Dryhouse Area:**

1. Stabilize and preserve historic resources including building ruins, small scale features, domestic vegetation and views toward the No. 2 & No. 4 Area;
2. Remove or thin woody vegetation impacting historic resources and views;
3. Provide pedestrian trail linking this area to the Mine Management Area, Campus Drive Area, and Former Miner's Residence Area;
4. Provide small parking area at No. 2 Road (6-8 spaces);
5. Provide wayside information at trailhead near parking area;
6. Provide small picnic area;
7. Provide vault toilet;
8. Interpret No. 2 Adit location;
9. When feasible, relocate radio tower;
10. Encourage visitors to explore area around dryhouse.

**Overall Historic Core:**

1. Remove non-contributing woody vegetation that impacts historic resources (including views);
2. Conduct professional archaeological investigations to address gaps in knowledge--interpret these activities;
3. Preserve, monitor and interpret historic shafts and maintain and interpret bat structures at shaft entrances;
4. Continue to utilize the No. 2 Adit for underground tours and interpret the location on the surface;
5. Preserve and interpret poor rock piles;
6. Preserve historic views by discouraging inappropriate development within key areas and removal of vegetation;
7. In short term, provide vehicular access road and parking at Supply House and No. 2 Hoist Houses. In long term, minimize parking at these locations to handicap accessible spaces and provide all other parking at the joint arrival facility at the Blacksmith Shop;
8. In the long term, implement a multi-use trail with a motorized alternative transportation system linking the site elements, in the short term, develop hubs and key links that will be part of the system.

**Legend**

	Historic Industrial Core Boundary		Conceptual Pedestrian Route
	Extant Historic Building		Historic Railroad Grade
	Remnant of Historic Building		Extant Railroad Track
	Contemporary/Modified Building		Vegetation
	Landscape Management Zone		Rock Piles
	Conceptual Route for Visitor Tram and Stops		Cog Rail Tramway
	Artifact pile		No. 6 Mine Shaft Location
	Conceptual location for overlook or interpretive wayside		Proposed Picnic Table
			Proposed Picnic Area



- Lower Pewabic Area:**
1. Advocate for the restoration of historic building exteriors and preservation of extant historic landscape features (including domestic plants, building foundations, roads, traces of former roads, views, and small scale features);
  2. Interpret the housing location at a landscape scale focusing on the overall patterns of roads, placement of buildings, gardens, outhouses, etc.;
  3. Provide interpretive waysides at key locations.

- No. 2 and No. 4 Area:**
1. Preserve historic resources including landscape features, artifacts, buildings and building ruins with self-guided walking tour and hands-on activities;
  2. Remove non-contributing woody vegetation to reveal traces of industrial activities;
  3. Establish pedestrian links throughout the area;
  5. Utilize Hoist Houses for QMHA Visitor Center, office, tour staging, restrooms, museum, and artifact display;
  6. Restore pulley stands between No. 2 Shaft-Rockhouse and No. 2 Hoist Houses;
  7. Consider restoration of portions of railroad grades, tracks, & trestles adjacent to the No. 2 Shaft-Rockhouse and other significant structures & interpret as part of the mining operations;
  8. Preserve ruins of buildings #11, 12, 13, 14, 16, and 17 and use for programed activities, as outdoor classrooms or picnic areas;
  9. Rehabilitate, partially restore, and interpret the No. 2 Shaft-rockhouse, provide visitor access to upper levels;
  10. Rehabilitate and partially restore the No. 5 Boiler Plant & adjacent trestle remnant, use for exhibits, office & interpret;
  11. Restore and interpret Captain's Office and Martin House, restore exterior and adaptively use Oil House and residence;
  12. Rehabilitate Supply House for adaptive use;
  13. Rehabilitate the Quincy Fire Hall and use as a part of the proposed visitor center complex, as a community room, for interpretive programs, or as a commercial space.

- Buildings and Remnants:**
1. Blacksmith's Shop
  2. Machine Shop
  3. Captains Office
  4. Supply House
  5. Oil House
  6. No. 2 Shaft-Rockhouse
  7. Old No. 2 Hoist House (1882)
  8. Martin House and Outbuilding
  9. No. 2 Hoist House (1918-20)
  10. No. 2 Hoist House (1894-95)
  11. No. 5 Boiler Plant (1912)
  12. Ruin of Diamond Drill Core House
  13. Remnant of Compressor Building
  14. Remnant of No. 4 Boiler House (1882)
  16. Remnant of No.4 Hoist House (1885)
  17. Remnant of No. 7 Boiler House (1898)
  18. Quincy & Torch Lake R.R. Water Tank
  19. Remnant of Engine House (1889)
  20. Dryhouse Foundation
  21. Mine Captain's Office
  22. Assay Office
  23. Captain White's Residence
  24. Pay Office/Mine Office
  25. Superintendent's Residence
  26. Quincy Fire Hall

- No. 7 & Railroad Corridor Area:**
1. Restore exterior of Roundhouse, service pits, track, and wood floor and install rolling stock exhibits;
  2. Extend restoration out from building into landscape with RR tracks, connection to other tracks and water tank, reveal historic grades and connections to the No. 2 and No. 4 Area;
  3. Rehabilitate water tank and interpret;
  4. Provide pedestrian route along the RR corridor at the crest of the hill;
  5. Develop a wayside at No.7.
- Mine Management Area:**
1. Work with owners to restore exterior of historic buildings;
  2. Work with owners to restore interior of selected spaces in selected buildings and interpret;
  3. Work with owners to rehabilitate interior of buildings & adaptively use;
  4. Restore landscape features associated with the Quincy Mine Office;
  5. Work with owners to stabilize and preserve historic resources including small scale features, domestic vegetation and views;
  6. Work with owners to provide a pedestrian trail linking this area to the Dryhouse Area, Campus Drive Area, & Former Miner's Residence Area;
  7. Provide picnic table at Mine Office;
  8. Provide barrier free access to the Mine Office.

**Base Sources:**

1. Aerial photography, prepared for Keweenaw National Historical Park by Ayres Associates, Inc., of Madison, Wisconsin, May 2002.
2. Eric M. Hanson, "Quincy Mining Company Maps," HAER Heritage, Conservation and Recreation Service, 1978.
3. Land ownership information provided by Keweenaw National Historical Park.
4. Larry Mishkar, "Land Use History and Archaeological Survey, Seaman Mineral Museum Project, Quincy Mine National Historic Landmark, Houghton County, Michigan," Industrial Archaeology Laboratory, Michigan Technological University, Houghton, Michigan, 2005.
5. Period of Change Plans, Chapter II, Landscape History, Quincy Unit Cultural Landscape Report.
6. Smithgroup and Hitch, Inc., "A.E. Seaman Mineral Museum Master Plan Report," 20 January 2006.

SCALE: NORTH

QUINN EVANS | ARCHITECTS

## Summary of Treatment Alternatives

Table 6-2 summarizes the major elements of each of the treatment alternatives and tests these elements against the proposal objectives which were stated in Chapter I. Table 6-2 reveals that Treatment Alternative C meets the project objectives more completely than other treatment alternatives considered.

The comparative analysis of potential impacts from each treatment alternative is summarized in Table 6-3. Resource topics carried forward for analysis in this CLR / EA are included in the table. More detailed analysis and conclusions of potential impacts is provided in **Chapter VII: Treatment Impacts/Environmental Consequences.**

**1 = Partially Meets Project Objective**

**2 = Meets Basic Level of Objective**

**3 = Meets Highest Level of Objective**

<b>Table 6-2 Alternatives Summary and Extent to Which Each Alternative Meets Project Objectives</b>				
<b>Project Objectives</b>	<b>Current Management (No Action Alternative)</b>	<b>Alternative A</b>	<b>Alternative B</b>	<b>Alternative C (Preferred Alternative)</b>
Document the development of the historic landscapes within the Quincy Unit of Keweenaw National Historical Park.	<b>1</b>	<b>2</b>	<b>2</b>	<b>2</b>
Document the existing conditions of the historic landscapes within the Quincy Unit of Keweenaw National Historical Park.	<b>1</b>	<b>2</b>	<b>2</b>	<b>3</b>
Evaluate the significance and integrity of the historic landscapes within the Quincy Unit of Keweenaw National Historical Park.	<b>1</b>	<b>2</b>	<b>2</b>	<b>3</b>
Provide treatment recommendations for managing the historic landscape resources within the Quincy Unit of the park.	<b>1</b>	<b>3</b>	<b>2</b>	<b>3</b>
Recommend landscape treatments to address management needs identified by the NPS and park partners in the Quincy Unit, including locating a park visitor center based on landscape characteristics.	<b>1</b>	<b>3</b>	<b>2</b>	<b>3</b>
Provide management recommendations and schematic designs for specific historic landscapes within the park that accommodate current and future needs while preserving the historic character and significant features present.	<b>1</b>	<b>3</b>	<b>2</b>	<b>3</b>
Streamline planning and compliance processes for the historic landscapes within the Quincy Unit of Keweenaw National Historical Park.	<b>1</b>	<b>2</b>	<b>2</b>	<b>2</b>
Enhance visitor experience through providing information about the history of the development of the park, to interpreters and site managers.	<b>1</b>	<b>3</b>	<b>2</b>	<b>3</b>
Provide recommendations for efficiently managing the historic landscapes within the Quincy Unit of the park while taking into consideration budget constraints.	<b>1</b>	<b>2</b>	<b>2</b>	<b>3</b>
<b>TOTALS</b>	<b>9</b>	<b>22</b>	<b>18</b>	<b>23</b>

**Table 6-3  
Environmental Impact Summary for Each Treatment Alternative**

<b>Resource Topic</b>	<b>Current Management (No Action Treatment Alternative)</b>	<b>Treatment Alternative A:</b>	<b>Treatment Alternative B:</b>	<b>Treatment Alternative C (Preferred Alternative):</b>
Cultural Resources	<p>Direct long-term, moderate adverse impacts to cultural resources</p> <p><b>Section 106:</b> Cultural Landscape - <b>Adverse Effect</b></p> <p>Archaeological Resources - <b>Unknown, further Sec. 106 consultation required</b></p>	<p>Direct, long-term minor to moderate beneficial impacts to cultural resources</p> <p><b>Section 106:</b> Cultural Landscape - <b>No adverse effect</b></p> <p>Archaeological Resources - <b>Adverse effect, consult with SHPO and prepare Memorandum of Agreement</b></p>	<p>Direct, long-term minor to moderate beneficial impacts to cultural resources</p> <p><b>Section 106:</b> Cultural Landscape - <b>No adverse effect</b></p> <p>Archaeological Resources - <b>Adverse effect, consult with SHPO and prepare Memorandum of Agreement</b></p>	<p>Direct, long-term minor to moderate beneficial impacts to cultural resources</p> <p><b>Section 106:</b> Cultural Landscape - <b>No adverse effect</b></p> <p>Archaeological Resources - <b>Adverse effect, consult with SHPO and prepare Memorandum of Agreement</b></p>
Socioeconomics	Direct, long-term, minor beneficial impact	Direct, long-term, minor to moderate beneficial impact	Direct, long-term, minor to moderate beneficial impact	Direct, long-term, moderate beneficial impact
Visitor Experience	Long-term, minor beneficial impact	Long-term, minor to moderate beneficial impact	Long-term, minor to moderate beneficial impact	Long-term, moderate beneficial impact
Park Operations	Short and long-term, negligible to minor adverse impacts	Short and long-term, minor to moderate beneficial impacts	Short and long-term, minor beneficial impacts	Short and long-term, minor to moderate beneficial impacts

### **Environmentally Preferred Treatment Alternative**

The environmentally preferred treatment alternative is determined by applying the criteria suggested in NEPA, which is guided by the Council on Environmental Quality (CEQ). The CEQ provides direction that "...the environmentally preferable alternative is the alternative that will promote the national environmental policy as expressed in NEPA's Section 101." Using the six criteria from Section 101 detailed below.

- Criterion 1: Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations.
- Criterion 2: Assure for all generations safe, healthful, productive, and aesthetically and culturally pleasing surroundings.
- Criterion 3: Attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences.
- Criterion 4: Preserve important historic, cultural, and natural aspects of our national heritage and maintain, wherever possible, an environment that supports diversity and variety of individual choice.
- Criterion 5: Achieve a balance between population and resource use that will permit high standards of living and wide sharing of life's amenities.
- Criterion 6: Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

Using the CEQ's interpretations of the Section 101 criteria and the alternatives impact analysis in this document, it was determined that the combination of Treatments Common to all Treatment Alternatives and Historic Industrial Core **Treatment Alternative C is the environmentally preferred alternative.**

The combination of Treatments Common to all Alternatives and Historic Industrial Core Treatment Alternative C would implement the highest level of rehabilitation, restoration and preservation of all the alternatives. This alternative, as well as Treatment Alternative A strike a balance between resources available and the desire to reestablish the landscape to its period of significance, while minimizing impacts to the natural communities at the Quincy Unit.

No new information came forward during public scoping or consultation with regulatory agencies or Native American tribes to necessitate the development of any new alternatives, other than those described and evaluated in this document. Because it meets the Purpose and Need for the project and is the environmentally preferred Treatment Alternative for the Historic Industrial Core, **Treatment Alternative C is also recommended to be the Preferred Treatment Alternative for this proposal.**

## Mitigation Measures

The following mitigation measures have been developed to minimize the degree and/or severity of adverse effects, and would be implemented, as needed, during implementation of the Preferred Treatment Alternative (Alternative C).

### Cultural Resources

- Proposed projects that would affect historic features of the cultural landscape (structures, vegetation, landscape character, etc) must comply with the requirements of *The Secretary of Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes* and *Cultural Resource Management Guideline*.
- Until the Keweenaw National Historical Park Inventory of Archaeological Resources is completed, conduct site/project specific archaeological assessments to determine if NRHP-eligible resources are evident. If NRHP-eligible resources are identified, project redesign or other appropriate mitigation measures would be determined through consultation with the SHPO or other appropriate parties.
- Any contractors and subcontractors, utilized for construction projects would be instructed on procedures to follow in case previously unknown archaeological resources are uncovered during construction. If previously unknown and significant archaeological resources are unearthed during construction, work would be stopped in the area of discovery and the NPS would consult with the SHPO and appropriate parties, the Advisory Council on Historic Preservation. If impacts to significant resources could not be avoided by redesign, mitigating measures would be developed in consultation with the SHPO to help ensure that the informational significance of the sites would be preserved. If appropriate, provisions of the Native American Graves Protection and Repatriation Act of 1990 would be implemented.
- The NPS would ensure that any contractors and subcontractors utilized for construction are informed of the penalties for illegally collecting artifacts or intentionally damaging archaeological sites, or historic properties.
- To minimize the amount of ground disturbance, staging and stockpiling areas would be located in previously disturbed sites, away from visitor use areas and circulation to the extent possible. All staging and stockpiling areas would be returned to pre-construction conditions following construction.

### Visitor Experience

- To minimize the potential impact to park visitors, variation on construction timing may be considered, such as conducting a majority of the work in shoulder seasons.
- Construction zones would be identified and fenced with construction tape, snow fencing, or some other material prior to any construction activity. All protection measures would be clearly stated in the construction specifications and workers would be instructed to avoid conducting activities beyond the construction zone.
- Temporary interpretive panels would be provided during the construction period to inform and educate visitors regarding the project and its importance to the overall historic landscape of the Quincy Unit.

### Park Operations

- Because soils are susceptible to erosion until revegetation takes place, standard erosion control measures such as silt fences and/or sand bags would be used to minimize any potential erosion. Other NPS Best Management Practices (BMPs) would be used as necessary and could include sediment traps and erosion checks.
- Fugitive dust generated by construction would be controlled by spraying water on the construction site, as needed. Water needed for dust control would come from park approved sources or would be provided by contractors from sources outside the park.
- To reduce noise and emissions, construction equipment would not be permitted to idle for long periods of time.
- To minimize potential petrochemical leaks from construction equipment, the equipment would be regularly monitored to identify and/or repair any leaks.

## **Treatment Alternatives Considered and Dismissed**

### Combined Visitor Center at QMHA No. 2 Hoist House

In attempting to find an appropriate location for the National Park Service Visitor Center within the Historic Industrial Core, the No. 2 Hoist Houses were considered. In this concept, the NPS visitor center would be closely related to the heart of the NHL and the existing QMHA tour activities and vehicular circulation at the No. 2 and No. 4 site could be simplified.

The significant No. 2 Hoist Houses do not contain enough interior space to fulfill the combined needs of the QMHA and NPS visitor center. Consideration was given to rehabilitating the No. 5 Boiler Plant to increase the space available however the building contains significant historic fabric that should be preserved and would need to be altered to accommodate the building needs. Further consideration was given to constructing an addition between the buildings. After careful consideration, this option was eliminated because the exterior of the Hoist Houses would no longer be fully visible, resulting in impacts to historic integrity that outweigh the benefits of having the visitor center in this location.

**Complete Removal of Parking at the Supply House**

Efforts were made to minimize modern intrusions, including access roads and parking lots, within the historic core. One effort focused on reducing places where cars can drive through the site as well as compressing parking into selected areas. Although an attempt was made to completely remove vehicular access and parking at the Supply House, all of the use alternatives for this structure indicate that general parking will be needed in the short term. Treatment Alternative C accommodates a long term shift to providing only service access and handicap parking at this location.

**Underground Tunnel Providing a Connection from the No. 2 Area to the Campus Drive Area**

Consideration was given to addressing the difficulty of providing access for visitors to the resources located on either side of U.S. 41 by constructing a tunnel under the highway. The tunnel could be used for pedestrian circulation between the two sides of the highway, and designed in a way to provide interpretive exhibits of the mining operations in an underground environment. Being a newly constructed element, the tunnel would need to meet design requirements for universal accessibility. In order to limit impacts to the historic landscape features and archaeological features, a determination was made that the entrance and exit to the tunnel should be at an existing grade near the No. 2 Shaft-rockhouse. Examination of existing topography on both sides of the highway indicated that the tunnel would need to be approximately three-hundred feet long to meet the design criteria. The length of the tunnel and associated impacts to historic resources was determined to outweigh the benefits associated with its construction.

**Reconstruction of Topography and Railroad Trestles at No. 4 Area**

In order to more vividly represent the historic character of the industrial landscape, consideration was given to reconstructing the topography and railroad trestles in the No. 4 Area. According to the Secretary of Interior Standards for the treatment of historic properties, reconstruction is appropriate only when the resource is at the highest level of significance, and when documentation exists that provides detailed information about the historic features. Although historic photographs illustrate historic conditions in this area, they are not extensive enough to adequately provide the information needed for reconstruction. In addition, the period of significance for the historic landscape encompasses several periods of landscape change. The resources related to all of these periods of change are significant. The wholesale reconstruction of elements associated with one point in time would impact resources related to other periods and limit the ability of the landscape to reflect the multiple periods of change associated with the mining industry. Treatment Alternative C provides a compromise to this approach by restoring select portions of topography and trestles associated with the No. 2 Shaft-rockhouse, the Roundhouse, and the No. 5 Boiler Plant.

**Development of Parking Lot and Visitor Center at Campus Drive Area**

Development of a visitor center and parking lot at the Campus Drive Area was contemplated. This concept would allow for the development of a new visitor orientation facility on the west

side of the highway, limiting impacts on the resources on the east side of the highway. All parking for the site would be provided adjacent to the visitor center, and an alternative transportation system would convey visitors from there to the east side of the highway. This concept would involve impacting the significant resources in the Campus Drive Area and greatly limit opportunities for visitors to casually explore the site. In addition, the construction of a new building would reduce prospects for adaptive re-use of significant historic structures, thereby decreasing opportunities for protecting them.

**Removal of all woody and herbaceous vegetation within the Historic Industrial Core**

In order to more extensively represent the historic industrial character of the landscape in the Historic Industrial Core, consideration was given to removal of all vegetation (woody and herbaceous). Once the initial removal was conducted, this approach would require intensive on-going maintenance efforts to keep vegetative growth from re-establishing. Some existing vegetation does not impact historic resources, and herbaceous vegetation may provide assistance in minimizing erosion problems. Treatment Alternatives A, B, and C provide solutions that address the woody plants, which are most likely to impact historic resources physically and visually, while allowing the herbaceous and historic domestic plants to remain.

**Removal of woody vegetation on Quincy Hill**

Multiple historic photographs of Quincy Hill show an expansive landscape denuded of vegetation. The possibility of restoring this type of landscape character was deliberated. The vegetation and wildlife associated with Quincy Hill today has value in its own right and full-scale removal of these resources is not a viable solution. Alternatives to this approach were developed that provide for removal of vegetation along specific view corridors to provide glimpses of historic character within the landscape.

**Rehabilitation of the Roundhouse for a National Park Service Visitor Center**

In attempting to find an appropriate location for the National Park Service Visitor Center within the Historic Industrial Core, consideration was given to rehabilitating the Roundhouse for this purpose. The location of this building at the southern end of the Historic Industrial Core is ideal for providing an overview of the region and introduction to the Quincy Unit. Two major concerns eliminated this concept from inclusion in the developed treatment alternatives. First, the building footprint does not contain adequate space for the building needs. Second, the Quincy Mine Hoist Association has plans to restore the structure to house rolling stock exhibits and provide interpretation. These two concerns outweighed the benefits of considering the concept further.