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_X_ RESTRICTED INFORMATION IN THIS DOCUMENT HAS BEEN REDACTED

REDACTION DATE 1/16/2024 (IF APPLICABLE)

NOTES:

FILE (PROPERTY) NAME: Calumet Historic District NHL

LOCATION (STATE/TERRITORY: Michigan

LOCATION (COUNTY/PARISH): Houghton County

NRIS#: 74000985

1. NAME AND LOCATION OF PROPERTY

Historic Name: Calumet Historic District

Other Name/Site Number: Calumet and Hecla and Red Jacket Village

Street and Number (if applicable)**:**

City/Town: Calumet **County:** Houghton **State:** MI

2. SIGNIFICANCE DATA

NHL Criteria: 1, 5

NHL Criteria Exceptions: None

NHL Theme(s): V: Developing the American Economy
Extraction and production
Workers and work culture
I: Peopling Places
Communities and neighborhoods

Period(s) of Significance: 1867-1923

Significant Person(s) (only Criterion 2)**:** N/A

Cultural Affiliation (only Criterion 6)**:** N/A

Designer/Creator/Architect/Builder: Calumet & Hecla (engineers)
Demitrius Frederick Charlton (architect)
John D. Chubb (architect)
Edward Demar (architect)
George D. Eastman (architect)
R. William Gilbert (architect)
Frank W Hessenmueller (architect)
Henry S. Hunnewell (architect)
Edwin O. Kuenzli (architect)
Erasmus D. Leavitt (engineer)
Charles Maass (architect)
Fred Maass (architect)
Paul Humphrey Macneil (architect)
Carl E. Nystrom (architect)
Byron H. Pierce (architect)
Charles K. Shand (architect)
George R. Shaw (architect)

John B. Sweat (architect)
Edward Ulseth (builder)

Historic Contexts: X. Westward Expansion of the British Colonies and the United States, 1773-1898
E. The Mining Frontier
XII. Business
A. Extractive or Mining Industries
XVIII. Technology (Engineering and Invention)
F. Extraction and Conversion of Industrial Raw Materials
G. Industrial Production Processes
XXX. American Ways of Life
C. Industrial Towns
Labor History in the United States (2022)

Paperwork Reduction Act Statement. We are collecting this information under the authority of the Historic Sites Act of 1935 (16 U.S.C. 461-467) and 36 CFR part 65. Your response is required to obtain or retain a benefit. We will use the information you provide to evaluate properties nominated as National Historic Landmarks. We may not conduct or sponsor and you are not required to respond to a collection of information unless it displays a currently valid OMB control number. We estimate the time to prepare an initial inquiry letter is 2 hours, including time to maintain records, gather information, and review and submit the letter. We assume that consultants will prepare nominations at an average cost of $32,680 per nomination. You may send comments on the burden estimate or any other aspect of this form to the Information Collection Clearance Officer, National Park Service, 12201 Sunrise Valley Drive, Room 2C114, Mail Stop 242, Reston, VA 20192.

3. WITHHOLDING SENSITIVE INFORMATION

Does this nomination contain sensitive information that should be withheld under Section 304 of the National Historic Preservation Act?

__X_ Yes

____ No

4. GEOGRAPHICAL DATA

1. Acreage of Property: 321.8

2. Use either Latitude/Longitude Coordinates or the UTM system:

Latitude/Longitude Coordinates:
Datum if other than WGS84:
(enter coordinates to 6 decimal places)

	Latitude:	**Longitude:**
1.	47.249803	88.465072
2.	47.254489	88.446217
3.	47.244964	88.442653
4.	47.230867	88.458428
5.	47.232639	88.461789
6.	47.247503	88.465614

OR

UTM References: **Zone** **Easting** **Northing**
NAD 1983 UTM Zone

3. Verbal Boundary Description:[1]

Beginning at a point on the north side of A Street approximately 83 feet southeast of the intersection of A Street and Mine Street, proceed southwest the southwest corner of Parcel #002-520-001-34. Turn and proceed northwesterly approximately385 feet, crossing Mine Street to a point.

At this point and proceed northeasterly to the intersection with Swedetown Road. Turn and proceed easterly along the south side of Swedetown Road to its intersection with Mine Street. Turn and proceed northeast along the west side of Mine Street to the intersection with Sixth Street. Proceed across Sixth Street to the east side of the street and continue along the east side of Sixth Street to the southeast corner of its intersection with Scott Street.

Turn and proceed westward along Scott Street to the southeast corner of its intersection with Ninth Street. Turn and proceed along the east side of Ninth Street to the southwest corner of Parcel #002-380-080-00. Turn and proceed westward across Ninth Street to an intersection with an imaginary north-south line that continues the east side of Tenth Street. At this point, turn and proceed northward to the east side of Tenth Street. Continue north along Tenth Street to an imaginary east-west line that continues the south boundary of Parcel # 002-440-075-00. Turn and proceed westward across Tenth Street along this imaginary line to the southwest corner of Parcel #002-440-075-00.

[1] Where the boundary description remains consistent with the 1989 boundary, property identification has been changed to parcel numbers rather than owner name. Parcel information available at https://colligogis.com/web/ (accessed March 29, 2023).

Turn and proceed northward to the northwest corner of Parcel # 002-440-067-50. At this point, turn 45 degrees northeast and proceed northwesterly to the south side of Portland Street. Continue northwesterly across Portland Street. Turn west and proceed along the north side of Portland Street to the southeast corner of its intersection with Eleventh Street. Turn north and proceed along the east side of Eleventh Street to the northwest corner of Parcel # 002-440-132-00. Turn and proceed westerward to the west boundary of Parcel #002-440-140-00. Turn s and proceed northward following the west boundary of Parcel #002-440-140-00 to its intersection with the south side of Oak Street.

Turn and proceed northwesterly along the south side of Oak Street, continuing across 1st/ W. Acorn and 2nd Streets, to the southeast corner of its intersection with Spruce Street. Turn north and follow an imaginary line that is approximately 170 feet from and parallel to the west side of 2nd Street. Follow this imaginary line the intersection of an imaginary east-west line that continues the south boundary of Parcel #009-290-019-00. At this point, turn 45 degrees northwest and proceed northwesterly along an imaginary line that is approximately 160 feet from and parallel to the northwest boundary of Parcel # 009-260-059-00. Continue along this imaginary line to its intersection with the north boundary of Parcel # 009-260-059-00.

At this point, turn 45 degrees east and proceed eastward, following the imaginary line until it intersects with the west side of 1st Street. Continue across 1st Street, then turn north to follow the east side of 1st Street to the southeast corner of its intersection with Pine Street. Turn and proceed eastward along the south side of Pine Street, to the northwest corner of Parcel # 041-105-003-00.

Turn south and proceed to a point approximately 40 feet south of the southwest corner of Parcel #041-420-116-00. Turn and proceed westward along an imaginary line until it intersects with the western boundary of Parcel #002-420-040-00. Turn and proceed north, crossing Pine Street, to the northwest corner of Parcel #002-420-020-00.

Turn and proceed eastward to the intersection of the north boundary of Parcel 002-420-016-00 and the west boundary of Parcel 3002-420-014-00. Turn and proceed northward along that line that forms the west (rear) parcel lines of houses fronting the west side of Waterworks Street. Continue to proceed north along that line extended to the shore of Calumet Lake. Proceed northeast along the lakeshore to the northeast point of Parcel #0092-064-001-40. Turn and proceed southward along a line that forms the east (rear) parcel lines of houses fronting the east side of Waterworks Road, to its intersection with the north side of Pine Street. Turn and proceed westward along the north side of Pine Street to the northeast corner of its intersection with Waterworks Street. Turn and proceed southward along the east side of Waterworks Street, crossing Elm Street. Continue the line south to its intersection with the northwest boundary of Parcel #002-064-009-60.

At this point turn and proceed southeasterly along an imaginary line, crossing Mine Street, until the line intersects with the northwest boundary of Parcel #002-300-061-00. Turn and proceed northeasterly along a line that forms the northwest (rear) parcel lines of houses fronting the west side of U.S. Highway 41. Continue the line across Church Street to the north side of the street. Turn and proceed southeastward along the north side of Church Street to the northeast corner of Parcel #002-300-043-00. Turn and proceed southwesterly along that line that forms the southeast (rear) parcel lines of houses fronting the east side of U.S. Highway 41/Calumet Avenue.

Proceed southwest along those lot lines to the southeast corner of Parcel #002-300-051-00. Turn and proceed northwesterly along the southwest boundary of Parcel #002-300-051-00 to its intersection with the south side of U.S. Highway 41/Calumet Avenue. Turn and proceed southwesterly along the south side of U.S. Highway 41/Calumet Avenue, to the southeast corner of its intersection with Division Street.

Turn and proceed northwesterly across U.S. Highway 41/Calumet Avenue to the northwest corner of Parcel # 002-402-065-00. Turn and proceed southwesterly along that line that forms the northwest (rear) parcel lines of houses fronting U.S. Highway 41/Calumet Avenue, to the point where line intersects the northeast boundary of Parcel #002-402-057-00. Turn and proceed southeastward along the northeast boundary of Parcel #002-402-057-00 approximately 60 feet to a point. Turn and proceed southwesterly along a line to its intersection with the northeast boundary of Parcel # 002-402-055-00. Turn and proceed northwesterly along the northeast boundary of Parcel #002-402-055-00 to a point approximately 83 feet from the south side of Mine Street. Turn and proceed southwesterly to the point of beginning.

4. **Boundary Justification:** The revised boundary includes all areas that were integral to the company's mining of the Calumet Conglomerate Lode; were historically owned by the Calumet & Hecla Mining Company and/or were integral to the mining operations of the company and to the development of the associated community; and that retain integrity to the period of significance (1867 to 1923). Mining operations are defined as extraction, transportation, management, and housing, which were owned or directly controlled by the company. The boundary also encompasses commercial, institutional, and residential areas of the Village of Calumet and Calumet Township, Michigan, which reflect the company's role in developing a community that supported but was also sometimes in conflict with the company and its practice of corporate paternalism.

As depicted on Map 4 (S-1 Overall District), the current legislative boundary of the Calumet Unit of Keweenaw National Historical Park is not identical to the National Historic Landmark boundary as designated in 1989 (predating establishment of the park) or as revised in this nomination.

Areas Removed from the Original Designation
Since the NHL district boundary was initially established in 1989, some areas formerly included have been impacted to the extent that they no longer contribute to the district. Therefore, the boundary has been adjusted to exclude these areas. Of the original 492 acres in the original NHL designation, 170.2 acres are recommended for removal (see Map 4: S-1 Overall District).[2] They are:

- The former Lincoln School, 2.41 acres (see Map 9: LCA-E). Located at the southeast corner of Pine and Waterworks Streets, this building has lost substantial integrity due to construction of two large one-story additions on the east and south elevations in 2017-2018 and 2020-2021. Since the former school was on the edge of the district, the boundary has been adjusted to follow the roads.
- The Calumet & Hecla No. 16 Captain's Office, 0.38 acres (see Map 6: LCA-A north B-C). The former office is situated at the northwest corner of Church and Rockland Streets, where the boundary originally extended to capture the small parcel on which this sits. However, the building was associated with the Kearsarge Lode, not the Calumet Conglomerate Lode, and the site has suffered impacts to its integrity, including the post-1989 construction of an adjacent cell tower. The boundary has been adjusted to eliminate this property.
- A small area south of Elm Street and west of Mine Street at the northern end of the Industrial and Mine Management Core, 10.13 acres (see Map 6: LCA-A north B-C). Several non-contributing buildings have been added in this area since the 1989 nomination, and only one small historic Man Engine House remains. The number of additions and their proximity to the historic building have substantially disrupted the visual connection to other historic resources within the NHL,

[2] The use of GIS provides a more accurate account of acreage for the 1989 nomination, which estimated about 385 acres.

impacting the Man Engine House's historic context. Since the historic building is on the edge of the district, the boundary has been adjusted to exclude this area.

- Portions of the mining resources south of the Sixth Street Extension and west of Mine Street, 157.28 acres (see Map 7: LCA-A South). Since the original nomination, a commercial development was constructed on the west side of the Sixth Street Extension, and many of the resources associated with mining operations, including buildings and building ruins, rail alignments, and poor rock piles, have been removed or impacted by stockpiling of materials and extraction of gravel and dirt for construction activities. Additionally, substantial post-1989 development has occurred near the street, creating a large change in the historic appearance of the area and the appearance of the landscape further south. These changes may have impacted archeology and due to these changes, even if some archeology may be present, the alterations have greatly impacted the overall high integrity of the area. A small area to either side of Mine Street that retains integrity remains within the amended boundary.

Areas Not Included in the NHL District

Other areas mentioned in Section 5 that have a connection with the Calumet & Hecla Mining Company and the Calumet community were not identified in the original NHL designation (see Map 5: Calumet Housing Locations). Additional research, field investigations, and assessments undertaken for this NHL amendment concluded that these areas should be excluded from the boundary revision for the following reasons:

The Village of Laurium was originally associated with the Laurium Mining Company, founded to mine the Kearsarge Lode (an amygdaloid lode), which did not become part of Calumet & Hecla until consolidation at the end of the period of significance. Historically, while a number of Calumet & Hecla workers and managers lived in and around Laurium, the village was not as strongly associated with the company as the Village of Calumet and the company exerted less control there. It is further set apart due to loss of integrity of the majority of the Calumet & Hecla Housing Locations that lie between Calumet and Laurium.

The company owned numerous housing locations in and around Calumet, including Albion, Calumet, Hecla, Red Jacket Shaft (not the same area as the village originally named Red Jacket), Newtown, Tamarack, Swedetown, Raymbaultown, and Florida. These areas, except for a small portion of the Calumet Housing Location within the original boundary and the eastern areas of Tamarack, have been excluded because they have either lost integrity, were not directly owned by the company until after the period of significance, or because intervening development has made them discontiguous with the portions of the district that retain integrity.

The area north of Pine Street, with the exception of the portions of Blue Jacket Housing Location along Waterworks Road, has lost integrity from the period of significance. During the period of significance, the north side of Pine Street was densely developed with commercial buildings. Beyond the commercial corridor was a mixture of warehouses and residential buildings including single-family, duplex, terrace, and tenement houses. At the northern edge was a railroad corridor. Although some of these buildings remain, there are significant gaps between the few buildings with a high degree of integrity and some of those gaps have been infilled with non-compatible buildings. This has substantially impacted the historic character of the north side of the street, particularly in the aspects of setting, association, and feeling. The remaining extant buildings are not sufficient to merit expansion of the boundary in this area.

The Calumet & Hecla Mining Company stamp mills and smelter at Torch Lake were evaluated for this nomination. Because they are discontiguous with the historic district and have lost integrity, they are not included in the nomination.

5. SIGNIFICANCE STATEMENT AND DISCUSSION

INTRODUCTION: SUMMARY STATEMENT OF SIGNIFICANCE

The Calumet Historic District possesses exceptional national significance as an exemplar of the United States copper mining industry in its earliest years, and the transformation of the American economy as a result of that industry. The Calumet Historic District is eligible as a National Historic Landmark (NHL) under NHL Criteria 1 and 5, with a national period of significance from 1867 to 1923.

Under NHL Criterion 1, the district is associated with the Calumet & Hecla Mining Company and the mid-nineteenth century coming of age of copper mining in the United States. With copper's extensive use as a conductor of electricity, the United States changed from a dispersed, agrarian country to a complex industrial and urban nation.[3] Upper Michigan's Keweenaw Peninsula was the first major copper mining district in the United States, with dozens of operations launched in the 1840s. For nearly four decades, the peninsula and nearby Isle Royale (also known as the Lake Superior copper region) produced more than one-half of the country's copper output; in some years that amount reached 90 percent or more.[4] Hundreds of copper mining companies were formed in the Lake Superior copper region between the mid-nineteenth to the early twentieth centuries.[5] Of these, two companies dominated copper production on the Keweenaw Peninsula: the Quincy Mining Company and the Calumet & Hecla Mining Company. While Quincy was the most productive in the early years of the copper mining boom in the 1850s and early 1860s and outstandingly represents the copper mining process, the Calumet & Hecla Mining Company eclipsed Quincy's production with the opening of the Calumet Conglomerate Lode in the late 1860s until it was in turn overtaken by Western mines in the 1880s. From the early 1870s to the mid-1880s, Calumet & Hecla alone represented over half the total United States national production of copper and built the most complete surface plant of any copper mining facility in the world. Keys to this success were the prodigious Calumet Conglomerate Lode, overinvestment in exploration and facility construction, the adoption of new technology, and more efficient labor management practices to increase profits. Calumet & Hecla's success also depended upon its employees, those who came to dig mines, haul materials, break rock, and smelt ore. While extensive, the company's influence was not absolute, and worker agency in exerting economic and personal control over their lives included creation of localized aid benefit societies, subscription to native language newspapers, development of fraternal organizations, participation in union organization, and support of or participation in workers strikes.

Under Criterion 5 the historic resources of the Calumet Historic District collectively comprise an intact landscape that outstandingly represents the development of an industrial community and the practice of corporate paternalism in the United States. Unique among the copper mining operations on the Keweenaw Peninsula, Calumet & Hecla's mining operations were contiguous and integrated with residential, civic, and commercial areas, such that there was little separation between life and work in Calumet. Mines, housing locations, and the village were within view of each other to a degree unseen in the rest of the copper district. While the company's Boston-based investors and leadership did not consciously set out to create a paternalistic company town per se, the region's remoteness and lack of infrastructure to accommodate a larger workforce necessitated that the company provide housing and other basic services and, once established, the company was reluctant to give up the "quiet control" that ownership of land and institutions provided. Calumet & Hecla's size

[3] Derek Strahn, Chere Jiusto, and Ellen Crain, "Butte-Anaconda Historic District" National Historic Landmark Nomination Form [revised documentation] (Washington, DC: US Department of the Interior, National Park Service, 2006), 85.
[4] F. E. Richter, "The Copper-Mining Industry in the United States, 1845-1925," *The Quarterly Journal of Economics*, 41, no. 2 (Feb. 1927), 237.
[5] More than 300 "ventures" started between the 1840s and the end of the Civil War, alone. Larry D. Lankton, *Cradle to Grave: Life, Work and Death and the Lake Superior Copper Mines* (New York: Oxford University Press, 1992), 9.

and influence meant it set the tone for corporate paternalism in the rest of the Lake Superior copper region.[6] The system of corporate paternalism as practiced by the Calumet & Hecla Mining Company, together with the complex relationships that developed between company leadership, local management, workers, and other citizens of the community, represents a unique and important aspect of the history of copper mining and community development in the United States. An integral component of this landscape is its housing locations, which continue to convey the living and working conditions of the people who worked at the copper mine.

In 1989 the Calumet Historic District was designated as a National Historic Landmark under the themes of Business (extractive or mining industries) and Technology (extraction and conversion of industrial raw material). The original nomination included the industrial core along the lode, the heart of the commercial district in the village, Agassiz Park between, and portions of the surrounding housing locations. Since the initial NHL designation, a greater understanding of related themes and the importance of landscape features has emerged. This nomination reconsiders the relevant resources of the Calumet Historic District, adds further information, and re-evaluates the boundaries of the district within those additional contexts.

Subsurface archeological resources related to the period of significance have been identified within the NHL district, however, at the time of designation they have not been well defined. Formal archeological evaluation would be required to determine whether they meet the high bar for significance and integrity under Criterion 6. Consequently, in the present nomination individual archeological sites are considered contributing features within contributing sites (Landscape Character Areas) under Criteria 1 and 5 for their contributions to the integrity of location, association, and setting.

Additions to the District

The most significant additions to the district are greater portions of the housing areas in the Village of Calumet and the Yellow Jacket and Tamarack Housing Locations. Recent survey of the buildings and landscapes of the area, and comparison to historic sources such as Sanborn maps, demonstrates a continuity of historic resources across these areas, where previously only representative portions were included in the district. This also recognizes the importance of the greater Calumet community and the practice of corporate paternalism to the nationally significant district (see Maps 4: S-1, 8: LCA-F, 10: LCA-G and LCA-H).

This nomination now also includes features beyond the remnant buildings of the mining era. Indeed, extensive study of the landscapes of the Calumet & Hecla Mining Company reveals that much of the district's historic character is demonstrated not just by its buildings, but by the landscape characteristics that define the area, including the spatial organization of the surface plant along the lode, the relationship of the commercial district and housing locations to above and below ground activities, neighborhood settlement patterns, and other features such as railroad grades and domestic vegetation. It was within these spaces, as much as within the buildings, that the activities of the mine and the people who lived and worked in and around it took place.

Removals from the District

While there are additions to the district boundary, this nomination also proposes some reductions. These areas are also shown on Map 4: Map S-1 Overall District. The original nomination was able to state in 1989 that there had been no new developments in the district and virtually no intrusions or non-contributing buildings or structures; however, some of this has changed in the interim. Most significantly the mining resources south and west of the Sixth Street Extension and Mine Street have been impacted by the construction of a modern

[6] Alison K. Hoagland, *Mine Towns: Building for Workers in Michigan's Copper Country* (Minneapolis, MN: University of Minnesota Press, 2010), xiii.

commercial development along the west side of the Sixth Street Extension and by construction activities in areas to the south and west. However, a concentration of industrial resources to either side of Mine Street between Swedetown Road and A Street retain integrity. The boundary has accordingly been redrawn to eliminate areas that have lost integrity. A few other minor alterations have been made. Additional description is provided in Section 6.

Period of National Significance

The original 1989 nomination established a period of significance beginning with Edwin Hulbert's location of the Calumet Conglomerate Lode in 1864 and ending with the shutdown of reclamation operations in 1930. This period has been re-evaluated in light of the updated historic context for the property that more fully addresses the nationally significant operations of the Calumet & Hecla Mining Company and the economic, social, and physical connections reflected in the company's mining landscape and the associated Calumet community. In particular, the updated nomination considers Calumet & Hecla's exceptional national significance in the context of economic, technical, and social developments related to copper mining, industry, and corporate paternalism in the United States. This nomination proposes that a more suitable period of significance for the Calumet Historic District is 1867 to 1923. While the lode was located by Hulbert in 1864, it did not begin producing copper in significant amounts until 1867. Similarly, while the company did continue mining operations as late as 1968, it is the conclusion of this nomination that the Calumet & Hecla Mining Company's era of national significance essentially ended with the formation of the Calumet & Hecla Consolidated Copper Company in 1923, the tacit acknowledgement that the company could no longer survive or thrive on the Calumet Conglomerate Lode that had brought it to national prominence.

PROVIDE RELEVANT PROPERTY-SPECIFIC HISTORY, HISTORICAL CONTEXT, AND THEMES. JUSTIFY CRITERIA, EXCEPTIONS, AND PERIODS OF SIGNIFICANCE LISTED IN SECTION 2.

Significant Themes: Developing the American Economy (extraction and production)

The Calumet Historic District possesses exceptional value in illustrating the broad patterns of the nation's copper mining history and the associated industrialization of the United States from the mid-nineteenth century to early twentieth century. The success of the Calumet & Hecla Mining Company and many of the other mining companies on the Keweenaw Peninsula was connected to the advent of the "Age of Electricity," and the corresponding industrialization of the late nineteenth and early twentieth centuries.

Michigan Copper and the Age of Electricity

Copper mining became a major industry in the United States with the opening of the Keweenaw mines in the mid-nineteenth century. Prior to the 1840s United States domestic copper output, confined mostly to sources in the East, struggled to exceed 200,000 pounds per year. Copper had been mined in the Atlantic Seaboard as early as 1709 at Simsbury, Connecticut, followed by deposits found in New Jersey, Vermont, Maine, Massachusetts, Connecticut, Pennsylvania, and Maryland. However, these earliest copper mining ventures were modest productions.[7] Primitive methods and transportation challenges made only the richest ores profitable to mine and

[7] Richter, "The Copper-Mining Industry in the United States, 1845-1925," 238; E. D. Gardner, C. H. Johnson, and B.S. Butler, *Copper Mining in North America, Bulletin 405,* US Department of the Interior, Bureau of Mines (Washington, DC: US Government Printing Office, 1938) 12; Otis E. Young, Jr., "Origins of the American Copper Industry," J*ournal of the Early Republic*, 3, no. 2 (Summer 1983), 117-137.

process, and the incentive to develop copper was further hindered by a relatively small demand, especially before 1840.[8] Until about 1855, the United States imported most of its copper from overseas, principally the mines of Cornwall and Devon in the United Kingdom.[9] During the early nineteenth century, copper came into increasing demand both in the United States and overseas, where it—and the copper alloys of bronze and brass—were used domestically for a variety of applications, from military ordnance and the sheathing for ships' hulls to domestic products like cookware and jewelry. The unprecedented demand for copper grew at precisely the time that copper was being discovered in large quantities in the rich deposits of Michigan's Upper Peninsula.

As the nation became increasingly industrialized by the mid-nineteenth century, copper assumed transcendent importance as the most practical medium for the transmission of electric current. As has been succinctly presented in the Butte-Anaconda Historic District National Historic Landmark nomination, copper ushered in the Age of Electricity and helped shape the modern world:

> It was copper that enabled electricity to transform the national character, creating nationwide systems of telegraph and telephone communication, triggering rapid urbanization, revolutionizing transportation and American manufacturing, and modernizing domestic life throughout the United States. In the form of wiring, machinery components, and transmission lines, copper "provided the sinews for the transformation of America from an agrarian to a complex industrial and urban society" between the Civil War and World War II.[10]

Copper connected formerly isolated communities scattered across three million square miles: in 1844 Samuel Morse utilized copper as an essential ingredient in the electric telegraph. By the 1860s the Civil War caused an increase of 25 percent in copper production, largely for cannon-making, and the extensive connection of copper telegraph wires played an important role in the Civil War victory of the industrialized northern states. Alexander Graham Bell's invention of the telephone in 1874 further advanced a nationwide system of communications. Eight years later Thomas Edison used copper wire to market electricity. His integrated electrical network expanded so rapidly that from 1890 to 1905, the amount of electrical power available in the United States increased a hundred-fold. In 1902 there were 2,250 power generating plants in the United States; by 1920 there were nearly 4,000. The growing availability of inexpensive electrical power facilitated the nation's rapid industrialization. Copper was used in the manufacture of electrical machines and supported the growth of mercantile shipbuilding and the rise of the German and American navies. Developments in hydroelectric technology at the turn of the twentieth century enabled the transmission of electricity over hundreds of miles via thick copper wires. Artificial lighting allowed around-the-clock production. Public lighting made urban areas safer and easier to negotiate, while suburban development followed the establishment of electric streetcars radiating out from city centers. During World War I, the mechanization of armies relied on copper to create tools and plant machinery for the production of motor equipment, radio communications, and ammunition. As a result of these and other advancements, productivity increased more than 300% between 1890 and 1940, allowing the United States to become a global power. On another level, the plethora of new electrical appliances reshaped day-to-day existence, while their sales provided a massive economic stimulus and profoundly influenced attitudes toward the traditional responsibilities of men and women in American society.[11]

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[8] Strahn, et al., "Butte-Anaconda Historic District," 99, citing sources in footnotes 85 and 86.
[9] William B. Gates, *Michigan Copper and Boston Dollars: An Economic History of the Michigan Copper Mining Industry* (Cambridge, MA: Harvard University Press, 1951), 7-9.
[10] Strahn, et al., "Butte-Anaconda Historic District," 102.
[11] Strahn, et al., "Butte-Anaconda Historic District," 85-86; James Calhoun, "War Metal!" *The Military Engineer*, 33, no. 194 (December 1941), 574, http://www.jstor.org/stable/44555658 (accessed July 13, 2020); Richter, "The Copper Mining Industry, 1845-1925," 265.

Copper Mining on the Keweenaw Peninsula

In the mid to late nineteenth century, the Calumet & Hecla Mining Company became (along with the Quincy Mining Company) one of the two most viable, competitive copper mining companies on the Keweenaw Peninsula. This was the result of many factors, not the least of which was its ownership of the rich Calumet Conglomerate Lode and the practice of corporate paternalism. The company's dominance can also be seen through its adoption over time of new technology and labor practices, increased scales of production and financial support, and consolidation. This trend towards large-scale, integrated corporate copper production was repeated on a massive scale in later Western copper mining ventures, involving extraction of lower-grade copper ore, and resulting in a significantly different copper mining landscape. Yet what initially drew miners and speculators to the Keweenaw Peninsula and the Lake Superior copper region was the wealth of native copper ores unalloyed with other elements. Some existed as tiny flecks held in a surrounding rock matrix. Others were located in rock fissures, or came in massive pieces, or mass copper, literally large specimens of pure copper situated relatively close to the surface. The Keweenaw Peninsula in fact held the world's largest deposit of native copper, a rare and "outstanding exception to the rule" that most of the world's copper production comes from ore deposits of copper in chemical association with other elements.[12] Comparatively, copper ore found in almost all other districts is formed as a copper oxide or a copper sulfide.

The copper deposits of the Keweenaw Peninsula were a significant source of copper stretching back as far as 7,000 years ago. Copper from the region has been found at Indigenous archeological sites throughout North America in the form of raw copper; tools such as spear points, fishhooks, and awls; and in decorative materials including beads and bracelets. [redacted]

European and later American explorers in the seventeenth and eighteenth centuries were attracted to the Keweenaw Peninsula by reports of its rich copper deposits and encounters with American Indian tribes of the Great Lakes region, who carried copper objects or conveyed knowledge about the source of copper in the area. The Ojibwa, Odawa, and Potawatomi nations lived in the western Great Lakes region when explorers arrived, with Ojibwa communities located on all sides of Lake Superior, or Gichigamiing (the great water, or sea). While these early explorers failed to establish mines, they brought American attention to the region's resources. As a result, as early as the 1820s the United States government sought to acquire the lands held by the Ojibwa in the Upper Peninsula with the intent to open the area for mining. Over the next thirty years, much of the Ojibwa land in the Keweenaw area was ceded in a series of four treaties (1836, 1837, 1842, and 1854); these treaties also included subsurface mining rights.[14] Douglass Houghton, Michigan's state geologist, exhibited

[12] Lankton, *Cradle to Grave*, 5; Richter, "The Copper Mining Industry in the United States, 1845-1925," 239 (quotation). [redacted] Further exploration of the topic is found in [redacted]

[14] Mattie Harper (Bois Forte Band of Ojibwe), "On the Shores of the 'Great Water': The Ojibwe people's migration to Gichigamiing," *Growler Magazine* (May 29, 2018), https://growlermag.com/on-the-shores-of-the-great-water-the-ojibwe-peoples-migration-to-gichigamiing/ (accessed November 5, 2018); David J. Krause, *The Making of a Mining District: Keweenaw Native Copper 1500-1870*

caution in reporting on the copper deposits of the Keweenaw in 1841, but their potential was visibly demonstrated by the Ontonagon Boulder, a 3,700 pound mass of pure copper that was displayed in Detroit in 1843 and then shipped to Washington, DC (the boulder is now in the possession of the Department of Mineral Sciences, National Museum of Natural History, Smithsonian Institution). With publication of Houghton's report in 1841, the "first real mine rush in American history was on."[15]

In short order, hundreds of mining companies were started and thousands of explorers, speculators, and mine workers flooded into the Keweenaw Peninsula.[16] The early mines on the Keweenaw Peninsula extracted mass copper, often in pits that showed evidence of work by Indigenous miners. Two of the earliest companies, the Minesota [sic] Mining Company and the Pittsburgh and Boston Mining Company, enjoyed early success by extracting mass copper at the Minesota Mine and the Cliff Mine, respectively. These large masses were broken into smaller pieces by hand cutting and brought to the surface. Despite the purity of mass copper deposits, the labor involved in bringing them to the surface was slow and intensive. By 1870 nearly all the early mass copper mines were essentially defunct, but their technical and community development efforts paved the way for larger enterprises devoted to conglomerate and amygdaloid mining.[17]

The mining of conglomerate and amygdaloid deposits, the two other types of copper deposits found in Michigan's Upper Peninsula and on Isle Royale, proved far more lucrative than mass copper. Both the peninsula and the island were formed from approximately 400 layers of basaltic lava flows interbedded with 20 to 30 layers of sedimentary rock that accumulated to thousands of feet thick. Within the basaltic layers, cavities (amygdules, or "almonds" in the Greek language) formed at the tops of the lava flows as the lava cooled. Pure, amygdaloid copper was created when copper-bearing solutions, probably forced upward through porous rock under tremendous pressure from deep underground. During long interruptions without volcanic activity, sedimentary rock formed as erosion took place. Conglomerate copper—"conglomerations" of boulders, sand, pebbles and sandstone fragments—was formed in these deposits when the rock later received mineralizing, copper-rich solutions. Geologic processes then tilted the layers and bent them into a basin; one rim of the basin ran from what is now the northern tip of the Keweenaw Peninsula southwestward into Wisconsin. The opposite rim appears now in Minnesota, along the Canadian shore, and on Isle Royale. Fissure copper was created during or following the creation of the basin, as longitudinal and cross-fractures created more voids in the rock that would receive copper-bearing solutions. Historian Larry Lankton notes that "it was a distinct geological novelty that the mineralizing solutions, whatever their exact constituency, apparently reacted with ferric compounds in the rock in such a way that metallic copper—and not copper compounds—precipitated out."[18] The amygdaloid and conglomerate copper lodes became the key to Michigan's copper mining success and distinguish it from prior or later copper mining ventures in the country.

Three fairly distinct mining districts were established on the peninsula: from northeast to southwest were the Keweenaw Point district, followed by the Portage Lake district, and the Ontonagon district at the southwest end.

(Detroit, MI: Wayne State University Press, 1992), 135. Names used to refer to the Indigenous peoples of the area vary. Different tribes prefer different spellings, including Chippewa, Ojibway, Ojibwa, and Ojibwe. The Ojibwa are part of the larger Anishinaabe cultural group, which includes Odawa and Potawatomi tribes. This nomination uses Ojibwa for the sake of consistency (citations use original spellings) and because it is used by several tribes in the area.

[15] Lankton, *Cradle to Grave,* 8; see also Krause, *The Making of a Mining District*, 135. It should be noted that the first "mine rush"–for gold--occurred in Georgia in 1828.

[16] Many of these companies were speculative and never progressed to actual mining operations.

[17] The exception was the Central Mining Company. Begun in the mid-1850s, it was the last successful mass mining venture, and continued up to 1898. Lankton, *Cradle to Grave*, 9-10; Larry Lankton, *Hollowed Ground*: *Copper Mining and Community Building on Lake Superior, 1840s to 1990s* (Detroit, MI: Wayne State University Press, 2010), 23. The spelling of the Minesota company is not the same as the state of Minnesota.

[18] Lankton, *Cradle to Grave*, 5-6.

Early development focused on the huge mass copper found in some mines in the Ontonagon and Keweenaw Point districts. The Portage Lake district eventually yielded the greatest amount of copper of the three regions and included both the Quincy and the Calumet & Hecla mines. The district was divided by its namesake, Portage Lake, a large natural body of water located roughly one-third from the southern end of the peninsula. It was the last area to be developed and included several other productive mines, such as the Tamarack, Osceola, Mohawk, Pewabic and Copper Range mines. While mining efforts began in 1846, it was not until the 1850s that the wealth of the region's lodes was fully understood.[19] Keweenaw copper mines began producing dividends for stockholders in 1849, further accelerating development of the copper resources.[20]

By the 1860s the Lake Superior copper region, known today as Michigan's Copper Country, produced on average more than fifteen million pounds of copper per year. [21] During this period a large proportion of Michigan copper was exported overseas.[22] Among the early copper mines on the Keweenaw Peninsula, the Quincy Mining Company, exploiting the rich Pewabic Amygdaloid Lode, grew to dominate Michigan copper production in the late 1850s and early 1860s. By the beginning of the Civil War in 1861 Michigan produced 89.5 percent of the total United States copper output, and the Quincy Mining Company supplied about 56 percent of that figure (over 1,200 tons of copper, 6.5 percent of total world production).[23] With the Civil War came an increased demand for copper to provide the raw material for arms, naval equipment, and necessities such as buttons for uniforms, and the copper mines of the Keweenaw were able to supply much of that need.

During this same period copper lodes had been discovered and worked elsewhere in the country, but with modest results. Discovery of a copper oxide ore (assaying at 14 to 32 percent copper) in Tennessee and the southern Appalachians during the 1840s -1850s led to a so-called "copper mania," but the overall production was comparatively much lower than in Michigan. Likewise, the distribution of copper discovered in New Mexico and Arizona suffered from remote locations and limited access. By the mid-1860s the state offering the closest competition was California. In that year California produced 1,800 tons of copper from its deep shaft mines, compared to Michigan's 7,179 tons.[24] Quincy's profitability and the success of other Keweenaw Peninsula copper mines, on the other hand, was keyed both to the quality of what was termed "Lake Copper" and to the ability to transport the processed material over water to growing industrial centers such as Buffalo, New York, and Cleveland, Ohio.

Whereas the profitability of copper extracted in the mountains of New Mexico, Arizona, or California relied on construction of railroad lines, Keweenaw copper depended on ships. The remoteness of the area and unforgiving climate presented extreme challenges to establishing mining operations. For the early industrial ventures in the Keweenaw, access via Lake Superior was often treacherous and land-based routes were unimproved trails. Shipping was always hazardous in this period, particularly on Lake Superior, which is notorious for the severity of its weather, but access to the lower Great Lakes was facilitated in 1855 with the opening of the canal and locks at Sault Ste. Marie (St. Mary's Falls Canal NHL, 1966) at the eastern end of Michigan's Upper Peninsula. Financed by capital from the East, the locks facilitated the development of commerce in the Great Lakes region and allowed for the inexpensive and convenient transportation of vast quantities of copper, iron ore and other natural resources to their processing and distribution markets. After this the remaining major obstacle was Portage Lake and the small river that connected it to Lake Superior. In 1859 the river was widened and dredged. This enabled large lake ships to dock in Houghton (on the south side of the

[19] Richter, "The Copper-Mining Industry in the United States, 1845-1925," 244.
[20] Krause, *The Making of a Mining District*, 217.
[21] "Copper Country" is a common and more recent regional designation applied to the copper-producing areas of the Keweenaw Peninsula, primarily Keweenaw, Houghton, and Ontonagon counties, and a portion of Northern Baraga County.
[22] Gates, *Michigan Copper and Boston Dollars*, 9-10, 197.
[23] Gates, *Michigan Copper and Boston Dollars,* 13; Lankton, *Hollowed Ground*, 52.
[24] Richter, "The Copper-Mining Industry in the United States, 1845-1925," 246-247

river) and Hancock (on the north side of the river) and later to access the stamp mills on Torch Lake.[25] These improvements culminated in the construction between 1868 and 1873 of a two-mile-long canal from the west end of Portage Lake to Lake Superior, resulting in a twenty-two-mile-long waterway cutting across the Keweenaw Peninsula from Keweenaw Bay on the east to Lake Superior on the west, called the Portage Lake and Lake Superior Ship Canal (now known as the Keweenaw Waterway). The canal not only enabled greater development of the mineral industry on the Keweenaw Peninsula, but also the agricultural, commercial, and railroad interests of the region.[26] Calumet & Hecla further improved its access to shipping by dredging the connection between Portage Lake and Torch Lake, where the company's stamp mills were located.[27] The company still owned and operated this canal into the early twentieth century.[28]

Overland routes were also developed in the 1860s. From 1863 to 1869 the United States government funded the construction of a military road to connect Fort Howard (near Green Bay, Wisconsin) and Fort Wilkins (at Copper Harbor in northern Keweenaw County, Michigan). Modern-day US 41, which cuts through the district, is aligned along the historic route of the military road.[29]

The Early Years of the Calumet & Hecla Mining Company

The Calumet Conglomerate Lode, on which the company's production was based, was located by Edwin Hulbert over twenty years after the Keweenaw copper rush began. Hulbert was engaged in surveying the peninsula for a wagon road when he found promising specimens of copper in a pit which he suspected was an ancient Indigenous digging at the top of a copper lode. In reality, the pit Hulbert found was a hidden cache of copper that had been extracted elsewhere. The pit, however, was situated directly above the mineral deposit that would eventually be renowned as the Calumet Conglomerate Lode. Hulbert had coincidentally found the one place with large concentrations of native copper along a lode within the heart of the peninsula.[30] Hulbert formed the Hulbert Mining Company and, with funds from Boston capitalist backers, began to purchase promising mineral lands. He began uncovering the Calumet Conglomerate Lode in 1864, and in 1866 Hulbert spun off the Calumet Mining Company. Later that same year the Hecla Mining Company was incorporated, and in 1868 Hulbert platted a village around the mine, originally called Red Jacket (now Calumet).[31] Although nominally separate companies controlling separate properties, both Calumet & Hecla companies had the same stockholders and administration and were mining the same lode.[32] Hulbert's initial mining attempts used an open-pit method that was neither organized nor successful. Frustrated by the lack of early profits, Hulbert's Boston investors replaced him with one of their own, Alexander Agassiz, who became the company's resident agent.[33] In 1871 the two companies merged as the Calumet & Hecla Mining Company (C&H), with Alexander

[25] Charles K. Hyde, "An Economic and Business History of the Quincy Mining Company," in "Historic American Engineering Report [HAER No. MI-2], [unpublished] (Washington, DC: US Department of the Interior, National Park Service, 1978), 44.
[26] Arthur W. Thurner, *Strangers and Sojourners: A History of Michigan's Keweenaw Peninsula* (Detroit, MI: Wayne State University Press, 1994), 81-82.
[27] Lankton, *Hollowed Ground*, 87.
[28] Horace Stevens, *The Copper Handbook: A Manual of the Copper Industry of the World, Volume X* (Chicago, IL: M.A. Donohue & Co., 1911), 535.
[29] "Military Road in Keweenaw Can Still Be Found in Places," *Daily Mining Gazette*, 16 January 1960.
[30] The lode itself was mined from several localities over a distance of about 18,000 feet. Mineral Resource Data System, "Calumet and Hecla Conglomerate Lode," USGS, https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10082604 (accessed May 15, 2023).
[31] The name Red Jacket came from the first (and unsuccessful) mining company to establish a mine in that area. Red Jacket was officially incorporated as the Village of Red Jacket in 1875. Confusingly, the nearby town of Laurium was called Calumet for some time. In 1895, it was renamed Laurium, and Red Jacket legally adopted the name Calumet in 1929.
[32] Creating separate companies was a common practice in the Lake Superior copper region; it reduced the investment risk for shareholders.
[33] Lankton, *Hollowed Ground*, 75-78.

Agassiz as president, a role he would occupy for nearly 40 years. Under Agassiz's direction, C&H would own and work the only stretch of the Calumet Conglomerate that could be made to pay, and its boundaries nearly coincided with the lode's copper-rich portion.[34]

The mine's landscape began to take shape immediately. The amygdaloid and conglomerate lodes of the Keweenaw Peninsula generally run northeast to southwest, the geologic spine of the peninsula, and the mining infrastructure built by Calumet & Hecla aligned itself along this axis. Industrial resources were centered along Mine Street, which paralleled the lode on the surface. Red Jacket Road, perpendicular to Mine Street, was the boundary between the Calumet Mining Company to the north and the Hecla Mining Company to the south. Shafts for each company were numbered starting with number one being the first and closest to Red Jacket Road and increased as they moved either northeast or southwest. The company sank eighteen shafts along the Calumet Conglomerate Lode, and developed associated mine buildings, railroad tracks, utility corridors, and areas for stockpiling materials needed for mining activities. Management operations were concentrated on Red Jacket Road, where the company's first office was built in 1867. The landscape that began to form during this early development period would set the precedent for Calumet & Hecla at the height of its operations: a vernacular landscape influenced by environmental factors and functional relationships to mine operations. Transportation routes were dictated by practical considerations such as movement of materials and heavy loads along the least arduous routes. Building design was largely functional and limited by the raw materials of wood and stone available for construction; there was little sense of a designed community aesthetic.

Like other mines on the peninsula, the company built stamp mills to process copper-bearing rock. The company's first stamp mill was on Calumet Lake, an impoundment the company built north of the mine that employed roller mills to crush the rock. However, the lake was too small to provide enough water for the process or to accommodate the tailings that were a byproduct of the processing.[35] In 1868-71 Agassiz moved milling operations to Torch Lake, about five miles southeast of the mine. The stamping process was described by Lankton:

> Heavy stamping machines first broke and abraded the copper rock, reducing it to the size of a peppercorn or smaller. Mechanically breaking the rock liberated its copper particles. A steady stream of water flushed the copper rock out of the stamps and onto other types of esoteric mill equipment, such as hydraulic separators, jigs, and slime buddles.
>
> This machinery, much of it 'homegrown' to work Lake Superior's peculiar copper deposits, used the difference in the specific gravities of copper and rock to separate the two materials. In the jigs…plungers agitated a watery suspension of copper and rock particles over a sieve. When the agitation stopped, and the water drained out of the box, the materials settled out onto the sieve plate, with the copper on the bottom. Mill hands skimmed off the rock, then collected the copper. At the buddles, a slimy mixture of miniscule particles of rock and copper flowed out very slowly from the center of a large, rotating disc; water carried the lighter rock particles across the disc's surface and then tailed them over its edge.[36]

[34] Larry Lankton, "Keweenaw National Historical Park Historic Resource Study," [draft] (National Park Service, 2005), 97-98. This includes a portion of the Conglomerate lode formerly owned by the Tamarack Mining Company. Between 1881-1885 Tamarack sank a shaft 2,270' deep, using machine drilling to reach the lode. In 1910-1911 Calumet & Hecla bought up controlling interest in Tamarack. Lankton, *Hollowed Ground*, 132-133.

[35] The mill site was later converted to a waterworks facility for the company; portions of this are included in the district.

[36] Lankton, *Cradle to Grave*, 11-13.

To transport rock from the mine to the mill, the company built the Hecla and Torch Lake Railroad, a four-foot-gauge line that stopped at the top of a steep hill about half a mile from the mills, after which the rock was delivered on a tramroad and dumped into storage bins above the stamping works.[37]

Calumet & Hecla Dominates National Copper Production

While earlier mining ventures across the peninsula struggled to turn a profit in their early years, including C&H's main rival, the Quincy Mining Company, the industry was well-established by the time C&H was founded. The company's ability to build on existing technology and systems, combined with the rich resources of the Calumet Conglomerate Lode, enabled it to quickly ramp up production from 1.35 million pounds in 1867 to over 14 million pounds in 1870. This represented more than half of Michigan's output and just under half of the total United States output for that year.[38] The company began paying dividends in 1869, a remarkable feat considering that the industry was still recovering from a sharp drop in copper prices following the end of the Civil War.[39] In large part, this productivity was due to the characteristics of the lode itself, which had average yields of 4.5 percent, over twice that of the Pewabic Amygdaloid Lode mined by C&H's rival, Quincy.[40]

Due in large part to its early success, Calumet & Hecla was proactive in developing both its underground and aboveground resources. In contrast to most other mining companies in the region, Calumet & Hecla tended to plan decades in advance rather than a year or two out. The company invested in technology such as Rand Little Giant rock drills that enabled miners to extract more copper rock per shaft and reduce drilling costs. The company invested in exploration and infrastructure to open more ground in advance; at times exploration was ten or more years ahead of current production.[41] It also tended to overbuild its aboveground physical plant, investing in larger facilities that went beyond their immediate needs in order to serve for many decades. Another strategy the company employed was building duplicate facilities, including two stamp mills; in case of a shutdown in one facility, the company could continue working the other. At the stamp mills, it also invested heavily in newer technology. While Quincy was still using Cornish-style gravity drop stamps, which had been used by mass mines for over twenty years, Calumet & Hecla equipped the latest in steam stamp technology, greatly increasing the processing capabilities and resulting mine waste products, which also changed the spatial relationships of mining companies and their processing plants. The result was the most impressive surface works associated with a mine in the region. In 1881 Michigan's Commissioner of Mineral Statistics claimed that "the machinery at the Calumet & Hecla excels that found at any other mine in the world."[42] This approach distinguished Calumet & Hecla from other mines.

By 1880 Calumet & Hecla was the king of the copper industry, both in Michigan and nationwide. In 1882, even as production in the Western copper fields was on the rise, C&H still accounted for 63 percent of the total United States production of copper. Lankton has provided a vivid picture of the Calumet community during this period:

> In 1880, if visitors wanted to get at the heart of things in the vicinity of the C&H mine and Red Jacket village, they didn't walk down a Main Street; they strolled down Mine Street. There, surrounded by a population of about 7,500 people, the C&H mine stretched out along the lode…each branch of the mine had its own large engine house replete with magnificent

[37] Lankton, *Hollowed Ground*, 87.
[38] Lankton, *Hollowed Ground,* 77.
[39] Charles K. Hyde, *Copper for America: The United States Copper Industry from Colonial Times to the 1990s* (Tucson: The University of Arizona Press, 1998), 50.
[40] Lankton, *Hollowed Ground*, 78.
[41] Lankton, *Hollowed Ground*, 80-81.
[42] State of Michigan, *Annual Reports of the Commissioner of Mineral Statistics for 1881* (Lansing, MI: 1882), 132.

> steam engines and massive boilers. Tucked in among the shafts were dry houses, a railroad roundhouse, pumphouses for unwatering the mine, a compressor building for powering new air drills, a couple of blacksmith shops, a machine shop, warehouses, man-engine houses, a carpenter shop, numerous tall smokestacks and, a bit to the north, the C&H waterworks. The surface plant was fully equipped to receive and ship copper rock; to forge and sharpen drill steels; and to maintain, repair, and fabricate all kinds of equipment. In terms of their materials, the structures evidenced an evolution at C&H. Many of the earliest buildings were framed and clad in wood; then followed a generation of buildings laid up of poor rock from the mine; more recently, dressed stone and brick gave form to the company's more important structures.[43]

Calumet & Hecla continued to build big into the 1880s. In the early part of the decade, the company installed what was said to be "the largest stationary [steam] engine in the world," the Superior, a three-quarters of a million pound engine with a capacity of 4,700 horsepower that was used to raise rock from four separate shafts.[44] Until the mid-1880s Calumet & Hecla, like its fellow Keweenaw mines, did not operate its own smelter, preferring to send rock to the Detroit and Lake Superior Copper Company's smelter on Portage Lake. In 1887, however, the company opened its own smelting works on Torch Lake near Hubbell, the first of the Lake Superior region copper mines to do so. In typical C&H fashion, the company also opened a second smelter facility near Buffalo, New York, in 1892.[45]

The extensive architectural landscape constructed by the Calumet & Hecla Mining Company has been acknowledged by several authors. In *Buildings of Michigan,* former Michigan State Historic Preservation Officer Kathryn Eckert described the overall district, provided a brief history of the company's activities in the region, and highlighted several individual buildings and structures including the C&H General Office Building and the Library as well as several buildings within the village of Calumet. Of the General Office Building (now the headquarters of Keweenaw National Historical Park), Eckert stated that "(t)he building tells of the significance of the preeminent copper producer in the Michigan copper district. Constructed and modified over eighty years of C&H ownership from 1887 to 1968, it reflects the company's growth, decline, and changes in management organization." Eckert also reflected on the architectural character of the Copper Country, noting that it "achieved a special harmony with the land because its architects and builders used, with sensitivity and understanding, the materials of the area – native Jacobsville sandstone, taken from the site or quarried locally at Portage Entry, and poor mine rock discarded from the mines. The architecture that emerged ranged from the strictly vernacular for the workers to the fashionable high styles for the owners and managers."[46] Eckert also discussed the buildings of Calumet and the Calumet & Hecla Mining Company in *The Sandstone Architecture of the Lake Superior Region.* She observed that "(t)hroughout the region, there are industrial structures of Jacobsville sandstone, some made of squared blocks of stone, but most composed of rubble stone combined with poor mine rock. Mining buildings of all kind – rock houses, machine shops, blacksmith shops, power houses, stamping mills, foundries – stand vacant and in ruins today, clusters of red and black rock. They were constructed by the engineers and workmen of the mining companies themselves. The company office buildings, libraries, bathhouses, and schools, however, are often of carefully extracted and finished blocks of sandstone after the designs of trained architects and engineers."[47] Among the buildings cited as examples of significant sandstone architecture, Eckert includes the General Office Building and Library as well as buildings within the

[43] Lankton, *Hollowed Ground*, 85-86.
[44] Lankton, *Hollowed Ground*, 93-94.
[45] Lankton, *Hollowed Ground*, 90; Hyde, *Copper for America*, 54.
[46] Kathryn Bishop Eckert, *Buildings of Michigan: Revised Edition* (Charlottesville, VA: University of Virginia Press, 2012), 470, 482-488.
[47] Kathryn Bishop Eckert, *The Sandstone Architecture of the Lake Superior Region* (Detroit, MI: Wayne State University Press, 2000), 179.

village. In *Mine Towns*, architectural historian Alison K. Hoagland observed that with little new development after the mines closed in the 1960s, "the built environment has survived by default, providing a wealth of material evidence" about the Keweenaw Peninsula mining companies' practice of corporate paternalism; the relationship between workers and managers, as well as the relationship between industrial, civic, and commercial landscapes.[48] Historian Sarah Fayen Scarlett most recently has observed that the region's coexistent paternalist company towns, housing locations and nearby city suburban neighborhoods "offer rich opportunities for interpreting social relationships because they developed largely in the same locations."[49]

In the late 1880s the Calumet & Hecla Mining Company entered a new phase. For the twenty years that it had been in production, C&H ruled the copper mining industry, both in Michigan and in the nation. But in the mid-1880s the vast copper mining operations of Montana and Arizona began to eclipse Michigan's Copper Country. In 1883 Michigan's average share of the United States copper production had dropped from 80 to 51.6 percent.[50] Michigan copper mines, including C&H, attempted to drive the Montana mines out of business by flooding the market and driving down copper prices, but due to underground fires in 1887 C&H could no longer sustain its output, and Montana passed Michigan in terms of percentage of total national production.[51] While Michigan remained behind the Western states in share of production, its copper industry continued to increase production into the early decades of the twentieth century, and it remained a significant national player in the copper mining industry through the end of World War I. Even into the final decades of the nineteenth century, Michigan's share of the world copper industry continued around 12 to 16 percent.[52]

The company struggled somewhat more in this era than it had earlier, contending with declining yields, periodic underground fires that shut down the mines, an unstable underground hanging wall that necessitated changing its mining methods, and labor unrest.[53] To offset these problems, the company continued to invest in facilities and methods that would reduce costs and improve yields. In the early 1890s the company built a number of shaft-rockhouses over their shafts. Prior to this, shafts were typically covered with shafthouses that were designed mainly to shelter the open shafts from wind, rain, and other elements. The rock brought up from the mine was then transported to a nearby rockhouse, where it was mechanically processed. While the rockhouse was adapted from similar non-mining prototypes, the hybrid "shaft-rockhouse" was unique to the Keweenaw Peninsula. The shaft-rockhouse improved the efficiency of operations by combining the two functions of crushing and sorting. Unlike a single rockhouse that was shared by several shafts, shaft-rockhouses were located over every shaft, increasing efficiency and decreasing the amount of human and mechanical effort needed to process the rock. Shaft-rockhouses became landmarks, the dominant structure at a mine shaft, and the visible symbol of the copper mining industry long after production ceased.[54]

The company also opened new shafts, including the Red Jacket shaft (reportedly the deepest mine shaft in the world when it bottomed out in 1896) and a number of shafts on two nearby amygdaloid lodes, the Osceola and the Kearsarge, in the final years of the nineteenth century and early years of the twentieth. The company purchased large tracts of land to search for new copper and purchased major interests in other mines on the

[48] Alison K. Hoagland, *Mine Towns: Buildings for Workers in Michigan's Copper Country* (Minneapolis: University of Minnesota Press, 2010): ix; xviii.
[49] Sarah Fayen Scarlett, *Company Suburbs: Architecture, Power and the Transformation of Michigan's Mining Frontier* (Knoxville: The University of Tennessee Press, 2021), 13.
[50] Michael P. Malone, *The Battle for Butte: Mining and Politics on the Northern Frontier, 1864-1906* (Seattle: University of Washington Press, 1981), 36.
[51] Hyde, *Copper for America,* 60.
[52] Lankton, *Cradle to Grave,* 71.
[53] The hanging wall is the underside of the wall rock overlying a vein or bed of ore.
[54] Scott Fisher See, "Industrial Landmarks: Shaft-Rockhouses of the Keweenaw Copper Mines" (Master's thesis, Michigan Technological University, 2006).

peninsula. Mines acquired prior to the formation of the Calumet & Hecla Consolidated Copper Company included the Laurium and LaSalle Mines in 1909 (working the Kearsarge Lode) and the Tamarack Mine (working the Calumet Conglomerate Lode). The latter acquisition included the Tamarack Housing Location. Calumet & Hecla also worked to increase yields on the copper it was producing, including improving its milling technology to capture a greater percentage of the copper in the rock, and retrieving waste sands from Torch Lake and re-treating them to extract yet more copper.[55]

The Last Boom and the Slow Decline

Calumet & Hecla, like other mining companies on the peninsula, benefitted from one final boom, or, perhaps more accurately, bubble. While the beginning of hostilities in Europe in 1914 initially prostrated the copper industry, domestic copper production and consumption grew in the following years, along with exports spurred by the increased demand by manufacturers for war supplies in Allied countries. The country saw its maximum production in 1916 when the price of copper jumped from 18 to 33 cents per pound. When the United States finally entered the war in 1917, copper was deemed "an essential metal... in the manufacture of munitions" and copper mining "an essential industry."[56] These boom years represented the peak of production and profitability in terms of absolute numbers for Michigan copper mines.

The boom did not last long. Following armistice in 1918 millions of pounds of copper recycled from the battlefields of Europe were returned to the market.[57] The price of copper plummeted from 25 to 12 cents a pound, and in 1921 smelter output for the United States fell to 253,000 tons, the lowest figure since 1897.[58] The general economic collapse of 1920-1921 affected the United States and other countries. For 14 months, the economy struggled with a surge in the labor force, unemployment, wage stagnation, a decline in commodity prices, and a tighter federal monetary policy.[59] For a time there ceased to be a copper market, even as former wartime belligerents increased competition with their enormous stock of copper.[60]

Michigan's copper mines also suffered from long-term changes in the copper mining industry in the early decades of the twentieth century. Competition from Western mines, particularly at Globe and Bisbee, Arizona, and Butte, Montana, became stiffer, and the Michigan copper industry could not compete with their lower operating costs. Such costs were supported by a trend towards corporate ownership of the Western copper mines—a necessity for increasingly large-scale, integrated production. Alaska's Kennecott Copper mines first mirrored and then surpassed Calumet & Hecla's and the Lake Superior copper region's transformation into large-scale, integrated production. Kennecott was the last high-grade source of copper extracted during the early twentieth century (at 79.8 percent copper) and ultimately gained market dominance. Elsewhere, at the mines of Montana, Arizona, and Utah, copper extraction turned toward lower-graded (generally assayed at about 2 percent copper) porphyry mines with a decreased copper yield per ton of rock. Such undertakings entailed enormous investments in the millions of dollars, and substantially and physically changed the landscape through

[55] Lankton, *Hollowed Ground*, 128, 132-134.
[56] Richter, "The Copper-Mining Industry in the United States, 1845-1925," 285; Robert B. Pettengill, "The United States Foreign Trade in Copper: 1790-1932," *The American Economic Review,* 25, no. 3 (September 1935), 432-433, http://www.jstor.com/stable/1802527 (accessed July 14, 2020); Strahn, et al., "Butte-Anaconda Historic District," 99, citing *Montana Socialist,* August 1917 and 13 October 1917, in footnote 67.
[57] Pettengill, "The United States Foreign Trade in Copper," 434.
[58] Strahn, et al., "Butte-Anaconda Historic District," 99, citing Richter, 286, in footnote 69.
[59] J. R. Vernon, "The 1920-21 Deflation: The Role of Aggregate Supply," *Economic Inquiry, Western Economic Association International*, 29, no.3 (July 1991): 572-580.
[60] Richter, "The Copper-Mining Industry in the United States," 285-286.

an open pit mining process first promoted by Daniel C. Jackling in 1907 in Utah. It was a process that changed the way the world mined copper.[61]

Worker demands for better pay and safer working conditions also affected Michigan's copper industry. The hard physical labor, isolation, and lower pay of a mining job could not compete with factory jobs in Detroit, Chicago, and other Midwest cities, or with mining opportunities at other camps such as in Butte, Montana. The population of the Copper Country began declining after 1910. Workers' choice to unionize further complicated labor relations, culminating in the rancorous strike of 1913-1914 (see below for discussion), and while companies like Calumet & Hecla and Quincy survived the strike, their relations with their workforces were forever altered.

Even as Calumet & Hecla reached its highest production figures, producing over 71 million pounds of copper in 1916, this still represented only a fraction of the nation's copper production; for that year, Michigan's share of the industry's production was only a little over 13 percent. The Michigan mines could not match the production of major porphyric copper miners in the West: in 1916, the Utah Copper Company produced over 187.5 million pounds of copper, Inspiration Consolidated (in Arizona) generated nearly 121 million, Nevada Consolidated boasted well over 90 million pounds, followed by Chino Copper (in New Mexico) at over 72 million pounds.[62]

For Michigan, the crash came shortly after the end of World War I. High wartime copper prices plummeted, and in 1921 a necessary nation-wide reduction in smelter output impacted Calumet & Hecla and all other copper companies. It was the most drastic curtailment in the history of the industry, with nationwide output falling to 253,000 tons.[63] Calumet & Hecla, like many of its fellow Lake Superior copper mines, shut down for a time in 1921.

Although the company was soon able to reopen, the remainder of its existence was one of consolidation and contraction as it struggled to make a profit. In 1923 the company legally merged the various mines in the area for which it had previously acquired controlling interests, a consolidation it had been trying to effect since 1911 but that had been blocked by lawsuits. These included the Ahmeek, Allouez, Centennial, and Osceola Mining Companies. While the new Calumet & Hecla Consolidated Copper Company meant the company regained a larger percentage of the Michigan copper production that it had been losing over the years, in many ways the consolidation marked the end of the company's outsized role in the national copper industry. It was an acknowledgement that the company could no longer rely on the Calumet Conglomerate Lode for profitability or even survival. The consolidation also meant that the company could shut down redundant shafts and close the associated surface facilities and move equipment and buildings to other locations on the Keweenaw Peninsula as new resources were discovered, altering the mining landscape. Copper reclamation at the stamp mill site on Torch Lake became a much more important and lucrative part of C&H's production portfolio.[64]

Through consolidation and reclamation, Calumet & Hecla managed to rebound slightly in the 1920s, but then lost most of those gains during the Depression and World War II in the 1930s and 1940s. The company attempted to ride out the Depression through use of its cash reserves, but it ran out of money before the Depression ended, resulting in even more cutbacks. In October 1939 the company capped the last shaft it was

[61] Richter, "The Copper-Mining Industry, 1845-1925," 239; Melody Webb Grauman, "Kennecott: Alaskan Origins of a Copper Empire, 1900-1938," *Western Historical Quarterly*, 9, no. 2 (April 1978); Strahn, et. al., "Butte-Anaconda Historic District," 101; Christopher Schmitz, "The Rise of Big Business in the World Copper Industry, 1870-1930," *The Economic History Review, New Series,* 39, no. 3 (Aug. 1986).
[62] B. S. Butler and W. S. Burbank, *The Copper Deposits of Michigan* (Washington, DC: US Geological Survey, 1929), 79, 95; Richter, "The Copper-Mining Industry in the United States, 1845-1925," 279.
[63] Richter, "The Copper-Mining Industry in the United States, 1845-1925," 286.
[64] Lankton, *Hollowed Ground*, 229-230.

working on the Calumet Conglomerate Lode, which it had been mining for over 70 years. The closure of this lode and the scrap metal drives of World War II resulted in the scrapping of tens of thousands of tons of machinery. The company limped through World War II and the immediate postwar years by working other lodes, diversifying into allied industries such as copper tubing, and selling off some of its extensive land holdings on the peninsula. In April 1968 C&H was acquired by Universal Oil Products (UOP), an independent company based in Chicago, which reincorporated C&H as one of its subsidiaries. But when its workers went on strike later that year UOP was not interested in concessions and eventually terminated the employment of some 1200 workers still employed in Calumet. By the end of 1970 the mine was closed for good, its shafts filled with water, and its assets liquidated.

The Keweenaw Peninsula was the location of the United States' first copper boom. Along with its primary competitor on the peninsula, the Quincy Mining Company, Calumet & Hecla had a direct impact on the growth of the national economy, dominating United States copper production for decades. The Calumet & Hecla Mining Company complements the Quincy Mining Company in terms of significance: while Quincy led the early decades of copper mining on the peninsula, Calumet & Hecla surpassed Quincy within a few years of tapping the lucrative Calumet Conglomerate Lode and dominated both the Michigan and national industries until it was in turn surpassed by Western mines in the late 1880s. Even after that Calumet & Hecla continued to successfully compete with Michigan and Western copper mines during the region's period of copper mining maturity, 1885-1918.[65] In addition to having access to the rich Calumet Conglomerate Lode, C&H's long-term success was due to its proactive investment in underground exploration and its surface plant, which carried it through the initial years of industry contraction in the early twentieth century. As late as 1911, the author of the *Copper Handbook*, which included a listing and description of over 8,000 mines worldwide, could still say that "The surface equipment at the Calumet and Hecla is the most complete found at any mine in the world."[66]

Significant Themes: Peopling Places (community and neighborhoods) and Developing the American Economy (workers and work culture)

The Calumet Historic District also possesses exceptional value in illustrating the broad patterns of the practice of corporate paternalism in the United States mining industry, and the ways in which administration and workers negotiated labor relations in the United States from the mid-nineteenth century to early twentieth century.

The Calumet Community

The copper mining companies of the Keweenaw Peninsula did not set out to build permanent communities, nor did they intend to create company towns where every aspect of their employees' lives was controlled by the company. Practically, however, building communities became a cost of doing business for all Keweenaw mining companies, and social control of the workforce was a means to maintain order and increase profit. Given the remote location and lack of infrastructure, particularly in the early years, attracting and retaining workers required companies to offer housing and other services. Yet most companies resisted going beyond the minimum required to support operation of the mine. As Lankton has observed, the development of housing by early copper mining companies on the peninsula created a "mental template" of what a mine location should include, beyond areas allocated for industrial use:

> A mine location was primarily a place to reside and work in, and only marginally a place of

[65]Gates, *Michigan Copper and Boston Dollars*; Butler and Burbank, 63.
[66] Stevens, *The Copper Handbook*, 529.

> commerce. The industry did not call its settlements *company towns* or *villages*. They were unincorporated *locations*. Companies did not build complete towns, nor did they want to. The typical mine location perhaps had a store or two, but no main street, no downtown… Mining companies understood that first and foremost they were in the mining business. They recognized the need for support services–but they did not want to tend to every human need.[67]

Yet, as Alison K. Hoagland has noted, worker housing often survives the longest of company-related buildings because they are still actively used. Housing can also "be the most visible evidence that a vast industrial enterprise occurred at a site…that workers had lives beyond the workplace…(and) represent management's service to or control of the workers…"[68]

The nucleus of the Calumet & Hecla mining community was the village of Red Jacket (officially renamed Calumet in 1929). Edwin Hulbert, the founder of the Calumet & Hecla mine, platted the village in 1868, just as the company's copper production was ramping up. The village was named after the Red Jacket Mining Company, which had also attempted to mine the Calumet Conglomerate Lode. As part of the Calumet & Hecla merger of 1871, C&H acquired the Red Jacket Mining Company and its property in order to continue mining the lode deep beneath it. They did not need the area on the surface for industrial use. Instead, in 1875, C&H incorporated the mostly independent commercial village located on part of the former Red Jacket property. Calumet & Hecla encouraged the few businesses located in Calumet & Hecla locations to move to the new village. Red Jacket village quickly became the civic and commercial heart of the settlement area in the vicinity of the C&H mines. Despite Red Jacket's growing prominence, then, as now, the entire area was referred to as Calumet. This was also the name used by the post office which served the whole area, despite that fact that it was actually located in the village of Red Jacket.[69]

As noted by historian Jane Busch, C&H prohibited stores, taverns, and other types of private development on company-owned land; consequently, Red Jacket became the center for trade, services, entertainment, and culture for a population of about 35,000 who lived in the area at the height of the mining era.[70]

While the company's industrial infrastructure paralleled the Calumet Conglomerate Lode below the surface, Red Jacket was laid out on an L-shaped 90-acre tract organized on an orthogonal grid aligned to cardinal directions. Within a few years the first commercial buildings, many of them wood-framed construction, appeared on Fifth Street, which developed into the main commercial thoroughfare. Unlike Quincy, where the mine sat on a hill relatively isolated from the community of Hancock below, at Calumet the mine and village

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[67] Lankton, *Hollowed Ground*, 41-50. Emphasis is original.

[68] Alison K. Hoagland, "Industrial Housing and Vinyl Siding: Historic Significance Flexibly Applied," in Michael A. Tomlan, ed., *Preservation of What, For Whom: A Critical Look at Historical Significance* (Ithaca, NY: The National Council for Preservation Education, 1998), 118.

[69] The question of community identity may have reached its comical zenith during a 1916 House of Representatives hearing before the Committee on Public Buildings and Grounds. Reminiscent of an Abbot and Costello "Who's on First" skit, committee members considering a bill to construct a post office in "Calumet, Michigan," soon learned that no such political division existed. To their obvious confusion, Michigan Representative W. Frank James explained that Calumet was the generally accepted name."... used by everybody for Red Jacket, Yellow Jacket, Blue Jacket, Tamarack and Tamarack Junior; and the mail is addressed to Calumet, but the post office is located in Red Jacket. But if you gentlemen addressed a letter to Red Jacket it would never reach Red Jacket. You would have to address it to Calumet." *Hearings before the Committee on Public Buildings and Grounds, House of Representatives, on H.R. 10487 Public Building Site at Calumet, Mich.*, February 9, 1916 (No. 5) (Washington, DC: Government Printing Office, 1916), 6-10. See https://books.google.com/books?id=t-osAAAAYAAJ&pg=RA4-PA4#v=onepage&q&f=false.

[70] Jane C. Busch, "Copper Country Survey Phase III--Houghton County" (Calumet District, Keweenaw National Historical Park Advisory Commission, August 2013), 35.

were in close proximity and intertwined to a degree that was unique in the Copper Country. As Lankton has noted,

> …various governmental boundaries divided this space up, but in a real sense, separate governmental units of village and township existed only on maps. Out on the land itself, this was one place, a populous community built around an industrial core, a place where life and work were hardly separated at all; where the spires of churches competed for attention with smokestacks; where railroad lines intersected streets; and where a school had boilerhouses and engine houses for neighbors.[71]

The village of Red Jacket was nominally independent, although in practice the company owned many of the lots. Calumet & Hecla also retained ownership of most of the surrounding land in Calumet Township, where it developed housing locations to accommodate its workforce, eventually the largest in the region. Locations east of the lode were generally laid out parallel to the lode, including Albion, Calumet, Hecla, and Raymbaultown. Locations surrounding the village, such as Blue Jacket, Yellow Jacket, and Red Jacket shaft (not village) were aligned to the previously established municipal grid.[72] A few locations departed from these precedents, such as Newtown, directly south of the village, which was established on curving streets.

Like many other mining companies on the peninsula, Calumet & Hecla favored married workers, reasoning that families provided a more stable environment, reduced turnover, and made the average worker more dependent on the company. Therefore, company-built housing was biased toward single-family dwellings and duplexes rather than boarding houses. For upper management, additional perks included rent-free housing, something not extended to the common laborer. It was not unusual for worker housing to be informally or formally segregated by ethnic group, and workers of equal occupation or status tended to live in housing of comparable quality. Historian Sarah Scarlett suggests, however, that Calumet & Hecla and other copper mining companies on the peninsula were less overt than the Quincy Mining Company in its obvious use of domestic architecture as a means of establishing employee hierarchy.[73] Historian Larry Lankton has noted that the Lake Superior copper mines' housing costs may have been the lowest of any major metal mining district in the country, although the companies never guaranteed housing to all workers who wanted it. As a result, competition for company housing was high—a situation preferred by the mining companies, as housing would then be considered an earned privilege. Such benefits would not extend to those who were the focus of cultural discrimination, and who were employed in the worst underground jobs; for them, housing was wherever they could find it.[74]

The company both provided company-built houses and leased land on which workers could build their own houses. Such arrangements have been described as "the ultimate expression of a strong bond between employee and employers, and of a worker's dependency and loyalty," as the employee's housing investment was dependent upon the mining company's success.[75] However, both ground leases and building leases also reflect the complexities and tensions in worker-management relationships. Calumet & Hecla tended to encourage land leases, believing that workers would be more loyal if they had built their own house, and that the company could spend less money on housing construction. As a result, the company had more worker-built houses than

[71] Lankton, *Hollowed Ground*, 97.
[72] The origins of the "Jacket" names applied to the village and to housing locations is unclear. There was a Seneca orator and chief called Red Jacket in western New York. He died in 1830. Similarly, there was a well-known Shawnee leader called Blue Jacket (died 1810) in Ohio. It is unclear what connection these historical leaders had to the Keweenaw region, beyond a general fashion for creating Indian-sounding place names during the settlement period in Michigan.
[73] Scarlett, *Company Suburbs: Architecture, Power and the Transformation of Michigan's Mining Frontier* (Knoxville: The University of Tennessee Press, 2021), 191.
[74] Lankton, *Cradle to Grave*, 152-157, 162.
[75] Lankton, *Cradle to Grave*, 158.

other regional mines.[76] Like other companies, C&H provided lots of a size sufficient to allow for keeping an animal, maintaining a garden, and accommodating an outhouse and maybe a small barn or other outbuilding.[77] Another consequence of this practice was that housing locations are differentiated from each other as a result of the unique circumstances under which each developed, rather than reflecting one corporate aesthetic.

Within the greater copper mining district, the quality of housing and maintenance depended upon the success of the company involved. Profitable companies were more apt to respond to worker housing needs, fixing roofs, windows, and chimneys. But as worker housing was considered a necessary but unprofitable cost of doing business, the companies expended as little as possible on maintenance, and provided improvements only to the housing of upper management.[78]

In instances where Calumet & Hecla or other mining companies leased land or buildings, they continued to exert economic and social control over their employees. For example, restrictive leases issued by Calumet & Hecla stipulated that a lessee could not transfer the lease or sublet the house without company approval. Further, new sublessees were required to be company employees; lessees could not sell alcohol; and tenants had to vacate the house within fifteen days of quitting or being dismissed from the company. The company could also terminate a lease within fifteen days' notice for any reason.[79] Calumet & Hecla's ground leases were even more draconian than their building leases. Ground leases ran for only five years, and were renewable, but such renewal was not guaranteed. The company could continue to mine within 15 feet of the house and could undertake open excavation or other development as it deemed necessary for mining operations. Company approval was required for owner sale of the house or transfer of the ground lease. The owner paid taxes on both the house and the land. If any of the stipulations were not met, the lease was void, and the company could repossess the land and house, although the owner could either pick up the house and move it to another location or sell it to a company-approved buyer. Failure to do either meant that the improvements became the property of Calumet & Hecla. Other mining company ground leases were similarly stringent.[80]

Between 1890 and 1910 the population of Houghton County grew from 38,000 to 88,000. The area's influx of new immigrants were largely from eastern and southern Europe. For the thousands of people who had found employment with Calumet & Hecla or other copper companies on the peninsula by the turn of the twentieth century, discriminatory hiring and housing practices impacted the quality of life for certain foreign-born workers and their families. A survey undertaken in 1909-1910 found that of nearly 500 people living north of Portage Lake, about one-third owned their houses while the others rented. The average family house had 4.6 rooms; however, the ethnic groups that held the most unskilled mining positions (Finns, Croatians, Italians, Hungarians and Slovenians), lived in houses with fewer rooms. The ethnic groups that tended to hold skilled, above ground jobs (Cornish, French Canadians, Irish, Norwegians, Swedes, and Poles), lived in houses with more rooms. Lankton points out that larger houses meant more convenience, more privacy, and an associated greater potential to avoid contagious diseases.[81]

The provision of company housing is typically (and accurately) considered a form of corporate paternalism that companies used to attract and control workers and to discourage strikes. However, the workers in the copper industry on the Keweenaw Peninsula "used the same buildings for their own ends."[82] Company workers made rational choices among housing options based on their personal situations, whether that meant a single worker

[76] Lankton, *Hollowed Ground*, 98.
[77] Lankton, "Historic Resource Study," 88.
[78] Lankton, *Cradle to Grave*, 158; Hyde, "An Economic and Business History of the Quincy Mining Company," 190.
[79] Lankton, *Cradle to Grave*, 159.
[80] Lankton, *Cradle to Grave*, 159.
[81] Lankton, *Cradle to Grave*, 156; Hyde, "An Economic and Business History of the Quincy Mining Company," 200.
[82] Hoagland, *Mine Towns*, xviii.

renting a room in a boardinghouse because it was cheap and convenient, or a family choosing to live in a privately owned house because it gave them a greater degree of freedom and financial security. The worker's ability to sublet a house or a room generated needed income. The boarders, whether family members or fellow countrymen, strengthened social connections and confirmed a cultural or neighborhood support network. These connections and networks were primarily established by adult women residents and became the basis of the area's women's organizations. For the women, housing also served as a place of work with remunerative value, and a point of production over which she held autonomy. Additional household income could be generated from boarders, gardening, taking in washing or sewing, or undertaking other such business ventures. As described by historian Shannon Kirkwood, these aspects of worker agency would carry into the worker strike of 1913-1914:

> The experiences of domestic labor and neighborly solidarity, along with prolonged exposure to socialism through their husbands' union activity and local, labor-owned newspapers, led the women of the Copper Country to develop a class consciousness based on their domestic existence and an understanding that the home was the center of working-class life. When the strike broke out, women involved themselves not because they were dedicated unionists, but because they wanted to preserve and protect their homes and their community.[83]

As described by architectural historian Alison K. Hoagland, corporate paternalism as practiced through company housing at Quincy and other nearby mining companies was "a two-way street," in which both management and workers developed strategies to best serve their own interests. Scarlett describes workers housing more specifically as playing a major role in residents' negotiations of identity and social power.[84]

Bridging the gap between the mine and the village was a triangular open common, later named Agassiz Park. Until the early twentieth century, the commons served a number of purposes, including shared grazing land for cows and horses owned by employees, storage of timber and mining material, and as an informal recreational space. The area also served for a time as a railyard, serviced with a depot (later moved to another location in the community). In practice, it also represented a transitional space between mine and village, particularly for workers who lived in the village or in the nearby housing locations.

A key defining characteristic of the Calumet community was its ethnicity, which has been described by modern observers as an ethnic conglomerate, a play on the Calumet Conglomerate Lode. By the time Calumet & Hecla was founded in the late 1860s, the region's early skilled mine workers of Cornish, Irish, German, and French-Canadian origin were giving way to large numbers of Swedes, Norwegians, and Italians. Toward the end of the nineteenth century, they were in turn augmented by Polish, Slovenian, and Croatian groups, but especially by Finns, who became the most numerous ethnic group in the region by the early twentieth century.[85] These later arrivals did not bring with them a mining background. Such workers tended to be less literate than earlier migrants and usually took the least desirable, most demanding, and most poorly paid jobs at the mines—trammers, underground laborers and general surface laborers. Both Quincy and Calumet & Hecla carefully documented this distinction, as they identified their workers by ethnicity on their employment records.[86]

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[83] Shannon R. Kirkwood, *Mobilizing the Home: The Politics of Female Space, Women's Working Class Consciousness, and the Labor Movement in the U.S. and Britain, 1912-1922*, (PhD diss., Central Michigan University, 2019), 46. See also Shannon Kirkwood, "2016 Graduate Student Essay Prize Winner: In Defense of the Home: Working Class Domesticity and Community Action in the Michigan Copper Country," *Michigan Historical Review* 43, no.1 (Spring 2017).
[84] Hoagland, *Mine Towns*, xvi (quotation), xvi-xxiv; Scarlett, *Company Suburbs*, 37.
[85] Keweenaw National Historical Park, *Final General Management Plan and Environmental Impact Statement* (US Department of the Interior, National Park Service, 1998), 142; Lankton, *Cradle to Grave*, 22.
[86] Keweenaw National Historical Park, *Final General Management Plan and Environmental Impact Statement* (US Department of the Interior, National Park Service, 1998), 142; Hyde, "An Economic and Business History of the Quincy Mine," 131, 200, 202; Lankton,

Extensive digital resources regarding demographics and ethnicity in the Keweenaw copper mining region have been linked from the National Park Service's Keweenaw National Historical Park website.[87] The majority of these later immigrant groups were unskilled laborers, and their impact on the culture of Calumet, including its food, architecture, traditions, and naming practices, remains to the present.

Around the turn of the century the built character of the Calumet community began to change. As the village Fifth Street solidified as the community's commercial district, many of the small, wood-framed buildings of the early decades were replaced with larger, more architecturally ambitious buildings of brick and stone, and more specialized stores were added. Among the offerings were hotels, livery stables, clothing stores, dry-goods merchants, general stores, meat markets, jewelers, and barbers. The community also boasted a bowling alley and an astonishing seventy-four saloons. During this period sidewalks and roads were paved with a variety of materials including bricks, concrete/granitoid, and wood block, and utilities like water, gas, and electricity began to be added.[88]

On the company side Calumet & Hecla also began to modernize its housing stock and locations. In part this was a response to pressure from its workers. The company was highly profitable in the late nineteenth century, and its workers earned some of the highest wages in the region and expected a higher standard of living than had been available to the previous generation. But while the company built bigger and better houses for its workers during this period, it resisted wholesale upgrades of water, sewer, heat, electricity, and gas for both old and new houses alike. Instead, it exerted control by running infrastructure to the street but making workers pay to connect to the main and for lines and fixtures inside the house. Workers could ask the company to install these, but it was a matter of the company deciding when that would happen, rather than the worker.

On the other hand, the company was happy to splurge on conspicuous public buildings, ones that publicly demonstrated the company's benevolence and stature, and privately contributed to their social control of the community. This was exemplified in the Calumet & Hecla Library. Proposed by company president Alexander Agassiz in 1895, the library was designed by the Boston firm of Shaw and Hunnewell; both of the firm's partners were related to the company's senior leaders, and the firm had recently completed the design of the company's General Office (now National Park Service headquarters for Keweenaw National Historical Park). Rather than placing the library in the village, it was built on company land at the corner of Red Jacket Road and Mine Street, opposite the office and house Agassiz had built for his own use while he was in Calumet. In addition to two floors dedicated to library stacks and reading rooms, the basement of the library held a bathhouse. While a library might appear to be a public resource, in practice this one served as a "quiet means of social control."[89] The company controlled the library by virtue of owning it, keeping the librarian on the company payroll, and exercising authority over the books in it, which were often approved, or rejected, by company leaders. The library also was a means to assimilate Calumet's large population of foreign immigrants and their first-generation children into American culture and language. Librarians stocked foreign-language translations of American novels and classics as well as books on American history, government, and prominent leaders (the library did also carry some periodicals and literature from the native countries of many ethnic groups). In 1907 assistant librarian Anna Fiske presented a paper at the annual meeting of the Michigan Library Association on Calumet. Fiske noted that one of the primary purposes of the library was to educate workers and their families on "what a home should be, judged by American standards" and to that end, the librarians tried to

Cradle to Grave, 22, 122; MTU Archives and Copper Country Historical Collection, "An Interior Ellis Island, Immigrants and Ethnicity in Michigan's Copper Country," https://ethnicity.lib.mtu.edu/intro.html, accessed January 2, 2024.
[87] National Park Service," Digital Historical Resources [Keweenaw National Historical Park]," https://www.nps.gov/kewe/learn/digital-historical-resources.htm (accessed April 14, 2023).
[88] Lankton, *Hollowed Ground*, 71-72, 178-180.
[89] Lankton, *Cradle to Grave*, 174.

cultivate a homelike atmosphere through the use of furniture, art, plants, and flowers, and maintained open stacks to facilitate browsing of materials in multiple languages.[90] In 1911 a purpose-built bathhouse was completed nearby, enabling the library to expand its stacks into the vacated bathhouse area in the library's basement. Again, while a bathhouse would seem to be a generous public amenity, there was a second motive behind its construction: by providing bathing facilities, the company could alleviate some of the pressure to provide water and sewers to every house.[91]

The company either built or provided the land for an impressive array of public buildings in the late nineteenth and early twentieth century, among them churches, schools, and a hospital. Of the thirty schools built in Calumet by 1930, over half had been built by the company. Near its industrial core, the company built Central School, also known as Washington School, in 1875; it was considered among the best in the state, and claimed to be one of the largest in the nation.[92] Like the library, this building was located not in the village, but directly adjacent to the No. 2 shaft and near the company's office, demonstrating the general lack of separation between public and industrial uses of the landscape. It also provided a very clear visual indication of the source of the community's benefaction. The 1875 Central/Washington School accommodated all grades until 1897-1898 when C&H built the Manual Training School. Located at the time in Washington School, the Calumet High School department provided college preparatory classes, and the manual training school offered industrial skills training. Many of the trades teachers were paid directly by the company, rather than the school district. In 1901 a separate Calumet High School was built. Both the technical and high school buildings burned in 1905 and were replaced by the Calumet Manual Training School and High School (1907/08)—the current high school. The Washington School burned down in 1929 and was rebuilt the same year, in the Charlton and Kuenzli design seen today.

The company built or provided land for more than thirty churches in the area. These catered not only to different faiths, but to ethnic subdivisions within each faith. For example, Calumet had six Catholic churches, built for French-Canadian, Irish and German, Polish, Slovenians, Italians, and Croatian congregations.[93]

In all of these ways, both subtle and overt, Calumet & Hecla's brand of corporate paternalism shaped the physical and cultural landscape of Calumet. Just as its tendency to overbuild resulted in the most impressive industrial plant in the region, likewise the company's approach to building community "set the tone and parameters of paternalism in the Copper Country."[94] The company's beneficence included providing land for the construction of the Calumet Theatre and the YMCA, where C&H managers sat on the board of trustees and the board of directors; Agassiz felt that the company had a responsibility to meet community needs, and he viewed these facilities as components of a healthy community.[95]

Workers and Work Culture

The unspoken aim behind many of the paternalistic policies of Calumet & Hecla's leadership was to prevent labor organization and the formation of unions, which had resulted in labor conflicts in other mining districts in the late nineteenth and early twentieth centuries. In addition to exerting "quiet control" through paternalism and control of housing and institutions, Calumet & Hecla attempted to minimize the potential for radicalism by not

[90] Anna J. Fiske, "The Human Interest in Library Work in a Mining District," *Michigan State Library Association Proceedings of the 17th Annual Meeting Held at Detroit, June 6-8, 1907* (Lansing, MI: Wynkoop Hallenbeck Crawford Company State Printers, 1907), 27-36.
[91] Lankton, *Hollowed Ground*, 186.
[92] Hoagland, *Mine Towns*, 187.
[93] Hoagland, *Mine Towns*, 171-172.
[94] Hoagland, *Mine Towns*, xiii.
[95] Hoagland, *Mine Towns*, 214.

hiring workers it knew had come from mining regions with frequent strikes and finding unrelated reasons to fire potential union organizers within its ranks. Calumet & Hecla also controlled building use through ground leases, such as the lease for the Presbyterian church that proscribed the sale of liquor or labor union-related activities on the premises.

Discrimination was particularly directed toward the company's Finnish workers. By the early twentieth century, Finns were the largest foreign-born ethnic group in Houghton County. Because they were a large and relatively cohesive group, the Finns were more likely to speak their native language and retain their native customs; this made other immigrants who had Americanized view them suspiciously and label them as clannish or difficult. Many Finns, especially those arriving in the 1890s and early 1900s, brought an interest in socialism and unionism, hardly likely to endear them to company management. Mine manager James MacNaughton actively worked to remove or block Finns from working with the company. As a result, despite their large numbers in the area, Finns were only the fourth-largest ethnic group working in the Calumet & Hecla mine, and they were restricted to the hardest, lowest-paid positions with little hope of working their way into better jobs. Coupled with labor hierarchies that tended to follow ethnic lines, this contributed to increased labor tension in the early twentieth century.[96]

While Copper Country mine laborers would identify higher wages as a consistent desire during times of labor tension, their monthly wages compared favorably with the wages of iron miners in the East in the last quarter of the nineteenth century. But compared to many Western mining districts, the Michigan laborers earned about half the amount. And within the working hierarchy in Michigan, contract miners at Quincy earned ten to twenty percent more than trammers. The earning differential at Calumet & Hecla was similar, at a twenty-three percent difference. At Calumet & Hecla, the average pay for miners by 1913 averaged $3.39 per day, and trammers earned $2.91 -- higher rates than the average pay for Michigan miners ($2.98 and $2.59 respectively).[97]

In the early twentieth century, workers organized some short-lived strikes in the Keweenaw copper mines. Generally, these were called along occupational lines, by specific work groups (e.g. miners, trammers, etc.) over issues that did not overlap with other categories of workers. However, labor relations in the Copper Country were relatively calm until a major strike erupted in 1913-1914. The causes were complex, but they could generally be traced to the decreasing profitability of mining and mine work and the mining companies' responses to it. With copper prices and profitability both falling, the Keweenaw's mining companies worked to lower production costs and increase efficiency, which often meant fewer workers doing more labor. In turn, workers were concerned that mechanization would cost them jobs.

The first attempts to unionize on the Keweenaw Peninsula occurred in the 1870s when the International Workingmen's Association organized in the region, and the Knights of Labor (KoL) arrived on the Keweenaw in the 1880s. But despite the nation-wide financial panic of 1873 and a reduction of wages at Quincy, the company's workers did not engage in significant strikes or other labor actions before 1890. Notable strikes in 1872 and 1874 at Calumet & Hecla and Portage Lake awarded miners higher wages and a reduction in the workday, but thereafter union and KoL members were not welcome at the company. Then, between 1890 and 1906, there were at least seven distinct strikes, most associated specifically with Quincy rather than instances of district-wide unrest. Yet during this Progressive Era, unions blossomed. Between 1902 and 1903 alone, the number of unions in Copper Country grew from zero to eleven; most were craft organizations, small collections

[96] Lankton, *Cradle to Grave*, 211-213.
[97] Lankton, *Cradle to Grave*, 59, 69-70; Hyde, "An Economic and Business History of the Quincy Mining Company," 123, 129, 164, 190, 196); Gates, Michigan Copper and Boston Dollars, 106-107; Arthur W. Thurner "Western Federation of Miners in Two Copper Camps: The Impact of the Michigan Copper Miners' Strike on Butte's Local No. 1," *Montana Magazine of Western History* 33, no. 2 (Spring, 1983), 38

of laborers focused on a single craft or occupation and who communicated using publications produced by their national unions.[98]

That there were relatively few substantial strikes on the Keweenaw may have been connected to mining company efforts to secure worker loyalty. But options such as housing and medical assistance did not extend equally to all, and only Calumet & Hecla created a benefit society (1877) and matched contributions paid in by its employees. In 1904 Calumet & Hecla was also the first --and for many years-- the only company to establish a pension plan, albeit with specific service criteria. Other mining companies undertook ad hoc measures.[99]

The increasing number of strikes at the turn of the century speaks both to the failure of the companies' paternalistic management philosophy, and to strength of workers' community organizations. Historian Larry Lankton has identified the various ways that workers supported themselves, their families, and their communities. Independent foreign-language papers published by Swedes, Italians, Croatians, Slovenians, and Finns early in the twentieth century provided news free of company influence. The communities of Hancock and Red Jacket offered "pockets of independence and anti-company sentiment" where socialists or union men could share information and increase memberships. Author Gary Kaunonen described Hancock in particular as a "proletarian nexus" for the Finnish socialist-labor movement. Finnish Halls became the location where ideological and political discussions were carried out, on topics from temperance to socialism. Elsewhere, churches offered connection to Old World traditions, and virtually every ethnic group established clubs, and mutual aid and fraternal or benefit societies. Several immigrant groups formed cooperative stores, or cooperative insurance organizations. Annual May Day or Labor Day celebrations encouraged public displays of working-class community and solidarity. The installation of the streetcar system facilitated movement between communities, which allowed mine workers both greater options for seeking higher wages at other area mines, and to engage in union activities across the peninsula. Workers or the unemployed could also leave the area for work elsewhere, such as in Detroit with the burgeoning auto industry, or other mining communities such as Butte, Montana.[100]

Mining companies were also willing to collaborate in opposition to their employees. As early as 1865, mining companies met to discuss a reduction in wages, which over the course of the Civil War had risen in response to labor shortages. While there is no record of the meeting's outcome, wage rates did fall. In 1869 Quincy and nine other Houghton County mines established the Houghton County Mine Agents Union. The mines intended to create a common front against employees and allow mine owners more leverage in reducing wages or resisting demands for increases. Members agreed to inform each other of a pending strike.[101] When mine laborers increasingly agitated for improvements in wages and safety in the early twentieth century, mine leaders again collaborated. About a year after the Western Federation of Miners (WFM) initiated an organizational drive at the mines, Calumet & Hecla for the first time shared employment and wage information with other companies, and consulted with them about altering existing wage rates.[102]

One area over which miners and laborers had limited control was the inherent danger in underground work, where life-threatening hazards abounded. In the dark, rough, narrow spaces, potential death or permanent

[98] Lankton, *Hollowed Ground*,73, 191; Hyde, "An Economic and Business History of the Quincy Mining Company," 123 109, 110, 202; Kaunonen and Goings, *Community in Conflict*, 27-29, 94-97.
[99] Lankton, *Cradle to Grave*, 190, 194.
[100] Lankton, *Cradle to Grave*, 188, 214, 216; Lankton, *Hollowed Ground*, 187-188, 239; Kaunonen, *Challenge Accepted,* 17-44, 62; Kaunonen and Goings, *Community in Conflict*, 33-34, 38-40, 56-57, 121-124.
[101] Gates, *Michigan Copper and Boston Dollars,* 100-101; Hyde, "An Economic and Business History of the Quincy Mining Company," 51.
[102] Lankton, *Cradle to Grave*, 205.

injury could come from nitroglycerine-based explosives, falling rock, or a tumble off a ladder or down open shafts or stopes. Tramcars could crush a person. Fires could immolate or suffocate. Sanitary conditions were crude at best. Temperatures in the deepest mines could reach over 80 degrees, with inadequate ventilation. As a result, as mines on the Keweenaw grew and profits increased, so did the number of deaths. Twelve men died underground in the 1850s; in the 1860s, 54 died. In the 1870s 106 workers were killed, the number nearly doubling to 195 in the 1880s and increasing to 284 fatalities in the 1890s. In the first decade of the twentieth century, 511 men died. Historian Larry Lankton has noted that in terms of fatalities per 1,000 men employed, by the turn of the twentieth century, Michigan mines were somewhat better than the national average; almost five men per thousand died in Copper Country's underground mines. However, the statistic for those with less-than-fatal injuries was worse than average, as over half of all reported serious and minor injuries in the U.S. copper industry occurred in the Keweenaw Peninsula mines. The dangers of working in the mines that these statistics reflect would have bearing on the most serious strike on the Keweenaw, in 1913-1914.[103]

While there were numerous reasons for the 1913-1914 strike, the introduction of the one-man hammer drill was the most immediate trigger. In comparison to the previously used two-man hammer drill, the one-man drill could be used in smaller spaces and was also more powerful, so it could match the output of the larger piston drills. It could also, as implied by its name, be operated by one man instead of two. By introducing the drill, mining companies anticipated an ability to both increase productivity and significantly decrease their labor costs. Miners (who operated the drills), on the other hand, believed that working alone on a heavy drill, even at the reduced weight of the new drill, was more dangerous than working as a two-man team. Certainly, the number of deaths had increased dramatically in the Keweenaw after the turn of the twentieth century, commensurate with the maturity of copper mining: an average of nearly 61 deaths per week occurred between 1905 and 1911. It was the threat to their livelihoods, however, that caused the greatest anxiety to the workers. In this, they were joined by the trammers (workers who transported the ore), who both feared competition from demoted miners and also saw their opportunity for advancement (to drilling, which paid more) evaporate. This unity between miners and trammers was a new development. Traditionally worker disunity—miner vs. trammer, surface worker vs. underground miner—benefitted the company, and the company bargained with individual segments of the workforce to pit groups against each other. Miners, trammers, and other workers joining together in a collective action was a critical aspect of the 1913-1914 strike and contributed to its length and intensity.[104]

1913-1914 Strike

Set within the greater national context of labor history, the 1913-1914 strike reflects a larger and analogous reaction to the impacts of industrialization on workers and the workforce that encompassed coal and hard-rock mining, stone quarrying, oil and gas exploration, and logging. The biggest factor was the steam engine and associated mechanization. In some instances, new technology alleviated physical burdens that exhausted or disabled laborers. In others, technological advances caused bottlenecks that intensified work. Industrialization also tended towards increases in occupational risk. Powerful, unfamiliar tools often harmed workers, while an associated increase in scale of operations meant greater hazards. Few legally mandated safety measures were in place, and company towns exercised a feudalistic control over worker's lives. In other instances, employment insecurities and social inequalities contributed to worker unease.

The creation of workers' unions as a means to organize for self-protection from company owners began in the mid-nineteenth century and gained momentum through the following decades. As described in the *Labor History in the United States* theme study, coal workers first organized in Pennsylvania in 1849 in opposition to

[103] Lankton, *Cradle to Grave,* 110-112; 125; Kaunonen, *Challenge Accepted,* 116; Kaunonen and Gary, *Community in Conflict*, 81-85.
[104] Lankton, *Cradle to Grave*, 104-107, 111, 221.

low pay and high prices at the company store. The first hardrock union emerged in the silver mines of the Comstock Lode of Nevada in 1863. The copper miners' organization in Butte, Montana, founded in 1878, grew into a formidable stronghold. By the turn of the century, this union had more than 6,000 members, making it the largest local union in the United States. Unions bargained with company owners over economic issues as well as health and safety concerns. Strikes became a common tactic used by unions when companies refused to accommodate workers' demands or to allow national (and regional) unions into their industries. Strikes became an almost ubiquitous feature in two key extractive industries: mining and timber. From the late nineteenth century through the early twentieth century, strikes broke out in almost every region that these industries dominated. Many of the significant strikes in the extractive industries occurred during World War I, when workers sought to use the wartime demand for raw materials to push for labor reforms, while operators used that same demand to speed up production and thwart unionization.[105]

While the specific issues associated with, or the outcomes of, the 1913-1914 labor strike in Michigan's Copper Country do not rise to the level of national significance, the strike is reflective of the outcome from changes in production and management by the Calumet & Hecla Mining Company and other Michigan copper mining companies, and it was one important contributor to the downfall of the Western Federation of Miners (WFM). As such, it merits inclusion as part of the Calumet community's story. The WFM, a union created by Western metal mine workers in 1893, was involved in violent strikes at Cripple Creek and Leadville, Colorado, in 1894 and 1896, and again in Coeur d'Alene, Idaho, in 1899. The union gained a reputation for a willingness for violence. But as quickly as it grew, the power of the WFM was diminished in the next few years, particularly following the outcome of the 1903-1905 Colorado City Smelter Strike and the unsuccessful 1909 Homestake Mining Strike. Supporting the 1913-1914 Keweenaw Peninsula strike would exhaust most of the union's resources.[106]

Prior to the strike, the WFM had only had moderate success in unionizing the miners of the Copper Country. The union capitalized on the appearance of the one-man drill and signed up thousands of miners and trammers in early 1913. Historian Gary Kaunonen observes that WFM's success in gaining membership in Copper Country was a strategy to enlist multi-ethnic organizers, to cut across ethnic divisions and crease a sense of solidarity.[107] Like their brethren across the country, WFM local union workers sought increased wages and an eight-hour workday, and opposed the one-man drill that was being introduced to area mines. Although the national leadership of the WFM was ready to increase its membership in the Keweenaw, they were not prepared to support a strike, particularly because they knew their funds were insufficient to sustain a prolonged strike against the companies, which were equipped with tremendous cash reserves. It was the local leadership that called the strike in the summer of 1913 and shut down the mines of the Keweenaw Peninsula, against the wishes of the national organization, because they wanted to thwart the introduction of the one-man drills.

For the next nine months, a battle for public opinion and the moral high ground was waged across the peninsula as the companies sought to crush the nascent union for good and workers tried to hang on long enough to force change. Strikers marched throughout the mining district, including down Fifth Street in Calumet and through the heart of the C&H administrative area on Red Jacket Road. Standing in solidarity with mine workers were women who provided support, and leadership during picket duty, meetings, and parades. Some were involved through WFM-established auxiliary locals specifically for women in the Copper Country.[108] The C&H

[105] Rachel Donaldson, *Labor History in the United States: A National Historic Landmarks Theme Study*, (Washington, DC: National Historic Landmarks Program, National Park Service, 2022), 111-116.
[106] Eric L. Clements, "Pragmatic Revolutionaries?: Tactics, Ideologies and the Western Federation of Miners in the Progressive Era," *Western Historical Quarterly*, 40, no. 4 (Winter 2009).
[107] Kaunonen*, Challenge Accepted*, 115; Kaunonen and Goings, *Community in Conflict*, 63-66, 98-99.
[108] Kaunonen and Gary, *Community in Conflict*, 119-120.

management hired guards from the Waddell-Mahon Corporation in New York City to protect the mines and replacement labor as they sought to reopen the mines without the striking workers. After a few early incidents of violence, the state sent in the National Guard, who set up tent encampments at both Quincy and Calumet, and the mines were soon able to reopen on a limited basis with a combination of scab labor and WFM defectors. During the strike, national labor leaders such as Mary Harris "Mother" Jones, who co-founded the Industrial Workers of the World (IWW), and John L. Lewis, a co-founder of the Congress of Industrial Organizations (CIO) and later president of the United Mine Workers, visited the Keweenaw and encouraged the strikers. In September 1913 prominent US labor attorney Clarence Darrow, who would later become famous for his participation in the Leopold and Loeb and Scopes trials, attempted (but failed) to initiate arbitration with Michigan's governor.[109] Later that fall, a Citizens' Alliance organization was formed, which purported to be a grassroots movement to counter the so-called violence of the strikers, but was really a propaganda machine created and funded by the companies.[110]

As the situation drew out into the cold winter of 1913-1914 and both sides grew weary, the WFM's Women's Auxiliary planned a Christmas party for strikers and their children—a respite from the strain and hardship created by the strike. The venue was the Italian Hall in Calumet. On Christmas Eve, 1913, with over 175 adults and 500 children crowded into the second-floor hall, a shout of "fire!" triggered a stampede that killed seventy-three people, nearly sixty of them children. There was no evidence of an actual fire. The stampede killed more people than any single accident on the Keweenaw Peninsula.[111] Various conspiracy theories were floated in the aftermath of the disaster. WFM national president Charles Moyer, who was in the Copper Country at the time, tried to blame the Citizens Alliance for the false cry of fire, and anti-union residents responded by violently deporting Moyer from the peninsula with a bullet in his back.[112] The disaster and aftermath also prompted the US Congress to open an investigation into conditions at the copper mines of the Keweenaw Peninsula.[113]

By Easter Sunday of 1914 the strike was over. The strikers had held on longer than anyone expected, and they wanted to continue the fight, but the WFM was out of money and cut benefits to strikers in April. The workers had no real choice but to end the strike, and while they did receive a few modest concessions, including an eight-hour workday and better grievance processes, it was considered a complete victory for the mining companies. The one-man drill was adopted and while productivity increased, fewer miners were needed to operate the equipment. Upward mobility was reduced for many trammers who had sought to move on to other mining-related jobs where work was comparably easier and paid better.[114] The WFM, which until then had been a powerhouse union in areas like Butte, Montana, and other mining districts, would suffer its worst defeat later that year in Butte, when a man was killed outside the union hall during a riot and the building itself was blown

[109] Lankton, *Cradle to Grave*, 225, 230; Kaunonen and Goings, *Community in Conflict*, 109-114, 124-127.
[110] Lankton, *Hollowed Ground*, 201. Anti-union committees aligned to and/or funded by employers were not unique to the Keweenaw; they were founded under similar names in other communities across the United States in the early decades of the twentieth century, including Dayton, Ohio; Minneapolis, Minnesota; Seattle, Washington; and the mining communities of Telluride and Cripple Creek, Colorado. They leveraged the power of local businesses to suppress the formation and activities of unions. See, for example, William Millikin, *A Union Against Unions: The Minneapolis Citizens Alliance and Its Fight Against Organized Labor, 1903-1947* (Minneapolis, MN: Minnesota Historical Society Press, 2001) and Louis G. Silverberg, "Citizens' Committees: Their Role in Industrial Conflict," *The Public Opinion Quarterly*, 5, no. 1 (March 1941), 17-37. See also Kaunonen, *Challenge Accepted*, for a description of the 1913-1914 strike, the involvement of Finnish socialist-unionists, and the role of the Finnish Tyomies Publishing Company in generating support for striking miners through its newspapers.
[111] Lankton, *Hollowed Ground*, 203; Kaunonen, *Challenge Accepted*, 150-157; Kaunonen and Gary, *Community in Conflict*, 167-219.
[112] Lankton, *Cradle to Grave*, 236-238, and *Hollowed Ground*, 204-205.
[113] An assessment of fatalities in the Upper Michigan mines concluded that there was actually a substantial decline in the ratio of fatalities to production, accounted for in technology-based productivity gains. Larry D. Lankton and Jack K. Martin, "Technological Advances, Organizational Structure and Underground Fatalities in the Upper Michigan Copper Mines, 1860-1929," *Technology and Culture*, 28, no. 1 (January 1987), 65-66.
[114] Lankton, *Cradle to Grave,* 239-241.

up.[115] The WFM had exhausted most of its resources in supporting the Michigan strike, and this final loss essentially finished the union. It no longer remained a viable organization for its Western members and within a few years reorganized into the less powerful International Union of Mine, Mill, and Smelter Workers.[116]

While the successful, from their point of view, conclusion to the strike permitted C&H's leadership to reassert control that they felt had been slipping away for years, the era of effective corporate paternalism was largely over for the company. After the short-lived copper bubble of World War I ended, the company struggled to stay alive, reducing its physical plant and consolidating its operations. The profitability that had permitted it to build conspicuous public buildings was gone. As part of a broader strategy to reduce costs, in the next decades the company would sell company housing and land-lease lots, stop supplying steam heat to management housing, and transfer the armory to the state. Among the last of the company's community projects was the development of the commons between mine and village as a formal park, named Agassiz Park in honor of company president Alexander Agassiz, who had died in 1910 after heading the company for nearly forty years. The company hired nationally known landscape architect Warren H. Manning to design the park and assigned the construction work to miners who were under-employed due to the post World War I copper recession, in part to keep them from leaving the area to seek work elsewhere. The park was completed in 1923, just as the company transitioned to the Calumet & Hecla Consolidated Copper Company.

As well as lack of funds, the aftereffects of the strike had severely damaged trust between workers and management. Furthermore, labor shortages in the 1920s changed the character of Calumet's "ethnic conglomerate" as many of its workers departed to seek work elsewhere, and the company had to recruit new workers from Cornwall, Germany, Canada, and Mexico.[117] In 1942 Calumet & Hecla's workforce finally unionized—the last among the local copper mines to do so. In the year preceding the successful unionization vote the company had strongly implied that unionization would result in the loss of benefits like low rents and utilities on company housing. In 1943, the year after unionization, the company made the decision to close the facility that had exemplified its patronage of the Calumet community—the Calumet & Hecla Library. The company explained that it made the move to relieve overcrowding in the general office building and paid to convert space in the high school to accommodate a reduced collection of books. Nevertheless, it symbolized that the company could no longer hope, and was no longer willing, to exert even quiet social control over its workforce.

Beyond the changes wrought by mining to the Keweenaw Peninsula landscape, an enduring result of copper mining in the area is the cultural diversity that has persevered over time. Indeed, such impact was already felt by the 1870s, when 57 percent of Houghton County's population foreign-born, making it the third largest foreign-born population as a percent of the total population in the United States. Over twenty immigrant groups were present on the peninsula over time, and the largest populations changed, from Irish to Cornish to Finnish.[118] Evidence of this ethnic diversity, for example, is found in location names, street signs, churches, institutions, and historic building names. While not within the Quincy Mining Company Historic District, perhaps one of the most permanent institutions is Suomi College (later Finlandia University), which was established in 1896 in Houghton by Finnish immigrants wo desired to provide a religious education, perpetuate the Finnish language, and preserve their experiences in this new country.[119] Finlandia University closed in 2023.

[115] Clements, "Pragmatic Revolutionaries," 463.
[116] Lankton, *Cradle to Grave,* 239-241; Kaunonen and Gary, *Community in Conflict*, 240; Thurner "Western Federation of Miners in Two Copper Camps," 30-45.
[117] Lankton, *Hollowed Ground*, 230.
[118] MTU Archives, https://ethnicity.lib.mtu.edu/intro.html, accessed January 2, 2024.
[119] At the time of its closure in 2023, Finlandia University was the only remaining North American institution of higher learning founded by Finnish Americans. "Finnish American Heritage Center," https://www.finlandia.edu/fahc/, accessed January 2, 2024.

CONCLUSION

The Calumet & Hecla Mining Company's Legacy

The Calumet community evolved as a direct consequence of the Calumet & Hecla Mining Company operations, and until 1968 neither the company nor the community had ever existed in the absence of the other. This changed in 1968 when the Chicago-based Universal Oil Products exchanged stock with C&H, incorporated a new Calumet & Hecla Corporation as one of its wholly-owned subsidiaries, and subsequently closed all mining operations.[120] Universal Oil Products retained a large amount of former C&H property throughout the peninsula and in Calumet through the former C&H real estate branch, renamed the Lake Superior Land Company. While all the shafts were capped and some industrial buildings and landscape features were removed, a large number of substantial mining resources remained. In addition, the interconnected mining and community landscapes at Calumet helped to preserve them, as the area in and surrounding the village remained in active use. Houses in the former housing locations continued to pass into private ownership. Continued occupation kept many of them intact and relatively unchanged.

The closure of the mine coincided with the development of the historic preservation movement in the United States, and the area's historic significance was documented and recognized in the 1970s and 1980s. Historic surveys in the 1970s led to listing of the Calumet Downtown District and the Calumet and Hecla Industrial District in the National Register of Historic Places in 1974, and the designation of portions of the industrial core, village, and housing locations of the Calumet & Hecla Mining Company as a National Historic Landmark district in 1989.

With its major industry gone, the region had to develop a new economy. Universal Oil Products hired professional land planners to examine regional development opportunities, who recommended the expansion of regional tourism and recreation. The planning study formulated a development concept called Coppertown USA, a history-centered theme park on UOP-owned land in the industrial core that built on the historic documentation and survey work of the 1970s. While lack of funding killed the larger vision, a few specific projects were implemented, including adaptation of the former C&H Library, which housed the Lake Superior Land Company offices, for Coppertown USA's offices. A non-profit mining museum in the former C&H Pattern Shop was created, which remains in operation today.

In 1992 Congress established Keweenaw National Historical Park as a unit of the National Park Service (NPS) in part to preserve and interpret the "nationally significant historical and cultural sites, structures, and districts" of a portion of the peninsula's copper mining heritage, focusing primarily on the former Calumet & Hecla and Quincy properties.[121] In addition, in recognition of the proposed role of partnerships in the new park, Congress also established a permanent, seven-member Advisory Commission to advise and assist the NPS. The resulting park is unique in that it combines limited federal ownership with partnerships that leverage existing preservation efforts and grassroots community involvement to preserve the Copper Country's heritage. The park is headquartered in Calumet and occupies a number of the historic buildings associated with the former Calumet

[120] Historian Larry Lankton notes that UOP was a conglomerate engaged in numerous, disparate activities. Its largest source of revenue was the petroleum and petrochemical processing market. UOP marketed itself as an advanced scientific and engineering research company. It dealt with materials science, minerals processing, catalytic converters, and plastics. It also fabricated metal parts and manufactured parts for truck suspensions and the airline industry. See Lankton, *Cradle to Grave*, 236, citing *Universal Oil Products Annual Report for 1968*, 5, 272.

[121] "An Act to establish the Keweenaw National Historical Park, and for other purposes," Public Law 102-543 (October 27, 1992).

& Hecla Mining Company, including the company's General Office, the C&H Library, the No. 1 Warehouse, and the Union Building Fraternal Hall.

COMPARATIVE COPPER MINING SITES

The evolution of the nation's copper industry over time can be roughly traced as an east-to-west progression across the country, correlating to the discovery and exploitation of various copper deposits, levels of accessibility, changing national and international economic conditions, technological progress, and greater investments of capital. As has been noted, copper mining ventures on the East Coast were modest affairs. Geologic variation impacted the scope and extent of the copper industry at any given time but, generally, substantial and economically feasible copper mining began in Michigan in the mid-nineteenth century, followed by California, then Montana and Arizona. By the turn of the twentieth century, Utah, Alaska, and New Mexico were producing sizable amounts of copper. In most instances copper extraction followed earlier exploration for gold and silver, and these precious metals continued to be extracted along with copper. The type and scale of copper production, economic output, and financial prominence of one area or region over another changed over time, and advances in technology developed in one area were applied in other regions.

Over the period of about 1850 to 1950 copper mining changed from extracting high-grade or even natural mineral ores, as in Michigan, to Western ores that were of increasingly lower grades. Generally, highly productive copper mining in the United States evolved from surface pits to deep shafts, then to open pits. Technological changes in extraction and concentration (processing), transportation and refinement were supported by increasingly massive sums of capital investment. This made possible the economic viability of mining low-grade sulfides and oxides of copper extracted on an immense industrial scale. Indeed, by 1944 more than one half of the nation's copper came from deposits about which mining operators had been aware as early as the turn of the century but had been considered valueless.[122] The result of this evolution was that over a 100-year period, copper production increased prodigiously even as the quality of copper ore dwindled.

The built environment of mining districts in these regions tells this story of the progression of copper mining in the United States, and its rise to become a major industry by the late nineteenth century. Lake Superior copper was mined, worked, and extensively traded by Indigenous people thousands of years ago, but this comparative analysis will focus on those industrial copper mining sites or districts that were the most substantial producers of copper in the top eight copper-producing states between the mid-nineteenth to mid-twentieth centuries: Michigan, California, Montana, Arizona, Alaska, Utah, New Mexico, and Nevada. During this period copper mining, extraction, and processing contributed to a definitive change in the United States economy from agricultural-based to industrial-based, and from a primarily rural to an urban society.[123] A ninth state, Tennessee, is included in the comparative analysis, despite its relatively small production of copper in comparison to the other states. This inclusion is due to the property's association with a US Supreme Court decision, important both for an advance in mining technology and in early environmental conservation law. Also included is summary information on a colonial era Connecticut copper mine of the eighteenth century, allowing for a better understanding of the extent of changes in American copper mining over time.

Furthermore, this analysis focuses on those properties that retain a high concentration of resources necessary to document the scope of mining, including extraction, milling, transportation, smelting, and other supportive

[122] Timothy J. LeCain, "Moving Mountains: Technology and the Environment in Western Copper Mining," Vol. II (PhD diss., University of Delaware, 1998), 715.
[123] Richter, "The Copper-Mining Industry in the United States, 1845-1925," 236-291, provides a definitive summary of the copper mining industry, and identifies the highest-producing and most influential copper mining districts and companies in the United States. This is repeated with additional information on specific mines in Gardner, et al.

elements. Also necessary for inclusion in this comparative analysis are the presence of associated residential resources, placing workers in close proximity to industrial locations. Distinctive residential building patterns that emerged alongside mining resources should be clearly evident. The comparative analysis thus identifies a select number of sites among hundreds that are definitively or potentially nationally significant. Not all have been listed in the National Register of Historic Places, although several have been previously designated National Historic Landmarks.

The properties included in this analysis physically reflect the evolution of copper mining in the United States, and the effects of advances in technology, the ongoing quest for efficiency, and increases in capital investments. There are notable distinctions among properties that relate to the type of copper ore mined, technology used in its extraction and production, and the scale of production.

Connecticut

In the early eighteenth century, copper mined in colonial America was shipped to Wales for smelting and used in the manufacture of bronze or brass for use in shipbuilding, precision instruments, and military ordnance. Historian Otis Young notes that the first productive American copper orebody was the Copper Hill Mine (also known as the Granby Copper Mines and the Simsbury Mine) in Hartford County, Connecticut, about 1707. This was a rich oxide deposit, and in 1709 the Simsbury town association received what is believed to be the first mining company charter in British North America. Its ore production is unknown but probably amounted to about 500 tons.[124] The underground mine was worked until about 1745, with brief attempts made at mining in the 1830s and 1850s. The Colony of Connecticut bought the mine in 1773 and used the tunnels as a prison for British soldiers, Tories, and other political offenders. The significance of the property as an early prison, rather than as a copper mine, is identified in the **Old Newgate Prison and Copper Mine National Historic Landmark**. The landmark was designated in 1970, with a period of significance of 1775-1827—the period of time the property was used as a prison. Five building ruins and the mine are contributing resources. The property is now a state historic site. The Old Newgate Prison and Copper Mine NHL complements the Calumet Historic District NHL as a baseline for comparison of the modest development of copper production in the United States prior to the discovery of elemental native copper in the Keweenaw Peninsula.

Michigan

During the mid-nineteenth century, Keweenaw Peninsula copper mines produced three-fourths of American copper.[125] Among those copper mining companies producing “Lake copper” or “Michigan copper” in the 1850s to the 1900s, the Quincy Mining Company and the Calumet & Hecla Mining Company proved to be the two most successful and powerful companies in the Lake Superior copper districts.[126] Resources associated with these two companies best represent the full spectrum of industrial copper mining history in Michigan, and the importance of Michigan copper mining to the national story.

While not directly comparable to the copper mining industry represented by the Quincy Mining Company Historic District and the Calumet Historic District, the **Minong Copper Mining District National Historic Landmark** is also included here as a complement and precursor to the nationally significant events associated with the latter NHL districts. The Minong Copper Mining District is located within Isle Royale National Park,

[124] Young, “Origins of the American Copper Industry,” 121. Young cites Charles R. Harte, "Connecticut Iron and Copper," *Annual Report for the Sixtieth Year* (Connecticut Society of Civil Engineers, 1944), for production estimates.
[125] Lankton, *Cradle to Grave,* 9.
[126] A comparison and details of all Michigan copper producers from 1845-1925 are found in Butler and Burbank, *The Copper Deposits of Michigan*.

over 50 miles off the tip of the Keweenaw Peninsula, at the northern end of Lake Superior. It is Michigan's most recent NHL, designated on January 13, 2021. The NHL boundary covers over 200 acres and encompasses the [redacted] and the [redacted]. The [redacted] site includes [redacted]. The [redacted] includes [redacted]. Archeological and historical evidence suggests [redacted]. Mining continued though the 1880s. The site has [redacted] and combines one of the [redacted] with the [redacted] on Isle Royale.

The Minong Copper Mining District National Historic Landmark is nationally significant because it showcases the intimate connection between North America's precontact and historic native copper mining activities. The site shares the same belt of copper-bearing geology that attracted copper mining investment in the Keweenaw Peninsula and Ontonagon County. Beginning in the 1840s, American miners used precontact mining remains found on Isle Royale and Michigan's Keweenaw Peninsula as a key guide to establishing a native copper mining industry that, by 1870, was producing the majority of the world's copper. [redacted] is by far the most thoroughly studied and figured prominently in several early archeological investigations. The studies contributed to the development of archeological science with respect to understanding of precontact copper mining. Much of our modern archeological knowledge of precontact native copper mining methods stems from field research undertaken at this site.[redacted]

The **Quincy Mining Company Historic District National Historic Landmark** was designated in 1989 for its outstanding associations with copper mining in the Keweenaw Peninsula and the greater "Lake region," and the role the company played in the economic transformation of the United States into a world leader in copper production. Whereas the Calumet Historic District NHL acknowledges the overarching dominance of the Calumet & Hecla mining company and addresses other major elements of Michigan copper mining industry during the period of national economic influence--corporate paternalism, company towns, immigration and ethnic settlement, and labor organization--the Quincy Mining Company Historic District NHL complements the Calumet NHL by focusing on industrial aspects of the copper mining process, in particular the company's early dominance of the industry on the Keweenaw Peninsula, its long record of profitability, and its application of technology to increase profits. The Quincy NHL's original period of significance was 1846 to 1931.[128]

The Quincy Mining Company was founded in 1846. After struggling to turn a profit in its early years, in 1856 it began mining the rich Pewabic Lode that would be the source of its long productivity and profitability. Production of this native copper made Quincy the biggest and wealthiest copper mine in the world in the late 1850s and early 1860s, until it was eclipsed by Calumet & Hecla in the late 1860s. Quincy made a number of strategic acquisitions of neighboring mines in the late nineteenth and early twentieth centuries, expanding its dominance of the Pewabic Lode.

Like the Calumet Historic District, the Quincy Mining Company Historic District is in the Portage Lake mining district. Quincy is located roughly 10 miles south of the Calumet NHL and includes the Quincy Smelting Works to the south on the shore of Portage Lake and (in its amended nomination) the Quincy Stamp Mill on Torch

[redacted]

[128] Kathleen Lidfors, "Quincy Mining Company Historic District" National Historic Landmark Nomination Form, (Washington, DC: US Department of the Interior, National Park Service, February 17, 1988), designated February 10, 1989. The Quincy Mining Company Historic District NHL is currently (2023) being updated in order to more adequately address the national significance of the company, and the economic, social, and physical resources reflected in this company's corporate mining landscape.

Lake. As with the Calumet Historic District, the core of the mining area follows the narrow belt of the copper lode. The Quincy Mining Company district contains a highly concentrated area of historic resources related to the extraction and processing of copper, dominated by the No. 2 Shaft-Rockhouse at the summit of Quincy Hill, which is visible for many miles. Quincy is notable as a collection of resources representing all aspects of the mining process, including extraction, transportation, milling, smelting, and housing, which best illustrate how copper mining became a dominant industry in the United States. The proposed expansion of the Quincy NHL's boundaries includes the stamp mill and associated housing resources at Torch Lake as well as the Quincy and Torch Lake Railroad Corridor that connected the two facilities. The proposed period of significance for amended documentation is 1856 to 1920.[129]

A number of other successful copper mines developed prior to or contemporaneously with the Calumet & Hecla Mining Company. While important for their contributions to the evolution of mining on the Keweenaw Peninsula, they are not considered outstanding examples of national significance because of the comparatively lesser scope of production, fewer number of remaining resources, or because the properties were later acquired by the Quincy Mining Company or the Calumet & Hecla Mining Company. Some of these acquired resources, in fact, contribute to the national significance of the Quincy NHL and the Calumet NHL districts.

Among the first successful mines on the Keweenaw Peninsula were (in roughly chronological order) Cliff Mine, Minesota Mine, Central Mine, Pewabic Mine, and Franklin Mine. Located at the northern end of the peninsula in Keweenaw County in the Keweenaw Point district, the **Cliff Mine** was the largest mine in production at the onset of copper extraction in the Lake region. The Pittsburgh and Boston Copper Harbor Mining Company organized in 1844 and established the Cliff in 1845 to work mass copper in fissure veins. At the time, this and other early companies considered conglomerate and amygdaloid deposits too hard to work and too poor in copper. Due to the rich mass copper the Cliff Mine was the first mine to turn a profit, producing over one million pounds of copper by 1849, the year the company first paid dividends. These dividends were the first to be received by any investors in Lake Superior copper and confirmed the region's value in investors' eyes. By 1857 the Cliff Mine used six steam engines to support the mining process, among the highest number used at one mining site on the peninsula. Between 1853 and 1868, the amount of refined copper produced annually by the Cliff Mine was consistently over one million pounds, and in some years over two million pounds. At the height of its productivity in 1860, over 1000 people lived in the associated company town of Clifton. Yet by 1870, with the diminishment of fissure copper, the mine closed. Subsequent owners continued minor production until 1887; by that time the mine had produced over 38 million pounds of refined copper. The Cliff Mine was later acquired by the Calumet & Hecla Mining Company. In 1899 Clifton's Catholic church was moved north to the community of Phoenix, where it still stands. Clifton was deserted by 1911, but the buildings stood until the 1930s, when the houses were sold for lumber, and the remainder were burned.[130]

The mine and company town were determined eligible for listing in the National Register of Historic Places in 2006. The site includes a cemetery and [redacted] Visible remnants include four smokestacks, two surviving cemeteries, stamp sands, and poor rock piles. The archeological deposits were altered only enough to remediate copper contamination from mining areas within the Great Lakes watershed.

[129] Ruth E. Mills, Brenda Williams, and Dena Sanford, "Quincy Mining Company Historic District," National Historic Landmark nomination amendment [draft] July 2020.
[130] Lankton, *Cradle to Grave*, 9, 42, 149-150; Butler and Burbank, *The Copper Deposits of Michigan,* 63, 67, 72, 83; "Cliff Mine," Michigan Archeological Site File, Michigan State Historic Preservation Office, Lansing, MI.

Remediation was completed in 2014.[131] Another cemetery associated with the mine and town is located outside the proposed NR district.

The Cliff Mine and Clifton are an important component of the national story of the growth of the copper mining industry in the United States; indeed, the mine was producing substantially more copper from its mass fissure than the Quincy Mining Company (working an amygdaloid lode) in the 1850s, and the Cliff Mine was arguably the model for the copper industry for its first twenty years. Incorporated only a few years before the Quincy Mining Company, the Cliff Mine focused on mass copper and ultimately did not prove to be as commercially dominant as its contemporary, the Quincy Mining Company. The mine itself would later become a component of the Calumet & Hecla Mining Company. For these reasons, the Calumet & Quincy Mining Company Historic Districts are better examples of the copper industry in the Lake Superior copper district when they dominated national production. The loss of intact above-ground resources at Cliff Mine and Clifton also lessens overall integrity as compared to the Calumet Historic District. The Cliff Mine and associated community represent a different aspect of copper mining on the Keweenaw, and the success of the Pittsburgh and Boston Copper Harbor Mining Company paved the way for larger enterprises devoted to conglomerate and amygdaloid mining through their technical and community development efforts. Future research may be undertaken to determine if that property merits NHL consideration.

The second major copper mining success in the district was the **Minesota Mine,** located at the southern end of the peninsula near Rockland in Ontonagon County, in the Ontonagon district. The Minesota Mining Company incorporated in 1848 to work fissure copper, beginning in 1849. The Minesota Mine began with the "discovery" of a six-ton mass of native copper, located in a pit that included timber cribbing and a variety of wood and stone tools; the copper had been previously worked by Indigenous populations. The company sunk a number of shafts, one of which encountered a 527-ton copper mass, the second-largest mass found in the district. The company paid its first dividend to investors in 1854. Prior to 1855 the Minesota produced over three million pounds of refined copper, and another 26.7 million pounds by 1864, yet it was basically defunct by 1870.[132]

The Minesota Mining Company platted the community of Rosendale in 1858 but also had its own adjacent housing location called Webster. Webster and Rosendale joined in 1864 to form Rockland, which is associated with several mines that spun off from the Minesota. [redacted]

The history of the Minesota Mine aids in understanding the national story of the growth of the copper mining industry in the United States, and it was producing substantially more copper from its mass fissure than the Quincy Mining Company in the 1850s. However, the Minesota Mine was ultimately not as commercially dominant as its contemporary, the Quincy Mine [redacted]. For these reasons, the Calumet Historic District is a better example of the copper industry in the Lake Superior copper district.

Located at the north end of the peninsula in the Keweenaw Point district near Phoenix in Keweenaw County is the **Central Mine.** It was operated by a company of the same name that organized in 1854 and was the first

[131] "Cliff Mine," Michigan Archeological Site File; "Environmental Restoration Project Redesign Produces Preservation Success, Keweenaw County, Michigan," *106 Success Story*, Advisory Council on Historic Preservation, http://www.achp.gov/docs/cliff-mine.pdf (accessed July 23, 2018).
[132] Lankton, *Cradle to Grave,* 10; Butler and Burbank, *The Copper Deposits of Michigan,* 63, 90.
[redacted]

mine in the district to produce and sell enough copper during its first year of operation to more than pay expenses for the year. Over forty tons of pure mass copper were removed in the first 40'. The Central Mine continued production into the growth period of copper mining in the district, and by 1887 it was the only fully operational mine in the county. The mine closed in 1898, however; by that time total production (over 51.8 million pounds of copper) and dividends were a fraction of those generated by either the Quincy Mining Company or the Calumet & Hecla Mining Company. Calumet & Hecla purchased the land in 1913, but never reopened the mine.[134]

The Central Mining Company developed the mine location with surface structures for the mining operation, and housing and community buildings for the miners. During the mid-1880s, about 1200 people lived in the company town in about 130 dwellings. Abandoned since the mine's closing, the Central Mine Historic District was listed in the National Register of Historic Places in 1974 at a state level of significance. At the time of nomination, eighteen miners' dwellings remained, along with the company clerk's house and Central Mine Methodist Church. Of the mining-related resources that once filled the landscape–engine houses, shafthouses, rockhouses, stamp mill, warehouses, powder house, boiler houses, washhouse, change house, ancillary support buildings, administrative offices, and a tramway—many ruins, foundations, and poor rock piles remain. The town of Central today retains thirteen houses, a church, and various mining-related ruins. The church was previously listed in the National Register in 1970 and has been documented through the Historic American Buildings Survey. The Central Mine is now primarily owned by the Keweenaw County Historical Society, which has restored and interprets a number of the community's buildings.[135]

As with the Cliff and Minesota Mines, the Central Mine aids in understanding the national story of the growth of the copper mining industry in the United States. At first the Central Mine produced more copper than the Quincy Mining Company, although Quincy notably surpassed Central's production by 1860.[136] Therefore, the Central Mine was not as productive or commercially dominant for as long a period as its contemporary, the Quincy Mine, or the later Calumet & Hecla Mine. The efforts of the Keweenaw County Historical Society have ensured that the remaining resources associated with the Central Mine will be preserved into the future; however, compared to the Calumet Historic District, the extent of associated resources is fewer. For these reasons, the Calumet Historic District NHL is a better example of the copper industry in the Lake Superior copper district.

The Pewabic Mining Company organized in 1853 and became a significant copper producer in 1855 with the discovery of the rich Pewabic Amygdaloid Lode. The **Pewabic Mine,** located in Houghton County in the Portage Lake district, worked the same lode as its neighbor, the Quincy Mining Company. The Pewabic Mine produced nearly 28 million pounds of refined copper by 1884. After it was purchased by the Quincy Mining Company in 1891, its resources became part of the company, and portions of the resources and landscape are included within the Quincy Mining Company Historic District NHL.[137] Because of this, the Pewabic Mine is excluded from further comparative analysis.

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[134] Butler and Burbank, *The Copper Deposits of Michigan,* 66, 82; L. J. Molloy, "Exploring Central – The Central Mine and The Central Mining Company," *Keweenaw County Historical Society,* http://keweenawhistory.org/central-mine-and-the-village-of-central/ (accessed July 23, 2018); Kathryn Eckert, "Central Mine Historic District" National Register of Historic Places Nomination Form (June 28, 1974); Donna Stiffler, "Central Mine Methodist Church" National Register of Historic Places Nomination Form (October 15, 1970); Wendy Nicholas, "Central Mine Methodist Church," Historic American Buildings Survey [HABS No. MI-421] (Washington, DC: US Department of the Interior, National Park Service, 1975), Library of Congress Prints and Photographs Online Collection, http://loc.gov/pictures/item/mi0480/ (accessed July 23, 2018).
[135] Molloy, "Exploring the Central"; Nicholas, "Central Mine Methodist Church."
[136] Butler and Burbank, *The Copper Deposits of Michigan,* 82, 95.
[137] Butler and Burbank, *The Copper Deposits of Michigan*, 93.

The third of the three companies working the same Pewabic Amygdaloid Lode north of the town of Hancock, the Franklin Mining Company, organized in 1857 and began working the **Franklin Mine**. The company completed a stamp mill in 1861. Although the Pewabic Lode produced substantial amounts of copper, the failure of the Franklin Mine to obtain adjacent land meant it was boxed in by the Quincy Mining Company. In 1908, the year the Quincy bought the mine, it produced over 136.6 million pounds of refined copper. In September 1915 the Franklin made profits for first time in twenty years.[138] Because the Franklin Mine's history is intertwined with and part of the history of the Quincy Mining Company Historic District NHL, like the Pewabic Mine, it is excluded from further comparative analysis.

During the growth and continued national dominance of Lake Superior copper through the turn of the century, mining companies availed themselves of new technology and systems, efficiently mining the amygdaloid and conglomerate lodes to exploit deposits that, due to their depth, previously had little economic value. The use of steam engines to run hoisting, pumping and ventilation was critical to this success. The companies would acquire great wealth, although none could challenge the overall success of the Quincy Mining Company, or the supremacy of the Calumet & Hecla Mining Company. The closest challenger was Copper Range Consolidated, a Boston-based holding company created in 1901 that owned nearly all of the stock of the Baltic and Trimountain Mines and the Copper Range Railroad in the Portage Lake district. It also owned half the stock of the Champion Mine, and sixty percent of a newly erected smelter on Portage Lake. The mines of Copper Range Consolidated worked the last important lode to be opened on the peninsula, the Baltic Amygdaloid Lode. This consolidation of property ownership reflected a trend in Michigan copper mining—control of the industry concentrated into four investment groups.

The **Champion Mine**, associated with the company town of **Painesdale** in Houghton County (named after William A. Paine, president of the Copper Range company and co-founder of Paine, Webber, and Company), was the most remunerative producer for Copper Range Consolidated. Between 1902 and 1925, the mine produced nearly 438.5 million pounds of refined copper and had slightly surpassed Quincy in dividends to its investors by 1925. Reflective of this volume, a building boom in 1916 brought the total number of houses built in the community to 200. Yet despite the impressive numbers, the mine still ranked third behind the Quincy Mining Company and Calumet & Hecla in terms of total production since initiation of mining. Mining operations ceased in 1967.[139]

The Champion Mine was included within the **Painesdale National Register of Historic Places** nomination in 1993 at a national level of significance for its ability to represent an early twentieth century extractive industry, single-resource company town, and for the high integrity of its contributing resources. Its period of significance is 1899-1930. Within the historic district are 216 contributing buildings and structures that represent the variety of property types associated with copper mining in the peninsula, along with substantial poor rock piles. [redacted] The surviving mining and support buildings are clustered around one shaft (Shaft E): the No. 4 Shaft House, a hoist house, engine house, powder house, a mine captain's office, a blacksmith and machine shop, railway equipment, and other ancillary structures. Three housing locations associated with specific mine shafts are within the district and retain rows of identical, standardized-design frame workers' housing and more individualized managers' houses. The Copper Range Railroad bed is occasionally visible within the district. Also included are a library, high school and three churches. A barbershop is the only surviving commercial building. A barbershop is the only surviving

[138] Butler and Burbank, *The Copper Deposits of Michigan,* 85.
[139] Lankton, *Cradle to Grave,* 21; Butler and Burbank, *The Copper Deposits of Michigan,* 66, 82.

commercial building. The non-profit Painesdale Mine & Shaft, Inc. volunteer corporation has been working to preserve and restore the Champion No. 4 Shaft-Rockhouse, associated buildings, and site.[140]

The Champion Mine is an important component of the national story of the growth of the copper mining industry in the United States, and it was a heavy producer of copper during the district's mature period, when copper mines in Western states were challenging the hegemony of Michigan copper. Paine's involvement is perhaps the clearest manifestation of the importance of East Coast financing of industrial operations of the Michigan mines. As with all housing across the Keweenaw Peninsula, modifications made by owners and occupants of the former mining dwellings to address climate requirements (new and more weather-tight windows placed in original window openings, new siding) have impacted the character of the resources although basic architectural forms and massing remain evident. Modern garages have been built. Although a substantial number and variety of resources survive, the buildings have lost integrity since the creation of the National Register district. Despite the nomination's statement that the Painesdale district was distinctive from either the Quincy Mining Company Historic District NHL or the Calumet Historic District NHL, the property is not as outstanding an example of national significance as the Calumet NHL because it lacks the resources associated with community development and corporate paternalism, and the interconnectedness of mine and community, that are evident in Calumet. In addition, the Calumet district has a higher number of surviving contributing resources. For these reasons, the Calumet Historic District is a better example of the copper industry and corporate paternalism in the Lake Superior copper district.

Tennessee

Contemporary to the initial development of the Lake copper mining districts in Michigan, high-grade copper ore was discovered in the Copper Basin of Appalachia in 1843. This area in the extreme southeastern corner of Tennessee also includes neighboring portions of Georgia and North Carolina. The Burra-Burra Lode in the Ducktown Mining District (also known as the Ducktown Basin or Ducktown) of Tennessee proved to be highly productive, although the total production of copper never came close to that generated in Michigan. From the beginning of mining operations to 1928, the Ducktown district produced about 519.5 million pounds of copper, compared to nearly 8.7 billion in Michigan.[141] The importance of copper mining in Tennessee is not related to the state's contribution to the growth of copper mining as a major industry in the United States, but rather stems from resolving environmental damage created as part of the copper refinement process. The following narrative therefore does not provide a comparative analysis regarding the copper mining industry of Tennessee to the Calumet Historic District, but rather information for possible future consideration of the Ducktown Historic District as a nationally significant property associated with the growth of the conservation movement. Further research and analysis are necessary to establish national significance, and if associated resources retain sufficiently high integrity.

Similar to early copper extraction in northern Michigan, the first copper ores discovered in Tennessee were easily accessible, shallow deposits. By 1879 the richest (14 to 32 percent copper) black oxide ore deposits were exhausted, and development turned to underground mining of lesser-grade, high-sulfur ores (chalcocite-pyrrhotite). Processing these copper ores required roasting, or smelting, to reduce the ore's sulfur content. This was done using an ancient "heap roasting" technique in which large piles of copper ore and wood were burned

[redacted]

[141] M. L. Quinn, "Industry and Environment in the Appalachian Copper Basin, 1890-1930," *Technology and Culture*, 34, no. 3 (July 1993), 577; Gardner, et al, *Copper Mining in North America*, 13.

in the open. After smoldering for days, poisonous sulfur dioxide gas was released into the air. The result of this process was a barren wasteland that surrounded the smelters for miles. Following the 1890 completion of a railroad line to the area, and the connections this provided to wider markets, several new copper mining companies were established in the district. Associated smelting increased significantly, and heap roasting continued to be a preferred smelting method. As a result, there was a concomitant rise in sulfur dioxide gas levels in the area.

Lawsuits alleging damage from the fumes—primarily to vegetation—began about 1895, ultimately leading to a precedent-setting Supreme Court decision. Although smoke from heap roasting and other smelters had become an issue in other areas of the country by that time, the Ducktown district's case was the first to reach the US Supreme Court, in *Georgia v. Tennessee Copper Co., 206 U.S. 236*. Early lawsuits against Ducktown smelting companies found in favor of the mining companies, with the courts ruling that the companies' benefit to the county outweighed their damages. But in 1906 the Supreme Court granted the state of Georgia an injunction halting all smelting in the Ducktown district. The decision set a precedent repeatedly cited by farmers, ranchers, and other citizens near Western mining communities as part of their own legal challenges to polluting copper smelters.[142]

A second outcome of the Supreme Court decision was a significant advance in smelting technology. This technology represents an early success in rectifying a serious and legally complicated interstate air problem. Following the Supreme Court decision, state of Georgia officials agreed that the smelters could continue to operate, provided that the sulfur dioxide was removed from most of the smoke. In 1908 the Tennessee Copper Company developed a recovery system that converted sulfur dioxide gas into sulfuric acid. The process substantially reduced the amount of sulfur dioxide released into the air, and also established a profitable by-product industry for smelter operators: sulfuric acid has become one of the most important industrial chemicals, used in the manufacture of fertilizers, pigments, dyes, drugs, detergents and explosives, and in refining petroleum.[143] The design was lauded by Stanford University chemist Robert Swain, as one of "… the great industrial achievements of this country."[144]

The 1983 **Burra Burra Mine Historic District National Register of Historic Places** nomination partially represents this history. The district is listed at both the state and local levels of significance, for its architecture and associations with copper mining industry and conservation law. The district includes thirteen structures associated with deep copper mining in the early twentieth century, including a hoist house, powder house, boiler house, mine office, machine shop, a change house, storage building, ore bins, a core house, bit house, and other support buildings. The only important original structure missing is the headframe, dismantled in 1966. When written, the nomination described the immediate surroundings as mostly devoid of vegetation, evidence of the copper mining industry. While vegetation is now returning, the impacts to the landscape are still visible. Missing from the district is an associated smelting area: five miles south, the city of Copperhill includes the partial remains of the Tennessee Copper Company smelter and acid plant.[145]

California

[142] Quinn, "Industry and Environment," 519, 579-594; Bode Morin, "Reflection, Refraction, and Rejection: Copper Smelting Heritage and the Execution of Environmental Policy" (PhD diss., Michigan Technological University, 2009), 151-168; Timothy J. LeCain, "Moving Mountains," 519.
[143] LeCain, 516-520.
[144] Quinn, 593, citing Robert E. Swain, "Atmospheric Pollution by Industrial Wastes," *Industrial and Engineering Chemistry* 15 (March 1923): 299.
[145] Shain T. Dennison and Lloyd Ostby, "Burra Burra Mine Historic District" National Register of Historic Places Nomination Form, (Washington, DC: US Department of the Interior, National Park Service, February 15, 1983); Morin, 194.

Economist F. E. Richter observed in 1927 that from the end of the 1850s on, copper deposits discovered and exploited in the southwestern part of the country that would become California, Arizona, and New Mexico accounted for a good part of the increase in copper production outside of Michigan.[146] By the mid-1860s, the state offering the closest competition was California. In that year, California produced 1,800 tons of copper from its deep shaft mines, compared to Michigan's 7,179 tons. The boom could be linked to the need for copper for munitions and shell casings for the Civil War. Most copper came from the West Shasta district in northern California, along the Sierran Foothill copper belt. From 1862 to about 1866 the chief area of production was at Copperopolis in Calavaras County. The Napoleon Mine was one of the earliest copper mines, established in 1860, followed soon thereafter by the Union Mine. The **Union Mine** was alone responsible for fully half of the ore exported from the state. The copper content of California's sulfide ores was estimated at between 10 to 60 percent, with very little below 15 to 20 percent. The center of Copperopolis burned in 1867 and was never completely rebuilt. The copper boom in California ended with the close of the Civil War, although mining continued intermittently into the mid-twentieth century. Today very few mining-related resources remain in the area from the period beyond large slag and mine waste piles with the distinctive rust color of copper ore gossan. Depressions in the ground show the location of the many once booming business establishments.[147] For these reasons, the Calumet Historic District is a better example of the growth of the copper industry in the United States during the nineteenth and early twentieth centuries.

Montana

After the discovery of placer gold near the Continental Divide in west central Montana in 1864, a mining camp was quickly established that became the community of Butte. Copper veins were also discovered that year. An early focus on gold and silver extraction, along with restricted access to the area, dampened copper production, but the construction of a smelter in 1879/1880 and the arrival of a railroad in 1881 increased activity. While copper was produced from numerous districts in the state, the Butte district had the largest output, mining mostly chalcocite and sulphide ores. An early Butte mine was the **Anaconda,** originally a silver mine that proved to be fabulously rich in copper ore. Marcus Daly purchased the Anaconda Mine in 1880, then in 1899 formed the Amalgamated Copper Company (a holding company) with out-of-state investors including Standard Oil magnate William Rockefeller. To support its operations, Amalgamated built in 1900 a large-scale smelter, refinery plant, and an associated company town named Anaconda, roughly 25 miles away. Overall copper production in the Butte mining district rose from 9 million pounds in 1882 to 222 million pounds in 1896. In 1887 copper production in Montana surpassed that of the Lake Superior copper district, at about 80 million pounds, with the Anaconda Mine the chief copper producer.[148]

Four industrial magnates controlled Butte's mining wealth near the turn of the twentieth century, although Amalgamated would gradually acquire ownership or control of most of the principal copper mining companies in town. In 1910 Amalgamated unified its various mines and smelting facilities under the Anaconda Copper Mining Company (ACM). The consolidation resulted in tremendous operating benefits, unification of effort, and avoidance of lawsuits. The ACM enjoyed a virtual monopoly over the mines in and around Butte by the 1920s and became the largest copper-mining company in the world.[149]

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[146] Richter, "The Copper-Mining Industry in the United States, 1825-1925," 247.
[147] Richter, "The Copper-Mining Industry in the United States, 1825-1925," 248; "Copperopolis History," http://www.calaverashistory.org/copperopolis (accessed July 26, 2018); "Calaveras Co., California, USA," https://www.mindat.org/loc-16293.html (accessed July 26, 2018).
[148] Gardner, et al., *Copper Mining in North America,* 14, 65-66; Richter, "The Copper-Mining Industry in the United States, 1825-1925," 254-255, 260; Strahn, et al., 3.
[149] Gardner, et al., *Copper Mining in North America,* 14; Richter, "The Copper-Mining Industry in the United States, 1825-1925," 260, 271, Strahn, et al., "Butte-Anaconda Historic District," 95.

The scope of Butte's ore reserves was so large that the community was built atop the ore bodies. Residential, commercial, social, religious, and mining-related resources are distributed across the landscape. The biggest change came with the creation of the Berkeley Pit in 1955, on the east side of town. The ACM shifted from labor-intensive underground mining to open-pit excavation, removing old mine shafts and Butte's Eastside neighborhoods. However, Butte's other mine yards remained in operation, utilizing the same buildings and equipment.[150]

The expansive **Butte-Anaconda Historic District National Historic Landmark,** which contains the communities of Butte, Walkerville, and Anaconda, was designated an NHL in 1961. The revised nomination (2006) identifies the district's close affiliation with the rapid industrialization of the United States, and labor's collective response to this process, during the late nineteenth and early twentieth centuries. The Butte-Anaconda Historic District illustrates the dramatic changes that resulted from the US emergence as the world's leading industrial nation. Supported by complex technology, outside capital, and railroads, the mines on Butte Hill represented industrial mining on a colossal scale. Butte-Anaconda experienced a meteoric rise to the pinnacle of world copper production, peaking in 1895 with 51% of the share of the nation's output. Expanding through the end of World War I, and holding the national lead until the mid-1930s, no other American mining region exerted as extraordinary, prolonged, and consequential influence on the historical development of the world copper industry. Butte-Anaconda also profoundly affected the nation's labor movement. As the United States' "Gibraltar of Unionism," Butte-Anaconda embodied the strengths (and periodic weaknesses) of the industrial working class. Workers at the mine spread the gospel of unionism and spearheaded the formation of the Western Federation of Miners and International Workers of the World, along with catalyzing the schism that led to the formation of the Congress of Industrial Organizations. The district includes thousands of industrial, commercial, and residential resources and a railway system. The NHL's period of significance is 1876-1934. [151]

The Butte-Anaconda mining district NHL complements the Calumet Historic District NHL by its representation of evolutions in copper mining history and impacts on the US economy. The district retains an exceptionally high number of contributing resources that represent the scope of mining, including extraction, milling, transportation, smelting, and other support elements. Residential and commercial neighborhoods are included, as are social and religious institutions. In this regard, the scope and context of the Butte-Anaconda NHL is more similar to the Calumet NHL than to the Quincy Mining Company NHL. A distinction between the Montana NHL and both Michigan NHLs is that the latter districts address the specific national significance of one copper mining company; the Montana NHL district includes a collection of copper companies, among which is included the colossally powerful ACM. Despite this, a mining historian noted that "At no time during the nineteenth century did the Anaconda occupy in Butte a position quite comparable with that of the Calumet & Hecla at the Lake. In other words, it did not overshadow its neighbors to the extent that Calumet did."[152]

Arizona

Copper ores were discovered in what would become southern and central counties within the state of Arizona as early as the 1850s, with the richest ore bodies identified in the 1870s. Unlike Tennessee, Michigan, Montana, Utah, or Alaska, the state contained several distinct and highly profitable copper mining districts that individually ranked among the top fifteen in total copper production in the United States by the 1920s.[153] These were the Ajo district, the Clifton-Morenci (Morenci-Metcalf) district, the Globe-Miami district, the Jerome district, and the Bisbee (Warren) district. By 1885 Arizona ranked third nationally in copper production, behind

[150] Strahn, et al., "Butte-Anaconda Historic District," 75.
[151] Strahn, et al., "Butte-Anaconda Historic District," 75.
[152] Richter, "The Copper-Mining Industry in the United States, 1825-1925," 267.
[153] Gardner, et al., *Copper Mining in North America,* 7.

Michigan and Montana; by 1905 the state ranked second, behind Montana.[154] Here and at other Western mines, the most highly successful open pit copper mines tended to replace earlier shaft mines, reflecting a change in technology, immense productions of scale, and consolidation under a few and very powerful business interests. In Arizona, this was the Phelps Dodge Corporation.

In Pima County, successful mining of high-grade native copper at the Ajo copper mines in the mid-1850s and 1860s were limited by the expense of transporting copper ore. These mines had been previously worked by Indigenous peoples, and subsequently by the Spanish. After closing for a time in the late nineteenth century, the Ajo mines were reopened with the advent of Daniel C. Jackling's new recovery methods for low-grade porphyry ore (see the Bingham Canyon Open Pit Copper Mine NHL, Utah, below). The Calumet & Arizona Mining Company—established by Michigan investors already engaged in mining in the Bisbee (Warren) district—took an option on one of the most productive properties, the **New Cornelia Copper Company Mine**, in 1911. The Calumet & Arizona developed the property as the first large open pit mine in the state. Steam shovels extracted carbonite ore and the lower-grade carbonite and sulfide ores that contained about 1.5 percent copper. To facilitate production, a leaching plant was constructed in 1917. One historian states that this effort was the first commercial application of hydrometallurgy to the reduction of copper ores on any scale in the country.[155] In 1931 Phelps Dodge, the nation's largest copper company, acquired New Cornelia and the mine became the New Cornelia Branch of Phelps Dodge. In the process, evidence of earlier copper mining was removed from the landscape.[156] Comparatively, the New Cornelia mine and nearby town of Ajo have closer associations with the Bingham Canyon Open Pit Copper Mine NHL than the Calumet Historic District NHL.

These same technological changes and evolution of the mining landscape were repeated at other copper districts in the state. Although copper lodes were discovered in the Clifton-Morenci district (in the future Graham and Greenlee counties) in 1870, remote access restricted the development of high-quality ore copper mines. The Arizona Copper Company bought the principal area mines in 1882, and subsequently built a smelter and a branch rail line connection, solving the problem of expensive transportation costs. The Arizona Copper Company dominated the district through the turn of the century. In 1885 the Morenci district smelter produced 3.345 million pounds of copper. In 1886, after the rich "bonanza" ores played out, the Arizona Copper Company and other mines invested in new equipment (concentrators and converter plants) to process lower-grade ores. Arizona Copper merged with the owners of neighboring mine claims, the Detroit Copper Company (of the Phelps Dodge Corporation) in 1919. Mining at the rich **Morenci Mine** remained underground until the 1930s, when open pit mining of 1.036 percent copper ore commenced. The pit ultimately consumed the associated mining settlement of "Old Morenci" which had been established adjacent to the mine on extremely steep terrain.[157] Today (2023) Morenci remains one of the largest copper producers in North America.[158]

Comparatively, the Morenci Mine and nearby company town of "New Morenci" have closer associations with the Bingham Canyon Open Pit Copper Mine NHL than the Calumet Historic District NHL. With the loss of "Old Morenci" to the pit, resources comparable to the Michigan NHLs no longer exist.

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[154] Richter, "The Copper-Mining Industry in the United States, 1825-1925," 238.
[155] Richter, "The Copper-Mining Industry in the United States, 1825-1925," 284.
[156] Richter, "The Copper-Mining Industry in the United States, 1825-1925," 247; Gardner, et al., *Copper Mining in North America*, 7, 18.
[157] Gardner, et al., *Copper Mining in North America,* 15-16; Morenci History, "Western Mining History," https://westernmininghistory.com/towns/arizona/morenci/ (accessed August 13, 2018).
[158] Richter, "The Copper Mining Industry in the United States, 1825-1925," 252-253; Gardner, et al., *Copper Mining in North America,* 15-16; "Morenci Copper Mine, Arizona," *Mining Technology*, https://www.mining-technology.com/projects/morenci/ (accessed July 27, 2018).

In the Globe-Miami district of east-central Arizona, oxide and carbonate copper ore mining began in earnest in the 1880s near what would become Globe, Gila County. One of the few deep shaft mines developed in Arizona that was not subsequently reworked as an open pit is the **Old Dominion Mine**, which by 1888 worked two shafts. A large smelter replaced an earlier facility in 1892. The Phelps Dodge Corporation gained control of the Old Dominion Copper Mining Company in 1902 and brought in additional processing equipment. Before it closed in 1931, the Old Dominion mine had produced more than 600 million pounds of copper. The mine is now included within the Old Dominion Historic Mine Park in Globe. While the massive headframe remains, the site has been modified for use as a city park. Historic buildings were taken apart for reuse in new facilities, slag piles re-graded, and a number of hiking trails added.[159]

While contemporary with copper mining in Michigan, the Old Dominion Mine does not represent the same breadth of development as the Calumet Historic District NHL, and it has few surviving resources. For these reasons, the Calumet NHL is a better nationally significant example of the influence of copper mining on the US economy during the mid and late nineteenth century.

Less than ten years after a high-grade copper ore body was discovered in Yavapai County in 1876, following the establishment of direct railroad access to the area, and the purchase and operation of mine property by the United Verde Copper Company, the **United Verde Mine** became another highly profitable Arizona mine. Mine workers employed at the underground mine lived in the nearby community of Jerome, named after Leonard Jerome, one of the company's New York City financiers (and grandfather of Winston Churchill). Operations proceeded sporadically as the quality of copper diminished and the costs of mining rose, until William A. Clark, ACM copper magnate from Butte, Montana, acquired control of the mine, erected a copper smelter, and built a narrow-gauge railroad to directly connect Jerome to a major rail line. In 1911 the company established the town of Clarkdale, six miles from the Jerome mines, and established an even larger and more modern smelter. Between 1888 and 1930, the mine yielded nearly two billion pounds of copper. Open pit mining began in 1929; following a hiatus in the early 1930s, the Phelps Dodge Corporation purchased the property and continued open pit mining. The **Jerome (United Verde Mine) National Historic Landmark** recognizes the community as one of the state's two most important copper-producing centers in the late nineteenth and early twentieth centuries, along with Bisbee, Arizona. The 1966 nomination does not define a boundary, a period of significance, or itemize contributing resources. Emphasis is on the town of Jerome. Both Jerome and Clarkdale were described as nearly "ghost towns," with frame buildings, narrow steep streets, and an 1883 blast furnace.[160]

Comparing this Arizona NHL to the Calumet NHL, the Jerome district complements the Calumet NHL by its representation of a different period in the evolution in copper mining history, including the development of an associated company town, and impacts on the American economy. Like the Butte-Anaconda NHL, the Jerome NHL identifies the national significance of the copper mining district as embodied in the community that supported mining efforts. Prior to its designation, many historic buildings were lost due to collapse, demolition, or fire.

In what would become Cochise County, near Bisbee, in the Bisbee/Warren district, the Copper Queen body of oxide ore was discovered in 1877. By 1884 the Copper Queen Mining Company had produced 35.5 million pounds of copper from ore containing over 20 percent copper, although that same year the Queen exhausted its original ore body. The **Copper Queen Mine** came into its own as the district's dominant copper mine after

[159] Gardner, et al., *Copper Mining in North America,* 20; Richter, "The Copper-Mining Industry in the United States, 1825-1925," 252-253; "Tour the Old Dominion," *Globe-Miami Times*, https://www.globemiamitimes.com/tour-old-dominion/ (accessed July 27, 2018).
[160] Gardner, et al., *Copper Mining in North America,* 19; "Jerome (United Verde Mine)" National Historic Landmark Nomination Form (Washington, DC: US Department of the Interior, National Park Service, November 13, 1966).

1885, the year when the Copper Queen combined with the owners of the nearby Atlanta Mine: Phelps, Dodge and Company. Phelps Dodge funded construction of a railroad branch line to directly connect Bisbee to the transcontinental railroad, facilitating the district's copper boom. A smelter was constructed a quarter mile to the east. As at other copper mines in the state, as the grade of ore gradually declined over time Phelps Dodge shifted to using steam shovels and open pit mining to expose sulfide and porphyry ores. Turning from the old Copper Queen underground mine, Phelps Dodge began removing Sacramento Hill, southeast of the Copper Queen, in the 1910s and 1920s. Work on what would become the **Lavender Pit** began in 1951 and continued until 1974; it is now one of the largest open pit copper mines of the world.[161] Underground mining continued in the district, with the average grade of ore at 6 percent copper; mining ended in 1975. The Copper Queen Mine was reopened for tours in 1976.[162]

The second-largest mine in the Bisbee area was originally the Irish Mag Mine, acquired at the turn of the century by Michigan investors from Calumet. By 1911 these investors had consolidated their interests in many mines into the Calumet & Arizona Mining Company, adjacent to the Copper Queen. In 1903 the company opened and focused efforts on the underground **Junction Mine**. A headframe from the mine survives on the southeast rim of the Lavender Pit.[163]

Although directly associated with the development of the Copper Queen Mine and other copper mines in the Warren Mining District of Arizona, the state's richest and most famous mine is not included within the **Bisbee Historic District National Register of Historic Places** nomination, which was designated at a national level of significance in 1980. Rather, the nomination addresses the community that developed in the shadow of the Copper Queen Mine, and its close association with the Phelps Dodge Company—one of the great industrial corporations of the twentieth century. The nomination also identifies the national prominence Bisbee acquired during the labor strike of 1917, which resulted in the notorious "Bisbee Deportation," a vigilante effort by mining companies to crush organized labor in the state. The period of significance is broadly identified as 1800-1899 and 1900. [164]

Within the Bisbee Historic District National Register district is the **Phelps Dodge General Office Building,** designated a **National Historic Landmark** in 1983 for its associations with the powerful corporation and its significance in US economic growth and development. As stated in the nomination, from its beginnings in 1843 through the twentieth century, "… few other enterprises spanned so significant a period of economic change or so clearly reflected the late nineteenth and early twentieth century economic transformations that placed the United States in the forefront of the modern industrial world."[165] The building now serves as the Bisbee Mining and Historical Museum.

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[161] Richter, "The Copper-Mining Industry in the United States, 1825-1925," 253-254, 273-274; David F. Briggs, "History of the Warren (Bisbee) Mining District," *Arizona Daily Independent* (June 4, 2015), https://arizonadailyindependent.com/2015/06/04/history-of-the-warren-bisbee-mining-district/ (accessed July 27, 2018); David Johnson, *Arizona Mines*, http://www.miningartifacts.org/Arizona-Mines.html (accessed July 27, 2018).

[162] "History," *Queen Mine Historic Mining Tours*, http://www.queenminetour.com/History (accessed August 14, 2018); David F. Briggs, "History of the Warren (Bisbee) Mining District," *Arizona Daily Independent* (June 4, 2015), https://arizonadailyindependent.com/2015/06/04/history-of-the-warren-bisbee-mining-district (accessed July 27, 2018).

[163] Richter, "The Copper-Mining Industry in the United States, 1825-1925," 273-274; Gardner, et al., *Copper Mining in North America,* 16-17; Briggs, "History of the Warren (Bisbee) Mining District,"; Johnson, *Arizona Mines.*

[164] Marjorie H. Wilson, Janet Stewart, James Garrison, Billy G. Garrett, and Thomas S. Rothweiler, "Bisbee Historic District," National Register of Historic Places Nomination Form (Washington, DC: US Department of the Interior, National Park Service, June 30, 1980).

[165]George R. Adams and James B. Gardner, et al., "Phelps Dodge General Office Building" National Historic Landmark Nomination Form (Washington, DC: US Department of the Interior, National Park Service, May 4, 1983).

Relative to the Calumet Historic District, the Phelps Dodge General Office building represents the further evolution of the United States copper industry when Western copper mines surpassed production rates of Michigan, with the associated changes in technology and extraction. The Phelps Dodge Corporation also represents the phenomenal growth of the copper mining business in the twentieth century, facilitated by the development of open pit mining. Further analysis might be undertaken to consider whether or not the Phelps Dodge General Office Building NHL, the Bisbee Historic District, and other mining-related resources, including the greater landscape, merit NHL designation as a historic district.

Utah

Following production surges first exhibited in the Michigan copper mining district, then in Butte, Montana, the third large surge began about 1908, when copper from porphyry ores began to come on the market. Of the many improvements in mining methods and metallurgy to influence the production and economics of copper, the most important advance has been attributed to the development of methods for mining low-grade porphyry deposits on a large scale.[166] The location of this development was at the **Highland Boy Mine** in Bingham Canyon, roughly 30 miles from Salt Lake City, Utah. The Highland Boy had started as a gold mine and, with the financial assistance of John D. Rockefeller and other Standard Oil interests, mining of 12 percent copper ore proceeded in 1899. The same year metallurgist Daniel C. Jackling proposed that much vaster but poorer ores at the Highland (two percent or less copper sulphides distributed throughout porphyritic rock) could be profitably processed by a new method of open-pit mining on an immense industrial scale—a paradigm shift for the copper mining industry. Unlike earlier mining enterprises, the scale of production required enormous investments previously not pursued. Vast amounts of capital from the Guggenheims facilitated Jackling's development, resulting in the removal of an entire mountain by huge steam shovels and vast amounts of ores quickly transported by ore trains through a massive concentrating plant. [167] Using Jackling's innovations, by 1910 the Utah Copper Company and other Utah copper mines produced more than half the amount produced by Michigan mines (63,000 tons versus 111,000 tons). By 1917 the Utah Copper Company produced over 195 million pounds of copper; in 1929 production reached 296 million pounds.[168]

The importance of the Highland Boy Mine is documented in the **Bingham Canyon Open Pit Copper Mine National Historic Landmark,** designated 1966 as the first open-pit copper mine in the world. Bingham Canyon Open Pit Copper Mine remained the most productive of all the low-grade copper mines (porphyry copper deposit) that followed. The immense output of this mine lifted Utah to the rank of fourth-largest copper-producing state by 1919. The mine was more than 2.3 miles wide and one-half mile deep in 1983. It is terraced into approximately 50-foot levels with ramp access between levels. Ore was removed from the mine by railroad cars which exited through one of three tunnels, or from the edge of the pit. Waste dumps formed from the removal of overburden can be seen from Salt Lake City. It is commonly known as the Kennecott Copper Mine. The NHL does not provide a specific period of significance beyond the 1900s.

The Bingham Canyon Open Pit Copper Mine NHL complements the Calumet Historic District NHL by its representation of the dramatic evolution of copper mining technology, and the consolidation of copper mining into a handful of giant corporations in the twentieth century. It does not, however, have an associated community as the Calumet Historic District does. The Utah NHL also reflects the application of Progressive Era attitudes to industrial development. More so than with the Calumet Historic District NHL, the Bingham Canyon

[166] Gardner, et al., *Copper Mining in North America,* 11.
[167] LeCain, "Moving Mountains," 290, 618-628; Gardner, et al, *Copper Mining in North America,* 23; Richter, "The Copper-Mining Industry in the United States, 1825-1925," 267. Jackling adopted the open pit mining techniques already in use on the Mesabi Iron Range in Minnesota.
[168] Fisher, 276; Gardner, et al, *Copper Mining in North America,*24.

Open Pit mine reflects the application of science-based technological research and development as critical to mining success.[169]

Nevada

The second of the great porphyry mines to produce in the United States was the **Nevada Consolidated Copper Company Mine** in the Ely (Robinson) mining district. Copper mining began there in 1868, but substantial development awaited construction of a railroad to Ely, and a nearby smelter, in 1906. Open pit work at the Copper Flat Mine and underground at the Ruth Mine began in 1908; by 1929 production reached 110 million pounds of copper. In the process of mining development, many of the associated mining towns were moved several times.[170] As with the Bingham Canyon Open Pit Mine, the Nevada mines represent a later phase of copper mining in the United States compared to the Calumet Historic District NHL.

New Mexico

One of the oldest of the large copper mines on the North American continent said to be exploited by colonial interests is the **Chino Mine** at Santa Rita. It was first worked in 1804 under contract for the Spanish colonial government. Early miners worked the deposit for native copper and erected a small smelting plant. Over time, and under various ownership, development included a concentrator, and by 1910 open pit mining commenced by the Chino Copper Company. The company was absorbed by the Ray Consolidated Copper Company in 1924, which in turn was absorbed by the Nevada Consolidated Copper Company in 1926. In 1933 the Kennecott Copper Company acquired all Nevada Consolidated's properties. In 1929 the net production of copper was about 85 million pounds; operations were suspended in 1934. As with the Bingham Canyon Open Pit Mine, the development of the Chino Mine into an open pit mine represent a later phase of copper mining in the United States compared to the Calumet Historic District NHL.

Alaska

While copper production in Alaska would not match those of other Western mining districts, significant tonnage of rich sulphide ores made mining profitable in the state. By far the most significant producer of copper was in the Nizina district at Kennecott, Alaska, in the south-central corner of the state. Alaska mining districts were in fact the location of the last large and high-grade ore (chalcocite, at 79.8 percent copper) to be discovered. First developed by the Alaska Copper and Coal Company, in 1905 it reorganized as the Kennecott Mines Company, funded by the Guggenheims and J.P. Morgan. In 1915 the Kennecott Copper Corporation was formed. Substantial investment included construction of a mine and mill works, a railroad, and organization of a steamship line. In 1911 the company's production of copper was over 20 million pounds. As the Kennecott Copper Corporation proceeded to extract lower-grade ores, the company initiated one of the world's first ammonia-leaching plants at the Kennecott site, ensuring continued profitability. [171]

The national significance of the property is identified in the **Kennecott Mines National Historic Landmark,** designated in 1986 as a true vestige of an early twentieth-century copper mining camp, reflecting the mining technology of the era. The mines at Kennecott, Alaska, were among the nation's largest, and contained the last

[169] LeCain, "Moving Mountains," 429.
[170] Gardner, et al., *Copper Mining in North America,* 24; "A Glimpse Into History: 'The Robinson Mining District,'" *White Pine Living*, https://whitepineliving.com/glimpse-history-robinson-mining-district/ (accessed August 13, 2018).
[171] Fred H. Moffit and Robert E. Fellows, "Copper Deposits of the Prince William Sound District, Alaska," *Geological Survey Bulletin* 963-B (Washington, DC: United States Government Printing Office, 1950); Melody Webb Grauman, "Kennecott: Alaskan Origins of a Copper Empire, 1900-1938," *Western Historical Quarterly,* 9, no. 2 (April 1978), 199-200; Gardner, et al., *Copper Mining in North America*, 25.

of the great high-grade copper ore deposits discovered in the American West. Competition for ownership and development of the mine affected territorial and national politics and led to the Ballinger-Pinchot affair, a turning point in the early conservation movement's struggles over public versus corporate interests. The innovations of leaching and flotation are represented here; the ammonia leaching process was said to be first used successfully on a commercial scale at Kennecott. By 1916 Kennecott was classed among the nation's largest mines, along with those at Butte, Bisbee, and Bingham Canyon. Profits from the mine provided the capital to fund Kennecott's purchase of the Bingham Canyon mine and the Utah Copper Company, and other mines in New Mexico, Nevada, and Arizona. By the 1930s, while the Alaska deposits were nearly exhausted, the corporation had expanded to become the nation's largest copper company and an international force in the metals market. The NHL is located within Wrangell-St. Elias National Park, 230 air miles east of Anchorage. It contains industrial and residential resources, including a concentration mill, support buildings, a power plant, a wood-frame company town, tramways, and mine camps. The period of significance is 1901-1938.[172]

Compared to the Calumet Historic District NHL, the Kennecott Mines NHL complements the Michigan NHL by its representation of a different period in the evolution of copper mining technology, and the transition of copper mining from wealthy companies into giant corporations in the twentieth century. Both Kennecott and Calumet & Hecla began to treat copper ores by ammonia leaching the same year, five months apart (Kennecott in March 1916, Calumet & Hecla in July). The use of ammonia in leaching had been proposed and tested by a Canadian metallurgist thirty years previously, although Calumet & Hecla metallurgist Harry Benedict first applied to patent the process in the United States.[173] As noted by historian Melody Webb Grauman, Kennecott also represents a maturity in the management of the copper industry: between 1906 and 1915, management followed a nineteenth-century business philosophy as represented in its Alaska Syndicate. In this, wealthy owners with decision-making responsibility operated as a partnership without accountability to public stockholders. Ultimately, this led to political dabbling and the Ballinger-Pinchot affair. With the creation of the Kennecott Copper Corporation in 1915, management applied tenets of scientific management to business technology, and decision-making shifted to efficient managers. The Kennecott NHL, however, does not exhibit the strong connection between industry and community that is demonstrated in the Calumet Historic District NHL.[174]

[172] Robert Pierce and Robert Spude, "Kennecott Mines" National Historic Landmark Nomination Form (Washington, DC: US Department of the Interior, National Park Service, June 23, 1986).
[173] C. Harry Benedict, *Red Metal: The Calumet and Hecla Story* (Ann Arbor: University of Michigan Press, 1952), 179-180; E. J. Duggan, "Organization: The American Institute of Mining, Metallurgical and Petroleum Engineers," (January 1, 1934).
[174] Grauman, "Kennecott," 197-211.

6. PROPERTY DESCRIPTION AND STATEMENT OF INTEGRITY

Ownership of Property		Category of Property	
Private:	X	Building(s):	
Public-Local:	X	District:	X
Public-State:	X	Site:	
Public-Federal:	X	Structure:	
		Object:	

Number of Resources within Boundary of Property:

Contributing		Noncontributing	
Buildings:	551	Buildings:	235
Sites:	008	Sites:	000
Structures:	002	Structures:	001
Objects:	002	Objects:	001
Total:	563	Total:	237

(See discussion under methodology for explanation of resource counts)

PROVIDE PRESENT AND PAST PHYSICAL DESCRIPTIONS OF PROPERTY
(Please see specific guidance for type of resource[s] being nominated)

METHODOLOGY/APPROACH

The Calumet Historic District is a complex collection of resources that represent and embody nationally significant themes in United States history. For the purposes of this nomination, a cultural landscape methodology was applied to document existing conditions and evaluate the district. This approach is based on federal guidance for evaluating historic resources consisting of or containing significant landscape elements, including *National Register Bulletin 30: Guidelines for Evaluating and Documenting Rural Historic Landscapes*, *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes*, *A Guide to Cultural Landscape Reports: Contents, Process, and Techniques,* and other pertinent documents.[175] This approach is used because the tangible and intangible aspects of the landscape individually and collectively create historic character and aid in the understanding of its historic and cultural importance.[176]

To better understand the complexity of the Calumet Historic District, the property has been divided into "landscape character areas" for the purpose of documentation and evaluation. According to National Park

[175] Linda Flint McClelland, J. Timothy Keller, Genevieve P. Keller, and Robert Z. Melnick, *National Register Bulletin 30: Guidelines for Evaluating and Documenting Rural Historic Landscapes* (Washington, DC: US Department of the Interior, 1989, revised 1999); Robert R. Page, Cathy A. Gilbert, and Susan A. Dolan, A *Guide to Cultural Landscape Reports: Contents, Process, and Techniques* (Washington, DC: US Department of the Interior, National Park Service, 1998); Charles A. Birnbaum and Christine Capella Peters, *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes* (Washington DC: US Department of the Interior, National Park Service, 1996), 3-5.

[176] The same use of landscape character areas has been previously used in the 2015 Lafayette Park National Historic Landmark in Detroit, Michigan.

Service guidance, a landscape character area is "(a)n area defined by the physical qualities of a cultural landscape and the type and concentration of cultural resources."[177] While landscapes are not recognized as separate property types under National Historic Landmark guidance, but rather as sites or districts, the use of landscape character areas to organize the description is beneficial for the historic district due to the way in which the Calumet & Hecla Mining Company used its property and its relationship to the greater Calumet community. These areas were established based on the physical qualities, historic uses, and relationship of resources present within a given part of the district. For the purposes of this nomination, the historic district is recognized as containing eight discrete cultural landscapes that represent key component resources of the nationally significant 1867–1923 Calumet & Hecla operations and the associated community**.** The components include extraction (mine), management, housing, commerce, public institutions, and recreation. Below are brief summaries of each landscape character area; specific detail of the landscape character areas follow below.

Landscape Character Area A: The **Calumet & Hecla Mine Industrial and Management Core** area is where surface mining operations associated with extraction occurred and where the company's principal management and support buildings remain. This area includes extant surface-level buildings, structures, sites, and landscape features associated with Calumet & Hecla extraction operations, management, and support activities, and public buildings constructed or supported by the company. These resources convey the historic character and scope of the Calumet & Hecla operations upon the landscape. The Industrial and Management Core is located principally to either side of Red Jacket Road between Mine Street and US-41, extending south to A Street.

Landscape Character Area B: The **Calumet Housing Location** encompasses the mine management homes on either side of Calumet Avenue (US-41), just east of the Calumet & Hecla Mine Industrial and Management Core. This represents the most intact portion of a larger company-owned mine managers housing location that was historically associated with the Calumet branch of the mine and was one of the earliest housing locations developed by the company.

Landscape Character Area C: Agassiz Park is a wedge-shaped piece of land that spatially bridges the gap between the Calumet Conglomerate Lode-aligned grid of the Industrial and Management Core, and the orthogonal grid of the Village of Calumet. It historically served as a public commons and community park, with portions of the 1920-23 Warren H. Manning Park design still evident.

Landscape Character Area D: The **Civic Core** encompasses the main business district of the Calumet community, an independent municipality that was nonetheless interdependent with the Calumet & Hecla Mining Company. It includes the commercial buildings, most dating from 1890-1910, that cluster along Fifth and Sixth Streets, as well as major institutional buildings such as the Calumet Theatre and a number of churches.

Landscape Character Area E: Calumet & Hecla platted and developed the **Blue Jacket Housing Location** north of Agassiz Park in the 1880s. Most of the houses, which date primarily from the mid-1880s to around 1900, were built by workers on land leased from the company, with the exception of the houses along Elm Street which were built by the company. [redacted]

Landscape Character Area F: The **Village of Calumet Housing** character area includes the non-company residential neighborhood from Sixth to Ninth Streets between Pine and Scott Streets. The majority of houses

[177] Page, et al., *A Guide to Cultural Landscape Reports*, 127.

date between 1880 and 1910 and encompass a wide range of resources from simple vernacular worker housing to elaborate middle-class houses, as well as a scattering of commercial and institutional buildings.

Landscape Character Area G: The **Yellow Jacket Housing Location** lies west of the Village of Calumet from Ninth to 1st Streets between Pine and Scott Streets. Here, workers built their own houses on land leased from the company, which owned and platted the location. This is the largest worker housing location in the district, with most of the buildings constructed in the 1890s.

Landscape Character Area H: The **Tamarack Housing Location** lies west of the Yellow Jacket Housing Location, from 1st to 2nd Streets between Maple and Oak Streets. The houses of Tamarack were originally associated with the Tamarack Mining Company and include several managers' houses on the west side of 2nd Street. Tamarack Housing Location was acquired by C&H along with the rest of the Tamarack Mining Company in 1917.

In the subsequent narrative the text will provide additional detail on each landscape character area, including descriptions of the past and present physical conditions of each character area; identification of contributing and non-contributing resources; definition of the boundaries/extents of each area; and assessment of the general character of the setting and landscape, architectural patterns, and characteristic elements and features. Architectural descriptions are presented in the form of patterns of (where appropriate) settlement, building forms, common materials, and unique features. Typical building styles, materials, and development density are also identified. Groups of similar resources, such as worker housing, are described collectively, with examples and exceptional features noted. With the exception of particularly significant or characteristic examples, which receive additional descriptive detail, individual building/structure descriptions are not provided for every counted resource. Some landscape character areas require a higher level of description because the resources are more individualistic in nature and because there are subtle variations across the area.[178] Following the descriptive narrative are tables enumerating the counted resources, type (building, structure, object, site), their contributing/non-contributing status, and an identification number keyed to the accompanying maps. An evaluation of integrity is also included for each character area. The landscape character areas and their relationships to each other are illustrated in Map 4: S-1.

Note that the term "location" has a specific meaning within the context of copper mining in the Keweenaw Peninsula. Historically, housing locations indicated those areas set aside by mining companies as residential districts for mine workers and their families. Housing locations were typically discreet areas with their own idiosyncratic names, analogous to neighborhoods within cities or villages. They were platted by the companies, who retained ownership of the land (as opposed to land platted and sold) and leased the land and/or the houses on them to mine workers. Mining companies and residents, both of the locations and neighboring areas, used this term rather than "neighborhood" and its use persists in the district. Throughout this report, "location" or "housing location" is used to refer to these settlements.

The original 1989 NHL nomination did not provide an itemized list of contributing and non-contributing resources. For the commercial district of Calumet, the nomination provided a list organized by street noting which buildings were non-contributing; all other "major buildings" were considered contributing. The narrative description noted that non-contributing elements for the rest of the district were marked on the accompanying map. The lack of enumerated contributing resources makes it difficult to compare the 1989 list of resources to those present today. This NHL amendment therefore provides an updated count of all contributing and non-contributing resources within the district boundaries but does not attempt to link them to those described in the original National Historic Landmark nomination. Construction dates are provided, if known.

[178] This format follows the precedent of the "Butte-Anaconda Historic District" National Historic Landmark document.

The complexity of the landscape within the Calumet Historic District necessitates a focused approach to count individual resources. Historic buildings and structures range from intact and actively used to ruins and foundations. The latter are concentrated in the Landscape Character Area (LCA) A Industrial and Mine Management Core, especially the area south of the Sixth Street Extension, where many are overgrown with dense vegetation to the point of being indistinguishable during the short growing season. Some archeological surveys have been conducted, but the full extent of below-ground resources is largely unknown. The ground plane itself has been shaped by the deposition of mine waste, although visible piles are minimal within the district due to later extraction and disturbance. Therefore, the following parameters have been used to count resources:

- Resource counts are organized by landscape character area, as described above.
- Each landscape character area is counted as a contributing site, reflecting its distinctive nature and characteristics within the overall Calumet Historic District.
- [redacted]
- Small-scale structures and features such as utility trenches and industrial artifacts are not counted individually but will be described collectively as part of the overall description of each landscape character area.
- While railroads and mining tramroads once spanned the district, today they exist primarily as visual corridors whose associated structures and component materials (track and tram remnants) are mostly missing. These corridors will be described as part of the overall description of each landscape character area but not counted unless there are physical structures present.
- Road systems are described and counted as one system (structure) that spans the district. Roads are important in understanding the distinction among landscape character areas, their development, use, and relationship to topography.
- Capped mine shafts were included in the 1989 nomination and are included as component features of the landscape character area (site) in which they are located.

Contributing/non-contributing buildings were mapped using a Geographic Information System (GIS) and exported to a table with addresses and coordinates for reference. Portions of the table identifying contributing and non-contributing resources are abstracted into each landscape character area description.

A final note on methodology: addresses in the district are highly idiosyncratic. Because the Calumet & Hecla Mining Company assigned building numbers, which in some cases have been overlaid by one or more municipal addresses, an individual property may have three numbers associated with it, or none at all. While there is usually an “official” address, the addresses on an individual street or road may not follow a logical sequence, or the numbers may not be immediately visible on the building.

PAST AND PRESENT PHYSICAL DESCRIPTION OF THE PROPERTY

Overview Description

The Calumet Historic District is located on the Keweenaw Peninsula in the northwestern portion of Michigan's Upper Peninsula. The Keweenaw Peninsula is a narrow land mass extending approximately 75 miles north and east into Lake Superior. Lake Superior greatly affects the climate of the peninsula, which can receive 300 inches of snow annually. Mild daytime temperatures in the summer average in the 70s, and in the 20s in the winter. In general, the peninsula is heavily vegetated with successional woodland dominated by conifers including Balsam Fir (*Abies balsamea*), spruce (*Picea spp)*, Red Pine (*Pinus resinosa*), and Northern White Cedar (*Thuja occidentalis*) and deciduous trees including a variety of maple (*Acer spp*), oak (*Quercus spp*), birch (*Betula spp*), aspen (*Populus termuloides*), and alder (*Alnus spp*). The peninsula is bisected by the Keweenaw Waterway, a partly natural, partly dredged waterway that includes (east to west) the Portage River, Portage Lake, and Portage Lake Canal. Extending north from Portage Lake are Torch Bay and Torch Lake.

As noted in Section 5, the Keweenaw Peninsula is formed from volcanic strata. The copper-bearing lodes of the peninsula run northwest/southeast along the peninsula, forming a geological "spine" along which the historic resources of industrial copper mining are aligned. It is sparsely populated, with most of the population concentrated in the cities of Houghton/Hancock (divided by the Keweenaw Waterway) and the villages of Calumet and Laurium (north of Houghton/Hancock, in the middle of the peninsula). Smaller villages are scattered along the peninsula, most in former copper mining locations. South of the Keweenaw Waterway, from south to north, these include Rockland, Painesdale, and South Range. Continuing north of the Waterway and north of Calumet are Mohawk, the former community of Clifton, then Phoenix, Central, and finally Copper Harbor at the northern shore (see USGS Topo Maps).

Michigan Highway 28 forms an east-west southern boundary to the peninsula, while US Highway 41 (US-41) and Michigan Highway 26 (M-26) provide the primary north-south circulation routes within the peninsula. US-41 follows the shoreline of Keweenaw Bay from L'Anse to the west shore of Portage Lake. It then turns west to follow the south shore of Portage Lake, crosses over the lake from Houghton to Hancock, and continues up the center of the peninsula to the Village of Calumet. From the south, M-26 runs up the center of the peninsula to Houghton, then crosses Portage Lake and turns east to follow the north shore of Portage Lake and the west shore of Torch Lake before turning west at the community of Lake Linden, to continue on to the Village of Calumet. In Calumet, US-41 and M-26 merge to form one road until they diverge again at Phoenix, with M-26 passing through the communities of Eagle River and Eagle Harbor along the Lake Superior shoreline. US-41 continues along the peninsula spine until it merges again with M-26 in Copper Harbor at the tip of the peninsula.

The Calumet Historic District is located in the middle of the Keweenaw Peninsula within Calumet Township and the Village of Calumet, in Houghton County, about twelve miles northeast of Houghton, the largest city on the peninsula. The district is located on relatively level ground, surrounded by gentle hills to the north, west, and south (see USGS Topo Maps).

The 321.8-acre district is centered on the Village of Calumet and is organized around two juxtaposing grid patterns (see Map 4: S-1). On the east and south side, the streets and historic resources in Landscape Character Areas A and B are aligned along a southwest to northeast diagonal that parallels the underlying copper lodes. Calumet Avenue (US-41) and Mine Street are the two major streets that reflect the organizational spines along the lodes. The northwest to southeast streets are spaced irregularly and farther apart than the streets that run northeast to southwest, creating large, long blocks. From northeast to southwest, the primary cross streets in

LCA A are Red Jacket, Depot, Rockhouse, and Agent streets. This arrangement minimized interference with production at the mine. Within this area, most of the resources are associated with mining operations and management, although some key public buildings and housing are located here. US-41 also provides separation between the concentration of industrial and management resources along Mine Street and the residential neighborhoods of eastern Calumet and beyond that the Village of Laurium. The northeast/southwest diagonal forms the central axis for the Calumet & Hecla mining company manager residences in Landscape Character Area B to the northeast, which is bounded on the northwest by an alley, and by Rockland Street on the southeast.

Within the NHL boundary to the north and west of US-41 is the Village of Calumet, its civic core, and the adjacent housing locations (LCAs D through H), aligned along a grid oriented to north/south compass coordinates. The tighter grid and the square and rectangular village blocks reflect a more traditional municipal street grid where block lengths and widths vary slightly in each direction. The civic core (LCA D) is concentrated along Fifth and Sixth Streets, the major north-south corridors, between Scott Street on the south and Pine Street on the north. East-west streets that continue through LCAs D, F, G and H, from south to north are Portland, Oak, and Elm.

Historic housing locations Blue Jacket and the Village of Calumet (LCAs E and F, respectively) border the Civic Core (LCA D; see also Map 4: S-1 Overall District) on the northeast and west. Blue Jacket Housing is bounded on the south by Elm Street, on the west by Fourth Street, and extends north along Waterworks Street to terminate at Calumet Lake. Within the NHL boundary, the Village of Calumet LCA F is generally bounded on the east by an alley west of Sixth Street, and on the west by the Mineral Range railroad corridor. As with LCA D, Pine Street is the northern border, with Scott Street defining the south border. The LCAs D, E, and F were bordered by a warehouse area and the Copper Range railyard to the north.

The Yellow Jacket (LCA G) and Tamarack (LCA H) housing locations further west of the Village of Calumet (LCAs G and H, respectively), are additions to the original 1989 NHL boundary. Yellow Jacket is bounded on the east by the former Mineral Range railroad corridor and extends west to 1st Street. Pine Street is the northern border, while the south boundary follows rear lots of houses from Oak Street south to Scott Street. The densely-developed Tamarack location is defined by 1st Street on the east and the rear lots of managers housing that front 2nd Street. The LCA includes houses along Maple Street to the north and Poplar Street to the south.

The diagonal and north/south street grid patterns are connected at Agassiz Park (LCA C), a wedge-shaped space that historically served as a transitional area between the industrial resources along the lodes and the commercial and residential community, as well as a recreational and gathering space, and remains a village park today that includes a large public housing development dating to the late 1960s and a recent dollar store franchise that replaced an earlier grocery store.

Building development in the Village of Calumet began along streets near the eastern edge of the village, closest to the C&H mines. This development dates to about 1870, as the earliest part of the town was destroyed by fire that year. Over the next few decades, new commercial buildings continued to be wood frame and were one or two stories. By 1885 all buildings along an unpaved Fifth Street had a commercial use, establishing the corridor as the village's principal commercial district. Businesses then expanded to Sixth Street and along Portland, Oak, Elm, and Pine. A new civic and cultural zone emerged at Sixth and Elm by 1898 where a village hall and opera house and a fire station were situated. Nearly every lot in the village's downtown area was occupied by 1910; thereafter, new construction was mostly limited to a 1930s-era Works Progress Administration post office, a few automobile-oriented businesses, and some rebuilding projects. West of the business district, the Village of Calumet's residential section offered dwellings for non-C&H employees and company workers who could not

obtain, or chose not to rent, location housing. Much of the district's residential development occurred in four C&H-sponsored locations. Three flanked the village: Blue Jacket, Newtown [not included within the NHL district], and Yellow Jacket. The company constructed houses for rent in these three locations; however, most houses here were privately built on leased lots. A fourth housing area for employees, Red Jacket Shaft location [not included in the NHL district], emerged in the 1890s west of the mine bearing its name; it was composed entirely of C&H-built rental houses. The population of the Village of Calumet peaked at about 4,600 in 1900. By 1910, a total of about four hundred houses filled nearly every lot in the four housing locations.[179]

The short bursts of construction resulted in a diversity of housing stock designs among the locations within the village. Historian Larry Lankton has noted a commonality among mining companies that applies as well to C&H. The companies engaged in intensive periods of construction as needed, resulting in small collections of often identical worker housing. The designs of such housing tended to vary from one lane to the next, and one neighborhood to the next. Initially C&H built a number of boarding houses. As copper production advanced, the company turned to production of single-family housing. Later nineteenth-century working class housing offered improvements such as more rooms, more space, more windows, and more stoves. Houses increased in size from one story to one-and-one-half story frame. On other streets, workers built their own homes on land leased from the company. Housing diversity extended to managers' houses, which was quite notable by the 1890s. Whereas workers' housing carried no architectural embellishments, higher-level managers enjoyed larger houses of individual design, with more amenities, and that were spatially set apart from standard workers' housing.[180]

At the height of the Calumet & Hecla Mining Company's operations in the late nineteenth and early twentieth centuries, a complex network of rail and tram routes criss-crossed the district, linking the various functions of the mine operations. Today evidence of this network exists in the form of linear corridors that are generally devoid of buildings and vegetation. While no functioning rail lines remain within the district, remnant evidence in the form of some extant rail sections and crossties are found, especially in former industrial areas. There is one structure, the Russell Snow Plow. Tramroads carried materials and equipment between the shaft complexes and other company buildings. The intracompany Hecla and Torch Lake Railroad (the corridor runs north-south mid-block between Tenth and Eleventh Streets in LCA G Yellow Jacket Housing Location) transported rail cars filled with copper rock from the mine down to the stamp mills at Torch Lake. Passenger and freight traffic into and out of Calumet was served by a number of railroads, including the Mineral Range Railroad (the corridor runs north-south between 2nd Street and the north-south portion of Poplar Street in LCA H Tamarack Housing Location), the Copper Range Railroad, and the Duluth, South Shore and Atlantic Railway.

One resource type, the road system, spans the district and crosses character area boundaries. For the purposes of the resource count, the road system is identified as one contributing structure spanning the district. While the road system extends outside the boundaries of the district, for the purposes of this nomination it is considered as contributing within the boundaries of the district.

The overall character of the district varies depending on location. A few generalizations can be made, while specifics are provided in the individual landscape character area descriptions. During the period of significance, from 1867 to 1923, the majority of the district was composed of three distinct land uses, industrial/mining operations, commercial/public institutions, and company housing. Today, the district contains resources associated with residential, commercial, industrial, institutional, and recreational/tourism uses. Although no mining activities continue today, many of these places have been transitioned for use as interpretive sites, which provide a tangible link to their historic use through education. Because of the intensive development and industrial use of the landscape, most of the native vegetation, which had included abundant growths of Sugar

[179] Busch, 35; Lankton, "Historic Resource Study" [draft], 125.
[180] Lankton, "Historic Resource Study" [draft], 88-89, 126.

Maple (*Acer saccharum*), birch (*Betula* spp), fir (*Abies* spp), oak (*Quercus* spp), and White Pine (*Pinus strobus*), as well as some swamp or marshland, was "cut over" to both clear the land for use and to provide wood for construction and fuel. With the decline of the copper industry and gradual scaling back of company operations, natural succession has reclaimed large areas of formerly cleared land. Woodland covers portions of the district, including areas of conifers such as Balsam Fir (*Abies balsamea*), spruce (*Picea* spp), Northern White Cedar (*Thuja occidentalis*), and Red Pine (*Pinus resinosa*). Mixed shrubs and trees include a broad range of woody plants in various phases of succession and transition such as mixed maple (*Acer* spp), oak (*Quercus* spp), birch (*Betula* spp), aspen (*Populus tremuloides*), alder (*Alnus* spp), apple (*Malus* spp), and lilac (*Syringa* spp) species. Meadow areas contain mixed grass and forb species as well as scrub plants (woody plants that are seedlings or saplings). Some of the domestic plants that were introduced to the area by residents have survived and spread, including rhubarb (*Rheum* spp), lilacs (*Syringa* spp), lilies (*Lilium*), apple (*Malus* spp), and Lombardy Poplar (*Populus nigra*) trees.

RESOURCE DESCRIPTIONS

Archeological Resources (features within various LCAs)

Documentation of copper mining in the area began in 1863 when Charles Whittlesey published his observations regarding early copper mining; investigations continue to the present. The Keweenaw Peninsula hosts the oldest known copper-working sites in North America, dating to the early Holocene (about 10,000 years ago). Although historic activity has resulted in extensive ground disturbance, precontact archeological remains likely exist. At present, pre-contact resources have yet to be investigated in depth. Although they may offer additional information about early activity in the Upper Great Lakes, precontact archeological resources would not contribute to the national significance of the district since they would provide information about occurrences outside of the period of significance.

There are five archeological sites within the Calumet Historic District NHL which have been assigned state site numbers 20HO4, 20HO288, 20HO311, 20HO321, and 20HO333. [redacted] The last four sites are associated with the Calumet Historic District's national period of significance and relate to the use and occupation of commercial and public buildings. Unless otherwise indicated, the descriptions are from the Michigan State Historic Preservation Office's Archeological Site Files for Houghton County. These sites are counted as components of the broader LCA within which each is located for the purposes of the current NHL update. This approach allows for their incorporation into this updated documentation while it is readily acknowledged that these resources warrant a full inventory and synthesis of their own.

Site **20HO4** is the [redacted] Additional information is required to determine National Register eligibility. [redacted]

Site **20HO288** is the [redacted] The site has not been evaluated for National Register eligibility. [redacted]

Site **20HO311** is the [redacted]
The integrity of the archeological remains has not been evaluated and additional information is required to

determine National Register eligibility.

Site **20HO321** is the

The site is located in

Site **20HO333** is the

The following chronology gives a summary of past archeological work on property within the Calumet Historic District NHL, by year of their undertaking. These activities were undertaken primarily by the NPS in support of modern utility and land development projects, performed in compliance with Section 106 of the National Historic Preservation Act of 1966.

1999: An informal survey of some locations within Keweenaw National Historical Park was conducted by the NPS Midwest Archeological Center, but no records kept or collections taken.[183]

[183] Ibid.

[redacted]

Resources that Span Multiple LCAs

1. Road Systems (one contributing structure)

The Calumet & Hecla Mining Company and the Village of Calumet constructed a complex set of road systems that both responded to the topography and functions of areas and also formed the patterns around which the community developed. In most cases, the company built the roads within mining and housing areas, but it also influenced the routes of major regional roads such as US-41, which cuts through the district, and the roads of the Village. The road systems reflect the spatial organization of the district around two primary systems, one aligned along the diagonal spine of the conglomerate lode, and one aligned to a traditional orthogonal street grid.

Landscape Character Areas and Associated Contributing/Noncontributing Resources

2. Landscape Character Area A: Calumet & Hecla Mine Industrial and Management Core (See Maps 4: S-1, LCA-1 north B C, LCA-1-south, and 5: H-1 Housing Locations)

Contributing: 43 Buildings, 3 Structures, 1 Site, 1 Object
Non-Contributing: 22 Buildings, 1 Object

Description

The **Calumet & Hecla Mine Industrial and Management Core** LCA is characterized by a dense concentration of historic resources directly related to the mining operations and management of the Calumet & Hecla Mining Company. There are forty-eight contributing and twenty-three non-contributing resources in this area. The resources include numerous industrial buildings associated with the company's surface plant, the

187 [redacted]

company's General Office, the Agassiz House, Calumet & Hecla Library, the Miscowaubik Club, a number of residential buildings, and landscape features. These are all associated with the period of national significance from 1867 to 1923. Historically, the area was owned by the Calumet & Hecla Mining Company for the entire period of significance. The surface plant in this area represents the most intact portions of what was once characterized as the "the most complete found at any mine in the world."[190] This is currently the NPS headquarters of Keweenaw National Historical Park, and the park owns several key buildings: the General Office, the Calumet & Hecla Library, and the No. 1 Warehouse.

The Industrial and Management Core is a linear corridor that parallels the Calumet Conglomerate Lode beneath and is bisected by Red Jacket Road, along which many of the most visible industrial and management resources are located. Resources are located to either side of Mine Street, which runs southwest to northeast along the corridor. This landscape character area extends from a driveway just north of the Calumet & Hecla Superior Boiler House on the north, to A Street on the south. Calumet Avenue (US-41) forms most of the eastern boundary, while on the west the character area is bordered by Agassiz Park LCA C and the Civic Core LCA D.

The Industrial and Management Core is characterized by major vehicle transportation routes, including Calumet Avenue (US-41) at its eastern edge, which provides access to the rest of the peninsula both north and south. Red Jacket Road is the primary entrance route into the industrial and downtown areas from Calumet Avenue. Mine Street forms the backbone of the LCA, although it has been blocked north of Red Jacket Road by the construction of an addition to the school complex. Depot Street, Rockhouse Road, Agent Street, and Division Street are shorter east-west roads in the southern area of the district. For most of the period of significance, the roads were unpaved, although key sections of Red Jacket Road and Calumet Avenue were paved toward the end of the period, and paved sidewalks were common earlier. Running from Red Jacket Road to the Sixth Street Extension (created in the 1980s) is a gravel road historically called Shop Street as it ran past the foundry/pattern, drop forge, and woodworking shop complexes. Some informal dirt paths run through the character area. Remnants of company railroad lines and tramroads are also present on the landscape, including some extant rails and crossties as well as related topographical features (e.g. grades) and visual corridors. These are not sufficiently intact or cohesive to be identified as distinct resources or historic associated features, but rather are described as elements of the landscape.

The spatial arrangement of resources and features on the Industrial and Management Core's landscape reflects its historic patterns of development and use. The alignment of the Calumet Conglomerate Lode under the Calumet & Hecla Mining Company determined the broad-scale above-ground spatial organization. Within the boundaries of the district, the lode angles along a southwest/northeast line, paralleling Mine Street. Shafts were located along the diagonal line of the lode and numbered sequentially beginning at Red Jacket Road (see Maps 4: S-1, 6: LCA-A north B C, and 7: LCA-A south). Calumet shaft numbers increased moving northeast, while Hecla shaft numbers increased moving southwest. While they were operated by one company beginning in 1871, in practice the company referred to the area northeast of Red Jacket Road as the Calumet branch, and southwest of Red Jacket Road as the Hecla and South Hecla branches. The company opened and closed shafts throughout its history, so the shafts were never all operated simultaneously during the period of significance. Clustered around each shaft were, over time, various combinations of shafthouses, rockhouses, hoist houses, shaft-rockhouses, hoist houses, boiler houses, compressor houses, dry houses, offices, a multitude of railroad tracks and trestles, tram lines, and various equipment and materials.

It is along this corridor that the majority of extant historic resources associated with extraction and initial processing of the copper ore are located. Most date from the 1880s to the 1910s. While all of the mine shaft-rockhouses have been removed and there is some encroachment by new construction, the area retains much of

[190] Stevens, *The Copper Handbook,* 529.

its character as an industrial mining landscape through the remaining mine surface plant support buildings, especially in the area south of Red Jacket Road. Numerous industrial buildings are still present and visible, as are topographical features, remnants of railroad and tram routes, and some pieces of equipment.

Many of the company's industrial buildings were constructed from poor rock, which was free and immediately available from the waste rock piles surrounding the site. Poor rock is a basaltic rock that ranges in color from light grey to black and often has a reddish cast from the presence of copper, but does not have enough copper to warrant processing, hence the term. Poor rock was very commonly used for foundations and footings throughout the Industrial and Management Core and in fact the entire district. It is also often used in random uncoursed rubble for walls, particularly the industrial buildings. Poor rock buildings often had brick-arched window and door openings, with the red brick providing both a contrast with the dark rock and a structural assembly that was easier to build with uniform components.

Another common material used throughout the region and the NHL district is Jacobsville sandstone, a formation of red sandstone that naturally occurs in the Upper Peninsula of Michigan (it is also sometimes known as Portage Entry red sandstone after the location of some of the major quarries). It was highly valued for its red color and ease of carving. Jacobsville sandstone was often used as trim, such as quoining at corners and around doors and windows, where it sharply contrasted with the dark poor rock. This is very characteristic of architecture in Michigan's Copper Country and is seen in two of the district's most prominent buildings, the General Office and the Calumet & Hecla Library. Where it was used for walls or foundations, the sandstone was usually pointed with a beaded profile, a characteristic expression of regional architecture (an excellent example is the Hecla No. 7 and 8 Dryhouse near the Hancock and Pewabic Boiler House at the southern end of the character area).

Other building materials are brick, metal, and wood. Red brick is used on the No. 1 Warehouse, the Calumet High School and Washington School, and the Calumet Bathhouse. A number of buildings are partially or entirely sided with corrugated metal, for example the No. 2 Warehouse; corrugated metal is also frequently used as a roof covering. Wood is used less frequently. Industrial buildings typically had wood doors and windows and a few smaller outbuildings were also sided with vertical or horizontal wood siding. The few residential houses and outbuildings in the Industrial and Management Core are generally sided with wood clapboard. In form, and unless otherwise described, buildings are generally rectangular, with an occasional wing, and from one to three stories in height. Almost all are front gabled, with a few side-gabled and hipped roofs.

The area north of Red Jacket Road and east of Mine Street contains a mixture of building and usage types that reflect the Calumet & Hecla Company's historic approach in which there was little separation between industrial buildings and more general use and community resources (see Map 6: LCA-A north B C). As a result, the area is generally utilitarian in character with a few exceptions. All industrial buildings were designed by C&H engineers or by consulting engineer Erasmus D. Leavitt.[191] At the southeast corner of the intersection is a complex consisting of the General Office, Agassiz House, and the Miscowaubik Club. The architecturally prominent General Office (25970 Red Jacket Road) is an L-shaped, two-story, cross-gabled building constructed in 1887 of poor rock trimmed with red brick. The building was designed by the Boston-based firm of (George R.) Shaw and (Henry S.) Hunnewell. It has a 1900 addition to the north, and the Michigan firm of (Demetrius Frederick) Charlton and (Edwin O.) Kuenzli designed a rear, two-story gabled addition, built in 1909. To the west is the two-and-one-half story Agassiz House (25946 Red Jacket Road), sided with synthetic boards and wood shingles, with a poor rock foundation and a cross-gabled roof. The company built the frame Agassiz House circa 1890; while large, it is simple in form, and its most distinguishing feature are three large,

[191] Jane C. Busch, "Copper Country Survey Phase III: Houghton County North, C&H Core District," Keweenaw National Historical Park Advisory Commission, August 2013.

corbelled brick chimneys. The construction of a library addition and two dormers occurred between 1912 and 1913.[192] North of the General Office is the sprawling Miscowaubik Club (57034 Calumet Avenue), a two-and-one-half story, cross-gabled building with a poor rock foundation, lapboard walls, and asphalt-shingled roof. It was originally a residence that Calumet & Hecla remodeled in 1903 to serve as a private club.[193]

Immediately north of this complex are the 1907 Calumet High School and the 1929 Washington School (57070 Mine Street), which were connected by an addition in 1997. This area had been occupied by educational buildings since 1875, when Calumet & Hecla built the Central School. In 1897 Calumet & Hecla also built the Calumet Manual Training School and High School, which was connected to the Central School—by then renamed as the Washington School— at the upper floors. In 1905 the High School burned down and was replaced in 1907 with the current structure designed by Charlton & Kuenzli. It is a three-story rectangular building with a raised sandstone basement, red brick walls, and a flat roof. Per Alexander Agassiz's wishes the school was utilitarian in design, but it does incorporate elements of the Classical Revival style in its symmetrical form, center pavilion, large arched windows on the north and south sides, and modillioned cornice.[194] When the Washington School burned down in early 1929, the company hired Chicago architect John D. Chubb to design its replacement. The three-story, L-shaped school is constructed of brown brick with a limestone base and trim in the Collegiate Gothic style. The modern connecting addition is two stories high and also clad in red brick with a flat roof. This area has a more formal landscape than the remainder of the character area, with well-defined sidewalks and parking areas, street trees and foundation plantings, and a formal courtyard between the two schools.

Moving west along Red Jacket Road, and crossing Mine Street, the next block contains two non-contributing buildings: the AT&T substation (25914 Red Jacket Road) and the Calumet Township Office (25880 Red Jacket Road). These replaced an earlier 1871 bank that later became the Calumet & Hecla telephone exchange building. The original mixed use operational/industrial/civic nature of this block remains evident with historic buildings to the west and north. These include the circa 1901 No. 2 Warehouse (25854 Red Jacket Road), located west of the Township Office. It is a one-story, long, rectangular building with a low, front-gabled roof, covered with metal siding and with ribbon windows under the roofline. To the west of that is the three-story, barrel-roofed Calumet Colosseum (110 Red Jacket Road), clad in metal siding and roofing. The latter was built in 1913 by the company and is reportedly the oldest continually operating ice rink in North America and one of the oldest indoor hockey arenas in the world. While today these buildings are surrounded by asphalt parking and drives, after 1923 the area in front of the Colosseum was landscaped with a lawn and street trees. A sidewalk parallels Red Jacket Road.

Indicative of the use of the area, Mine Street once extended uninterrupted north, past Calumet High School and Washington School, to Elm Street and beyond. The street follows the lode axis, defining the landscape historically associated with the Calumet branch shafts 1-4. The historic mixed use of the area may be most notable here, where educational facilities stand adjacent to mining-related development. Calumet & Hecla Mining Company resources here include an historic electrical substation, the ca. 1888 Gear House (power plant) (57069 Mine Street), the ca. 1860s Powder House (57125 Mackinac Trail), the ca. 1885 Calumet No. 2 Dryhouse (57171 Mackinac Trail), the ca. 1885 monitor-roof Calumet Drill Shop (57189 Mackinac Trail), and

[192] Agassiz House First Floor Plan (#6462), July 17, 1912, and Agassiz House Second Floor Plan (#6463), July 17, 1912. Map Folder 29 C 12 B, MS-005: Calumet and Hecla Mining Companies Drawings Collection, Michigan Technological University Archives and Copper Country Historical Collections, Houghton, MI. The alterations would not be enjoyed by Agassiz, who died in 1910.
[193] "Miscowaubik" is the Anglicization of an Ojibwa word for copper, popularly translated at the time as "red metal" although it more accurately translates to "red medicine." The additions are documented in C&H Inc. Records, 007.01.03-001#024, C&H Office Grounds, 1913, Herman, Lake Superior Collection Management Center, Calumet, MI.
[194] Dana Peavey, Stevan Sliger, John Krystof, and Travis Dvorak, "Buildings by Charlton and Gilbert (1891-95)," *Copper Country Architects* (website), http://www.cca.ss.mtu.edu/ch_build.htm (accessed September 2020).

the 1880 Boiler House and associated fluted, 150' fluted smokestack for the Superior steam engine (57140 Mine Street). These buildings are all generally rectangular, one-story buildings constructed of poor rock with brick trim and metal-covered roofs. The Gear House has a large, pyramidal roof, as does the south end (original section) of the Superior boiler house. A playground is located between the school addition and the Drill Shop, while a few remnants of the industrial landscape remain around the Dryhouse and Drill Shop and the Boiler House.

South of Red Jacket Road are the landscapes associated with the No. 1, No. 2, and No. 7 Hecla shafts, aligned along Mine Street. This area includes a concentration of support buildings that were associated with C&H operations. They include the 1894 No. 1 Warehouse (25885 Red Jacket Road), the ca. 1904 Calumet & Hecla Pattern Shop (now Coppertown Museum, 25815 Red Jacket Road) and the 1914 Pattern Storage Warehouse (56947 Sixth Street), the Man Engine House for the Hecla No. 2 shaft (56984 Mine Street), a Sand Storage building (56930 Sixth Street), the 1883 Hecla Blacksmith Shop (with 1904 addition) (56912 Mine Street), the Hecla Mine Captain's Office (56980 Sixth Street), the ca. 1882 Hecla Machine Shop (with a 1911 addition) (56912 Mine Street), the Railroad Shack (56880 Mine Street), the historic but altered Hecla Fire Department (56825 Mine Street), and the ca. 1888 Hecla and Torch Lake Railroad Round House (with a 1926 and subsequent additions) (25830 Depot Street). South of the Pattern Shop is the foundation of the Foundry and beyond that a partial wall and foundation of another sand storage building. Rail lines are still evident in this area, including along the side of the second sand storage building, along the west side of the No. 1 Warehouse, under the location of the Russell Snow Plow, and another that extends north/south from close to the Sixth Street Extension to Red Jacket Road. At the Red Jacket Road end of this line sits the Russell Snow Plow, a ca. 1906 rail car designed to clear snow from the tracks. Historically, this area would have been completely denuded of vegetation and covered with equipment, piles of material, and other mining-related small-scale features. It retains much of this character, although some successional vegetation has filled in disused areas, and parking areas have been added along the west side of Mine Street.

Of these resources south of Red Jacket Road, the No. 1 Warehouse is the most prominent. It is a two-and-one-half-story, front-gabled, rectangular building constructed of red brick with a poor rock foundation and sandstone trim. To the south of the Warehouse, the Hecla No. 2 Man Engine House is a smaller, rectangular one-story building with a pyramidal roof, poor rock foundation, and brick walls. To the west and south of the No. 1 Warehouse, the industrial buildings are generally rectangular, front-gabled buildings constructed of irregularly coursed poor rock with brick trim, such as the Mine Captain's Office. The Pattern Shop is an exception; a one-story, front-gabled building, it has a poor rock foundation but walls of tan brick. Along the west side of Mine Street is the long, rectangular, one-story Hecla Machine Shop, which has a side-gabled roof covered with metal. South of this is the two-story Hecla (now Calumet Township) Fire Department. The rectangular building has a low-sloped. front-gabled roof with a shed-roofed garage wing and board-and-batten siding. Additions to the south side of the building are one story.

At the southeast corner of Red Jacket Road and Mine Street is one of the most visually prominent buildings in this area, the 1898 Calumet & Hecla Library (25947 Red Jacket Road). Designed by Boston architects Shaw and Hunnewell in a style that echoes their design of the nearby General Office, the building is a two-story T-plan building with cross-gables. It is constructed of poor rock with red brick trim. The Library displays richer architectural detailing than the General Office and includes ornamented barge boards and a patterned brick chimney. To the south of this is the large Calumet Electronics complex (25830 Depot Street). In the core of the complex is the Hecla and Torch Lake Railroad Roundhouse, a one-story semi-circular building constructed of poor rock with a flat roof. It has several additions, including a one-story brick wing at the southeast corner, and two one-story, rectangular, metal-clad factories and warehouses to the north.

East of the roundhouse, at the northwest corner of Calumet Avenue and Depot Street is the 1911 Calumet Bathhouse (56905 Calumet Avenue), designed by Charlton and Kuenzli. The Bathhouse is a rectangular, one-story red brick building with a raised poor rock basement and stone trim. From the Bathhouse north to the intersection of Red Jacket Road, the west side of Calumet Avenue served as a parade ground for the Calumet Light Guard in 1905. Prior to this, worker housing occupied the area. In 2021 Calumet Electronics constructed a new two-story manufacturing facility in this location, which is mostly clad in vertical metal siding. To reference the historic setting, brick veneer and a stone "water table" veneer covers the southeast corner's front entrance. A grass lawn and a parking lot continue north to Red Jacket Road; the Calumet Congregational Church stood here until it burned down in 1949. Between the parking lot and Calumet Avenue sits a large piece of float copper and adjacent interpretive panels and a park entrance sign featuring a poor rock foundation.[195] West of the parking lot is the Calumet & Hecla Library and a statue of Alexander Agassiz that formerly sat in Agassiz Park but was moved to this location after the period of national significance. Despite this, the Michigan State Historic Preservation Office in 2013 determined that the statue remains a contributing feature to the district because it dates to the period of significance, remains within the district, and has strong associations with the historic significance of the district; it has therefore been retained as a contributing object in this nomination.[196] The area of Red Jacket Road between Calumet Avenue and Mine Street was, and remains, significant not only as the heart of the Calumet & Hecla operation, but for its reflection of how the company, under Agassiz's leadership, intertwined corporate paternalism and the landscape: sharing this location were the mine office, church, public library, and Agassiz's own residence. Between the library and Calumet Electronics was the Calumet Armory (demolished); this general area was used as an encampment for the National Guard during the 1913-1914 strike.

South of Depot Street between Mine Street and Calumet Avenue are four blocks of houses concentrated along Calumet Avenue (see Map 6: LCA-A south). These were historically associated with the Hecla Housing Location. They range between one-and-one-half to two-and-one-half-story side- or front-gabled houses with stone foundations, wood siding, and asphalt-shingled roofs. These houses have mature trees of which the most common are maple (*Acer* spp*)*, oak (*Quercus* spp), and pine (*Pinus* spp) and lawns, distinguishing this part of the LCA from the industrial portion. A few non-contributing single-story ranch houses have been constructed on these blocks.

At the far southern end of the district is the industrial landscape associated with the Hecla No. 7 shaft and the Hancock and Pewabic Engine Hoist and Boiler Houses. The two remaining buildings here are the Hecla No. 7 and 8 Dryhouse and the Hancock and Pewabic Boiler House. The Dryhouse is a one-story, rectangular building with a low-sloped front-gabled roof, irregularly coursed variegated Jacobsville sandstone walls trimmed with red brick, and a poor rock foundation. The Boiler House is also constructed of irregularly-coursed Jacobsville sandstone trimmed with red brick, and has a front gabled roof covered with metal and a raised clerestory monitor. This area also contains many surface-level remnants, including building and equipment foundations. Piles of poor rock are visible to the west, but these have been impacted by non-historic extraction for industrial use. Successional vegetation is encroaching into this area including birch (*Betula* spp), maple (*Acer* spp), alder (*Alnus* spp), Redosier Dogwood (*Cornus sericea*), and honeysuckle (*Lonicera)*.

[195] The float copper piece was donated for display by Joseph and Mary Lizzadro. Joseph Lizzadro married Mary Sandretto, a native of the Keweenaw Peninsula, and began collecting stones from the region on family trips. He became a lapidary hobbyist and collector and opened the Lizzadro Museum of Lapidary Art in Chicago in 1962. "The Lizzadro Story," https://lizzadromuseum.org/the-lizzadro-story/ (accessed September 2020).

[196] Quinn Evans Architects, "Calumet Unit Cultural Landscape Report/Environmental Assessment" (National Park Service, 2013), Errata-2. There is a desire by Keweenaw National Historical Park to return the statue to its park location; it can be moved without substantial physical change to the surrounding landscape.

Inventory of Resources, Landscape Character A: Calumet & Hecla Mine Industrial and Management Core

NOTE: "HAF" is Historic Associated Feature, part of the LCA site

(ID numbers are keyed to the attached maps)

ID #	HISTORIC NAME (CURRENT NAME)	ADDRESS	STREET	TYPE	STATUS
NA	Calumet & Hecla Industrial and Management Core Landscape	NA	NA	Site	Contributing
001	Residence	25673	Agent St.	Building	Noncontributing
002	Miscowaubik Club	57035	Calumet Ave.	Building	Contributing
003	Residence	56531	Calumet Ave.	Building	Contributing
004	Residence	56557	Calumet Ave.	Building	Noncontributing
005	Residence	56611	Calumet Ave.	Building	Contributing
006	Residence	56641	Calumet Ave.	Building	Contributing
006	Residence, Garage	56641	Calumet Ave.	Building	Noncontributing
007	Residence	56737	Calumet Ave.	Building	Contributing
007	Residence, Shed	56737	Calumet Ave.	Building	Contributing
007	Residence, Shed	56737	Calumet Ave.	Building	Contributing
008	Residence	56761	Calumet Ave.	Building	Contributing
008	Residence, Shed	56761	Calumet Ave.	Building	Noncontributing
009	Residence	56783	Calumet Ave.	Building	Contributing
010	Residence	56843	Calumet Ave.	Building	Contributing
011	Residence	56859	Calumet Ave.	Building	Noncontributing
012	Calumet Bathhouse	56905	Calumet Ave.	Building	Contributing
013	Hancock & Pewabic Boiler House	N/A	Calumet Ave.	Building	Contributing
014	Float Copper	N/A	Calumet Ave.	Object	Noncontributing
015	Calumet & Hecla Paint House (Calumet Electronics Warehouse)	25830	Depot St.	Building	Contributing
016	Hecla and Torch Lake Railroad Roundhouse (Calumet Electronics)	25830	Depot St.	Building	Noncontributing
017	Calumet Electronics	25830	Depot St.	Building	Noncontributing
018	Residence	25855	Depot St.	Building	Contributing
018	Residence, Shed	25855	Depot St.	Building	Noncontributing
019	C & H Powder House (CLK Public Schools)	57125	Mackinac Trail	Building	Contributing
020	No. 2 Dryhouse	57171	Mackinac Trail	Building	Contributing
021	C & H Drill Shop (Copper Country Curling Club)	57189	Mackinac Trail	Building	Contributing
022	Residence	56622	Mine St.	Building	Contributing
022	Residence, Garage	56622	Mine St.	Building	Noncontributing
023	Residence	56654	Mine St.	Building	Contributing

023	Residence, Garage	56654	Mine St.	Building	Noncontributing
024	Residence	56754	Mine St.	Building	Contributing
025	Hecla Fire Department (Calumet Township Volunteer Fire Dept)	56825	Mine St.	Building	Contributing
026	C&H Machine Shop	56877	Mine St.	Building	Contributing
027	C&H Railroad Shack	56880	Mine St.	Building	Contributing
028	C&H Blacksmith Shop	56912	Mine St.	Building	Contributing
029	Man Engine House	56984	Mine St.	Building	Contributing
030	C & H Gear House	57069	Mine St.	Building	Contributing
031	Calumet High School	57070	Mine St.	Building	Contributing
032	Washington School (CLK Public Schools)	57070	Mine St.	Building	Noncontributing
032A	Washington School, Outbuilding	57070	Mine St.	Building	Noncontributing
033	C&H Superior Boiler House	57140	Mine St.	Building	Contributing
034	Equipment Garage (behind Colosseum)	Unk	Mine St.	Building	Noncontributing
035	Superior Boiler smokestack	N/A	Mine St.	Structure	Contributing
036	Storage Building (next to Equipment Garage)	Unk	Mine St.	Building	Noncontributing
037	Hecla No. 7&8 Dryhouse	Unk	Mine St.	Building	Contributing
038	Russell Snow Plow	N/A	Red Jacket Rd.	Structure	Contributing
039	Calumet Colosseum	110	Red Jacket Rd.	Building	Contributing
040	Pattern Shop (Coppertown Museum)	25815	Red Jacket Rd.	Building	Contributing
041	C&H Warehouse No. 2	25854	Red Jacket Rd.	Building	Contributing
042	Calumet Township Office	25880	Red Jacket Rd.	Building	Noncontributing
043	C&H Warehouse No. 1	25885	Red Jacket Rd.	Building	Contributing
044	AT&T Calumet Office	25914	Red Jacket Rd.	Building	Noncontributing
045	Alexander Agassiz House	25946	Red Jacket Rd.	Building	Contributing
046	C&H Library (Keweenaw History Center)	25947	Red Jacket Rd.	Building	Contributing
047	C&H General Office (KNHP Headquarters)	25970	Red Jacket Rd.	Building	Contributing
048	C&H Electric Substation (CLK School Bus Maintenance)	57033	Red Jacket Rd.	Building	Contributing
049	Agassiz Sculpture	N/A	Red Jacket Rd.	Object	Contributing
050	Residence	25825	Rockhouse Rd.	Building	Noncontributing
050	Residence, Garage	25825	Rockhouse Rd.	Building	Noncontributing
051	Residence	25838	Rockhouse Rd.	Building	Contributing
051	Residence, Garage	25838	Rockhouse Rd.	Building	Contributing
052	Residence	25847	Rockhouse Rd.	Building	Noncontributing
053	Residence	25857	Rockhouse Rd.	Building	Noncontributing
054	Fuel Oil Storage	Unk	Shop St.	Building	Contributing

055	Railroad and Tram Lines	N/A	Shop St.	Structure	Contributing
056	C&H Storage Building Foundation	N/A	Shop St.	HAF	n/a
057	Residence	56724	Sixth St.	Building	Noncontributing
057	Residence, Garage	56724	Sixth St.	Building	Noncontributing
058	Head Mine Captain's Office	56890	Mine/Sixth St.	Building	Contributing
059	Sand Storage Building	56930	Mine/Sixth St.	Building	Contributing
060	C&H Pattern Storage Warehouse	56947	Mine/Sixth St.	Building	Contributing

Integrity Assessment

The **Calumet & Hecla Industrial and Management Core** LCA has not substantially changed since the initial 1989 NHL nomination. It contributes to the historic character of the district to a very high degree. Contributing resources include the landscape (one contributing site), forty-three buildings, three structures, and one object. The character area retains high integrity of location, design, materials, workmanship, feeling, and association due to the extensive extant resources that continue to represent the flow and extent of historic mining and management activities in the district. The Industrial and Management Core is integral to the character of the NHL district as the location of the central activity of extracting copper ore and initial processing before transportation to the smelter and stamp mills for further processing. It also contains a concentration of surviving management and support buildings for mining operations, as well as several key buildings that characterize the company's practice of corporate paternalism. It is the heart of the Calumet & Hecla Mining Company's original operations from the beginning of the period of significance in 1867 to the activities of the early 1920s before the company consolidated with nearby mines. The location and setting of the character area exemplify the interconnection of the company and the community and demonstrates the company's approach of mingling industrial and public buildings in the same area. The views along Red Jacket Road to US-41 and into downtown Calumet, and south and north of Red Jacket Road remain important in providing a broad visual overview of the spatial relationships between mining activities, mine management, and the public institutions sponsored by the company.

As with the original 1989 NHL nomination, since the closure of the Calumet & Hecla Mining Company operations, a number of historic resources have been lost or deteriorated, and some intrusions have occurred, such as the construction of the township office, telephone company building, new elementary school, and both new construction and additions to the Roundhouse and Paint Shop by Calumet Electronics. As noted in that nomination, the modern buildings are incompatible in terms of design and materials but are generally of acceptable scale. The Calumet Electronics' new construction and additions incorporated materials that reference those commonly found in the LCA. A few non-contributing buildings have been added on the periphery of the character area, but again these have not substantially impacted the character of this LCA since the original nomination. The majority of non-contributing resources are residential garages and outbuildings from the mid-twentieth century. They were not included in the resource count for the original NHL designation. They are one-story, generally located to the rear of property parcels and do not substantially detract from the pattern of historic housing in this LCA.

The district boundary line at the northeast end of the character area originally extended to Elm Street. It has been amended slightly to exclude an area that has lost substantial integrity since the original nomination due to the construction of new buildings.

More extensive impacts to integrity have occurred to areas that were originally within the NHL boundary south of the Sixth Street Extension, west of Mine Street, and south of A Street. This area originally contained resources related to the surface plant of mining operations south of the Hecla 1 and 2 Shafts, including mine buildings, rail and tram lines, and poor rock piles. Impacts since the original 1989 nomination include the construction of a modern retail development southwest of the Sixth Street Extension, the loss of mining buildings and associated landscapes, and extensive removal of poor rock piles. For these reasons, the boundary has been reduced to include only those areas that retain a high degree of integrity and have not substantially changed since 1989.

The distinctive resources in the Calumet & Hecla Mine Industrial and Management Core area retain their original designs, materials, and workmanship. Mostly designed in-house by company engineers, the materials and their application distinguish between building use: buildings of poor rock built in random rubble construction signify heaviest industrial uses. Dressed sandstone laid in courses or brick buildings are associated with more skilled tasks, storage, or office space. In addition, buildings of outstanding architectural character such as the General Office and the Calumet & Hecla Library, both designed by a Boston architecture firm, reflect the wealth of the Calumet & Hecla Mining Company and its confidence in long-term economic success.

3. **Landscape Character Area B: Calumet Housing Location** (See Maps 4: S-1, 6: LCA-A north B C, and 5: H-1 Housing Locations)

   Contributing: 21 Buildings, 1 Site
   Non-Contributing: 9 Buildings

Description

The **Calumet Housing Location** LCA was historically associated with the Calumet branch of the Calumet & Hecla Mining Company and was one of the company's earliest housing locations, with the area built out by 1880. It primarily served as housing for the company's upper-level managers, although it also included worker housing. Compared to other housing locations in the NHL district, this LCA reflects the greater comforts given to the higher-status employees: the houses and lots are larger and houses sit back further from the street. The housing location was originally bounded roughly by Mine Street on the west, Caledonia Street on the east, Pine Street on the north, and School Street on the south. However, by the time of the 1989 NHL nomination, only a small portion of the housing location on either side of Calumet Avenue (US-41) from Church Street to Stable Street retained integrity from the period of national significance; other parts of the historically larger housing location that contained workers housing had lost integrity. The NHL boundary remains unchanged in this area. There are twenty-two contributing and nine non-contributing resources.

The Calumet Housing Location LCA is located east of the Calumet & Hecla Mine Industrial and Management Core LCA A, bounded roughly by Church Street on the north, the east-west line of Stable Street on the south, the alley between Mine Street and Calumet Avenue on the west, and the alley between Calumet Avenue and Rockland Street on the east. It is situated on relatively level ground and is spatially defined by the parallel streets of Mine Street, Calumet Avenue, and Rockland Street, which are oriented southwest-northeast to align with the lode and connected on the north end by the shorter northwest-southeast oriented Church Street. At the south end, the housing location loses integrity approximately where Stable Street intersects with Rockland Street, so the boundary ends there rather than at School Street slightly farther south. The small, evenly spaced rectangular lots and uniform setbacks create a relatively dense neighborhood residential pattern.

The streets are level and paved with asphalt. Calumet Avenue has sidewalks and curbs, but not Church Street. Most lots have driveways with surfaces varying from gravel to asphalt to concrete; most extend along the sides of the houses to attached or detached garages at the side or rear of the house. Pedestrian circulation occurs on the roads, driveways, parking areas, and lawns. Calumet Avenue (US-41) is the main highway through the peninsula, as it was during the period of significance, and has the character of a busy thoroughfare.

The nineteen primary buildings--extant residences--in the Calumet Housing Location LCA line either side of Calumet Avenue, with nine on the west side and ten on the east. The frame houses are set on rectangular parcels that are generally evenly spaced and have relatively uniform setbacks. The houses were built ca. 1899 and are typically one-and-one-half to two-and-one-half stories, ranging from rectangular gable-front buildings to T-plans and side-gables. They have stone foundations, a few of which have been painted. Historically, they had wood clapboard or shingle siding. Most retain the wood siding, while a few have been covered with horizontal aluminum or vinyl siding. Roofs are generally asphalt shingled and a few houses have shed dormers. Windows are typically double-hung units with a variety of light patterns ranging from one-over-one replacements to original six-over-six, eight-over-eight, and three-over-one units. Single-leaf entry doors are usually located on the front façade, sometimes within open or enclosed porches. All the houses have porches, but they vary widely, from small front-gabled open porches at the entry, to partial and full-width porches, either open or enclosed. Some houses have enclosed side porches as well. Seven houses on the west side of Calumet Avenue were originally identical (57117, 57125, 57137, 57145, 57157, 57169 and 57181 Calumet Avenue). Each was a two-and-one-half story, gable-front building with poor rock foundations, clapboard siding, and shingled roofs. Common features included a wrapround entry porch at the northeast corner, a shed roof at the base of the gable end, and a Chicago-style window in the gable. Each house has been altered over time but is still a clearly distinguishable type. There are two side-gabled duplexes with three-quarter front porches at 57193 and 57194 Calumet Avenue. The house at 57116 Calumet Avenue is new construction, designed to fit into the historic district and echo the location's T-plan, cross-gabled residences.

Most houses have garages and outbuildings. Typically, the earliest garages in the location were rectangular, one-car buildings with gabled or flat roofs, built of wood, covered in clapboard siding, and attached to one side of the house (e.g. 57125 Calumet Avenue). Non-historic garages have either been added to the side elevation or placed at the rear of the side yard (for example 57180 Calumet Avenue). There are also a number of smaller outbuildings, typically sheds of varying dates. These are usually set along the rear property lines.

The areas around the buildings include lawn, canopy and ornamental trees (the most common are maple (*Acer* spp*)*, oak (*Quercus* spp), pine (*Pinus* spp*),* and apple (*Malus*spp)), ornamental shrubs and foundation plantings (in particular lilac (*Syringa spp*), and a few vegetable and flower gardens. Calumet Avenue is lined with mature street trees of basswood and maple just inside of the sidewalks (house sides). There are fewer trees than were present historically, and some of the remaining trees are in poor health.

Inventory of Resources, Landscape Character Area B: Calumet Housing Location

(ID numbers are keyed to the attached maps)

ID #	HISTORIC NAME (CURRENT NAME)	ADDRESS	STREET	TYPE	STATUS
NA	Calumet Housing Location Landscape	NA		Site	Contributing
061	Residence	57104	Calumet Ave.	Building	Contributing

061	Residence, Shed	57104	Calumet Ave.	Building	Noncontributing
062	Residence	57116	Calumet Ave.	Building	Noncontributing
063	Residence	57126	Calumet Ave.	Building	Contributing
064	Residence	57138	Calumet Ave.	Building	Contributing
065	Residence	57150	Calumet Ave.	Building	Contributing
066	Residence	57162	Calumet Ave.	Building	Contributing
066	Residence, Shed	57162	Calumet Ave.	Building	Noncontributing
067	Residence	57172	Calumet Ave.	Building	Contributing
068	Residence	57180	Calumet Ave.	Building	Contributing
068	Residence, Garage	57180	Calumet Ave.	Building	Noncontributing
068	Residence, Shed	57180	Calumet Ave.	Building	Noncontributing
069	Residence	57194	Calumet Ave.	Building	Contributing
070	Residence	57216	Calumet Ave.	Building	Contributing
070	Residence, Garage	57216	Calumet Ave.	Building	Contributing
071	Residence	57117	Calumet Ave.	Building	Contributing
071	Residence, Garage	57117	Calumet Ave.	Building	Noncontributing
072	Residence	57125	Calumet Ave.	Building	Contributing
073	Residence	57137	Calumet Ave.	Building	Contributing
074	Residence	57145	Calumet Ave.	Building	Contributing
074	Residence, Garage	57145	Calumet Ave.	Building	Noncontributing
075	Residence	57157	Calumet Ave.	Building	Contributing
076	Residence	57169	Calumet Ave.	Building	Contributing
076	Residence, Shed	57169	Calumet Ave.	Building	Noncontributing
077	Residence	57181	Calumet Ave.	Building	Contributing
078	Residence	57193	Calumet Ave.	Building	Contributing
078	Residence, Garage	57193	Calumet Ave.	Building	Noncontributing
078	Residence, Shed	57193	Calumet Ave.	Building	Contributing
079	Residence	57215	Calumet Ave.	Building	Contributing
079	Residence, Garage	57215	Calumet Ave.	Building	Contributing

Integrity Assessment

The **Calumet Housing Location** LCA has not substantially changed since the initial 1989 NHL nomination and continues to contribute outstandingly to the historic character of the district. Contributing resources include the landscape (one contributing site) and twenty-one buildings. The character area retains integrity in the aspects of location, design, association, and materials. The Calumet Housing Location is integral to the character of the overall district as a Calumet & Hecla Mining Company owned and operated housing location, specifically for upper-level managers during the period of significance. The small, evenly spaced lots platted by the company created a dense residential neighborhood that is still evident in the patterns displayed by streets, buildings, and residential vegetation. Historically, this housing location had a strong functional and visual connection to the

adjacent mining landscape, due to its placement between the shaft complexes of the Calumet Conglomerate and Kearsarge Amygdaloid Lodes. Some of this character has been lost, although remnants remain on the conglomerate lode side. The houses retain their historic setting, form, workmanship, and materials with few alterations, most of which are compatible with their historic character. The construction of recent outbuildings and addition of garages and entries to some of the buildings have created a variety of adaptations, but the scale, rhythm, and character of the historic residences remain apparent. The majority of non-contributing resources are residential garages and outbuildings from the mid-twentieth century. They were not included in the resource count for the original NHL designation. They are one story, generally located to the rear of property parcels and do not substantially detract from the pattern of historic housing in this LCA. The continued use of historic houses for residences reflects the historic land use and strengthens the connection between this area and its significant historic role as a part of the Calumet & Hecla Mining Company operations.

The area of the location within the NHL boundary is smaller than its historic extent; with the exception of the exclusion of the No. 16 Captain's Office (not historically associated with the Calumet Conglomerate Lode), the boundary has not changed since the original NHL nomination in 1989.

4. Landscape Character Area C: Agassiz Park (See Maps 4: S-1 and 6: LCA-C)

Contributing: 1 Site
Non-Contributing: 14 Buildings, 1 Structure

Description

Since the earliest days of the Calumet & Hecla Mining Company, **Agassiz Park** has functioned as a commons area and transitional or buffer space between the mining activities along the industrial core/Calumet Conglomerate Lode, and the commercial and institutional areas of the Village of Calumet. It represents the physical transition between the lode-oriented Industrial and Mine Management Core landscape and the orthogonal grid-oriented Civic Core landscape, and the symbolic transition between company-controlled property and the nominally independent Calumet community. Although it was owned by the company during the period of significance, functionally it was a liminal space used throughout its history as a public common. In fact, it was originally known as the Calumet Common, possibly a reference to Boston Common in the city where many of the company's officers and investors lived and where the company itself was officially headquartered from its incorporation until 1968. In the company's early years in the 1870s-1880s, workers used the space as pasturage and hay fields, then as material storage and a rail yard. For a time, a passenger depot was located in the area. From the 1890s-1910s it was chiefly used for recreation, including a fenced baseball field with grandstand at the northwest corner. For the company's fiftieth anniversary in 1916, the Common was converted to a grass-covered park for the community-wide celebration. In 1921-1923, it was developed as a formal community park by the company, using company workers, following the plans of Boston landscape architect Warren H. Manning, and named for company president Alexander Agassiz, who died in 1910.

The Agassiz Park LCA is a triangular area bounded by Fourth Street on the west, Elm Street on the north, and a diagonal line starting at the intersection of Elm and Waterworks Streets and extending southwest to a point just east of the intersection of Fourth Street and Red Jacket Road. The entire area was included within the boundary of the 1989 NHL district. The park is one contributing site and contains fifteen non-contributing resources.

Agassiz Park is located west of the Calumet & Hecla Mine Industrial and Management Core LCA A (see Map 4: S-1) and east of the Civic Core LCA D and is spatially defined by the juxtaposed street grids of both areas.

The area bridges the gap between the diagonally-oriented grid of the Industrial and Management Core, which paralleled on the surface the below-ground orientation of the Calumet Conglomerate Lode, and the orthogonal grid of the Civic Core. At the north end of the character area are grass athletic fields for the Calumet-Laurium-Keweenaw (CLK) schools. These include an oval track and bleachers, smaller areas for field events such as jumping and throwing, and several small concession and storage buildings. The buildings are generally one-story, side-gabled frame buildings with asphalt-shingled roofs. A one-story, concrete block fieldhouse with a hipped, asphalt-shingle roof was recently added at the west side of the track. The athletic fields are enclosed by a chain-link fence and bordered by rows of trees on the east, south, and west. The athletic fields border Elm Street on the north. While Elm Street is paved with asphalt, there are no sidewalks between the street and fence; this area supports vehicle parking for school athletic events. The athletic fields are consistent with Manning's plan for the park that placed active recreation uses in this location, including a football field and running track in the approximate location of the current track.

Immediately west of the athletic fields, on the northwest corner of the site, is a dollar store (340 Fourth Street), surrounded by paved parking on the north and west sides. To the south of the store is another large paved parking area. This area of Agassiz Park was sold for development in 1976. A grocery store was built at this time, and later replaced (around 2015) on the same site by this Dollar Store, which is a rectangular, one-story building with a low-sloped gabled roof, clad in vertical metal siding.

To the south of the commercial store is the heart of the public park. This is the most intact portion of Warren H. Manning's plan as executed in 1923. Manning's design featured radial *allées* consisting of crushed stone paths lined with single-species canopy trees that intersected at a focal point featuring a bronze statue of Alexander Agassiz by Paul Wayland Bartlett. These paths responded to long-present patterns of circulation connecting the industrial core to downtown Calumet through the commons. Three of these radial allées remain and are lined with two Paper Birch (*Betula papyrifera*), six Red Oak (*Quercus rubra*) and sixty-one Red Maples (*Acer rubrum*). The Agassiz statue was moved in 1974 to a new location east of the C&H Library. The park is bordered on the western edge by parking along Fourth Street, installed in 1990. A restroom/activity building, built in 1991, is also located on the western side of the park. This is a square, one-story building with an asphalt-shingled pyramidal roof topped by a square cupola.

Along the eastern edge of the character area is a modern senior housing development and affordable housing complex. The development consists of four townhouses and an apartment building, accessed by Park Avenue, a paved road that enters the character area from Fourth Street and curves north and east to end in a cul-de-sac. Rectangular parking areas are located between the buildings. The senior apartment building is a four-story, V-shaped brick-clad building with two lower wings, one to the south and a larger addition to the northeast. Two maintenance sheds are located northeast of the apartments. The four townhouses are two-story, rectangular buildings with side-gabled, asphalt-shingled roofs, clad in brick on the lower levels and horizontal siding on the upper levels. At the far northeast end of the complex is a one-story, front-gabled maintenance shed.

A six-foot woven wire fabric fence extends along the eastern edge of the housing complex; the fence is bordered on its western side by a linear planting of mixed species including Northern White Cedar (*Thuja occidentalis*), Eastern Red Cedar (*Juniperus virginiana*), pine (*Pinus* spp), and Lombardy poplars that reflects Manning's design for vegetative borders around portions of the park. This development dates to the late 1960s or early 1970s, when the Calumet Housing Authority obtained this part of the park.

At the far southwest corner of this area is a mid- to late twentieth-century insurance office building (100 Fourth Street). It one story high, clad in brick with a flat roof and metal-clad fascia.

Inventory of Resources, Landscape Character Area C: Agassiz Park

(ID numbers are keyed to the attached maps)

ID #	HISTORIC NAME (CURRENT NAME)	ADDRESS	STREET	TYPE	STATUS
NA	Agassiz Park Landscape	NA	NA	Site	Contributing
080	Family Dollar	340	Fourth St.	Building	Noncontributing
081	Stadium Bleachers	25885	Elm St.	Structure	Noncontributing
082	Locker Rooms	25825	Elm St	Building	Noncontributing
083	Press Box	25847	Elm St	Building	Noncontributing
101	Fieldhouse	Unk	Elm St	Building	Noncontributing
084	Park Place Senior Housing	1	Park Ave	Building	Noncontributing
085	Park Place Townhouse	4587	Park Ave	Building	Noncontributing
086	Park Place Townhouse	5441	Park Ave	Building	Noncontributing
087	Park Place Townhouse	6099	Park Ave	Building	Noncontributing
088	Park Place Townhouse	6099	Park Ave	Building	Noncontributing
089	Farmers and Merchants Mutual Insurance	100	Fourth St.	Building	Noncontributing
090	Public Restrooms	Unk	Fourth St.	Building	Noncontributing
091	Housing Commission Shed	3389	Park Ave	Building	Noncontributing
092	Housing Commission Shed	3389	Park Ave	Building	Noncontributing
093	Maintenance Shed	Unk	Park Ave	Building	Noncontributing

Integrity Assessment

The **Agassiz Park** LCA has not substantially changed since the initial 1989 NHL nomination and continues to contribute to the historic character of the district. The main contributing resource is the landscape (one contributing site), including the extant portions of Agassiz Park and the athletic fields. The character area retains integrity in the aspects of location, setting, association, and design. Agassiz Park was historically a place where the mining and community landscapes physically and functionally intersected, and this essential character remains intact and important in understanding the significant connections between company and community. It was the location of passive and active recreation throughout its history, uses which continue to the present day. The radial walkways that were central to Warren H. Manning's design are recognizable on the landscape today, representing the last major execution of the C&H Company's practice of corporate paternalism. The radial allées continue to frame views to and along the streets of downtown Calumet, emphasizing its connections to the Civic Core landscape.

The park has suffered impacts to integrity since the end of the period of significance, including the encroachment of multi-story residential and commercial development and alterations related to the addition of non-contributing recreation facilities such as a basketball court, horseshoe courts, and a bike pump track. However, it is important to clarify that most of these alterations were present at the time of the 1989 nomination. The few changes to the character area since the 1989 nomination are the expansion of parking

along Fourth Street, the construction of the small restroom/event building, and the replacement of the non-historic grocery store with a franchise dollar store, which occupies a smaller footprint than the previous building.

5. Landscape Character Area D: Civic Core (See Maps 4: S-1, 8: LCA-D, and 5: H-1 Housing Locations)

Contributing: 72 Buildings, 1 Site
Non-Contributing: 28 Buildings

Description

The Calumet **Civic Core** LCA was historically the heart of the Village of Red Jacket/Calumet, a municipality that was nominally independent of the Calumet & Hecla Mining Company. However, the two entities were in practice interdependent, and the company owned land within the village and donated or leased some of that land for the construction of community institutions, such as churches. Historically, commercial buildings were clustered along the Fifth and Sixth Street corridors from Pine Street on the north to Scott Street on the south. During the earliest decades of development, interspersed with commercial development were tenements and more industrial enterprises. The area between Fourth and Sixth Streets and Scott and Armory Streets was known as Temple Square due to the cluster of churches and public institution buildings there, and also acted as a gateway into the village from the industrial area on Red Jacket Road.

The Village of Calumet, known at the time as Red Jacket, was platted in 1868 by Edwin Hulbert and officially incorporated as the Village of Red Jacket in 1875. For most of the period of national significance, the community was informally known as Calumet, and this was also the name used by the post office which served the whole area. Confusingly, the nearby town of Laurium was called Calumet for some time. In 1895, that community was renamed Laurium, and the Village of Red Jacket legally adopted the name Calumet in 1929. The majority of this character area was included within the boundary of the 1989 nomination except for a few properties on the west side. There are seventy-three contributing and twenty-eight non-contributing resources.

The Civic Core is located west of the Agassiz Park LCA C and Blue Jacket Housing Location LCA E, and east of the Village of Calumet Housing LCA B (see Map 4: S-1). It is bounded roughly by Fourth Street on the east, Armory and Scott Streets on the south, Birch Lane (between Sixth and Seventh Streets) on the west, and Pine Street on the north, although there are some deviations on the northwest where the commercial buildings begin transitioning into the residential area. Fourth Street jogs to the east north of Elm Street, but the character area boundary continues north through the center of the block to mark the edge of the Blue Jacket character area. The southern portions of the character area are on relatively level ground, but the topography slopes gently higher to the north. The area is spatially defined by the parallel north-south streets of Fourth, Fifth, and Sixth Streets, which are oriented north-south to match the orthogonal grid. These are bisected by, from south to north, Scott, Portland, Oak, and Elm Streets. The blocks are longer north-south than east-west. Within the blocks, the lots are rectangular with the short sides of the lots fronting on the numbered streets, creating a densely packed commercial pattern that contrasts with the adjoining residential neighborhoods and the open ground of Agassiz Park. This pattern is broken at Temple Square, where the roads are irregular and the larger institutional buildings cover more ground.

The streets in the character area are paved with asphalt and have curbs and sidewalks, with the exception of Fourth Street, which only has sidewalks on part of the east side near Agassiz Park. Sections of Fifth Street between Elm and Pine Streets, and Oak and Portland Streets between Fourth and Fifth Streets, have brick pavers. There are asphalt paved alleys through the center of the blocks between Fifth and Seventh Streets.

Parking is generally on the street, but some vacant lots have been paved to serve as parking lots, as well as the rear lots facing onto Fourth Street.

Within the character area, the contributing commercial buildings date primarily between 1890 and 1910. They generally face onto the main north-south streets (Fifth and Sixth) and are built out to the lot lines. Buildings typically range from one to three stories and reflect the village's commercial development over time, as frame houses and stores were replaced by sandstone and brick business blocks. The dense mix of residences and commercial development may best be reflected in the [redacted]

Some modest vernacular frame buildings from prior to 1890 survive, including the circa 1869 John Green Building (101 Fifth Street), reportedly the oldest wood-framed building in the village, although it was substantially rebuilt after being damaged by fire in 1912. They sit side-by-side with imposing masonry, three-story buildings built in subsequent decades with Italianate, Renaissance Revival, and Neoclassical facades. Many of these latter buildings are faced with the local Jacobsville sandstone in rusticated or smooth applications. A few newer buildings have been added to the streetscape, but they generally fit into the scale, massing, and materials of the existing buildings. While this nomination was being prepared, three contributing buildings in the district, the Mandelbaum Building (108 Fifth Street), Bloy Block (112 Fifth Street), and the Holman Block (116-120 Fifth Street), were destroyed by fire; the updated resource counts reflect this.

Storefronts have also evolved over time, and some buildings have been faced with new materials from a later period. The earliest building fronts typically reveal limited embellishments such as decorative moldings and bracketed wood cornices, whereas larger masonry structures often display terra cotta elements, cast iron columns, engaged pilasters, and similar architectural elements. A number of the earlier buildings were updated with a more modern masonry veneer, such as the Ruppe Department Store Building (211 Fifth Street). The Michigan firm of (Demetrius Frederick) Charlton, (R. William) Gilbert, and (Edward) Demar designed a new Romanesque Revival style front for this business in 1899 and included elaborate terra cotta ornamentation. Local architect Charles K. Shand likewise designed a new third floor and façade for the Quello Block (308 Fifth Street) in 1900 and rented space in the building for his office. Next door to this, in 1907 local architect Frank W. Hessenmueller designed a new, two-story Renaissance Revival style building for Quello, to accommodate the F. M. Kirby and Co. 5 and 10 Cent Store at 310 Fifth Street. Hessenmueller explored the use of projecting purple brick against an orange brick wall to imply massive quoins in his design for the 1909 Tambellini Block (508-510 Portland).[197] Large windows at the second and third floors have French doors leading onto iron balconies, which are supported by scrolled iron brackets.

Sixth Street is now less densely packed than Fifth Street, with several vacant lots historically occupied by business buildings now converted to parking areas. Despite this, Sixth Street contains some of the most distinctive buildings in the character area. It is anchored on the north by the Calumet Theatre (340 Sixth Street), an 1898 opera house that is a village institution and which draws on the design ideas of the Italian Renaissance style. The imposing three-story rectangular building is built of rusticated Jacobsville sandstone on the first floor

[197] Dana Peavey, Stevan Sliger, John Krystof, and Travis Dvorak, "Buildings by Charlton and Gilbert (1891-95)," *Copper Country Architects* (website), http://www.cca.ss.mtu.edu/ch_build.htm; Kiel Vanderhovel and Derek Dykens, "Charles K. Shand," *Copper Country Architects*, http://www.cca.ss.mtu.edu/sha.htm; Alison K. Hoagland, "Frank W. Hessenmueller," *Copper Country Architects*, http://www.cca.ss.mtu.edu/hf_build.htm (all accessed September 2020).

with tan brick trimmed with more sandstone on the upper floors. The complex roofline features copper cornices and a square clock tower projecting above the roofline on Sixth Street. Shand designed the building as an addition to the 1886 Red Jacket Village Hall designed by John B. Sweat. Architect William Eckart of Chicago designed the intricately ornamental interior. Shand designed two other noteworthy buildings across the street: the 1899-1900 Romanesque Revival style Red Jacket Village Fire Hall (327 Sixth Street), and the 1898 Edward Ryan Block (305-307 Sixth Street) with its notable large bowed bay. Further south on Sixth Street at the intersection of Oak Street are four large-scale commercial buildings, including the 1905 Michigan House (300 Sixth Street), trimmed with sandstone and featuring two-story oriel windows. Local architect Charles Maass designed the three-story building for the Bosch Brewing Company, and it includes a largely intact interior saloon. In addition to this building, Maass produced designs for several buildings further south along Sixth Street. For his 1899-1900 remodel of the two-story Vertin's Department Store at 216-220 Sixth Street, built of sandstone, Maass designed two additional floors of red brick, and repeated on the fourth floor the round-arched windows from the second floor. Working with his brother Frederick Maass, he again incorporated curving elements for their commercial designs after 1900. Their design for the 1905 Jacka Block (200 Fifth St., later Merchants and Miners Bank) incorporated an oriel window on the building's corner. Their work on the elegant 1906 Calumet State Bank (219 Sixth Street), which stands diagonally across from the Michigan House, may be the most refined. The Renaissance Revival style bank building was designed to complement the Coppo Block adjacent to it on Sixth Street. Both are three stories with round-arched windows at the third story. The brick and sandstone bank has a curved outer corner, and a large, modillioned cornice. Maass' integration of projecting and curving design elements is found in the large circular corner turret of the 1898 Kinsman Block (101 Sixth Street), and the nearby 1898 Hermann Block (106 Sixth Street) with its two pressed metal oriel windows.[198]

The south end of the character area has a cluster of churches and institutional buildings built on land donated by C&H for this purpose and known as Temple Square. At 25725 Scott Street is the 1900 St. Anne's (French-Canadian) Catholic Church. This Gothic Revival church, designed by Charlton, Gilbert, and Demar, is built of rough-faced Jacobsville sandstone with a prominent corner bell tower, triple Gothic-arched entrances, and engaged buttresses. It is now home to the Keweenaw Heritage Center. Adjacent to the church is the two and one-half story, Tudor Revival style St. Anne's Rectory at 25719 Scott Street, built in 1909 from designs by Hessenmueller. Across the street from the church is the 1888 Union Building, so-called because of a "union" between the Masons and Oddfellows fraternal organizations to fund its construction. It was designed by local architect Byron H. Pierce, the first architect to set up a business in the Keweenaw. Three stories high, the building is constructed of red brick with sandstone trim and a cornice with modillions. Masonic and Oddfellows symbols appear in the arched window lintels. In 1889 it also housed the Merchant and Miners Bank following Calumet and Hecla's efforts to move commercial businesses out of the Calumet & Hecla location and into the village. This building is the NPS visitor center for Keweenaw National Historical Park.[199]

To the south are three more churches. The 1894 First Presbyterian (Scottish) Church (57055 Fifth Street) is a cruciform, front-gabled Gothic Revival church with a sandstone foundation, wood clapboard walls, and a corner tower. The 1893 Christ Church Episcopal (57031 Fifth Street), designed by Calumet & Hecla employee Charles W. Whiting, is a rectangular, front-gabled Gothic Revival church with a sandstone foundation, clapboard siding (which replaced earlier shingles), and lancet windows. The 1896 Carmel Evangelical Lutheran (Swedish) Church (37030 Sixth Street) is a rectangular, front-gabled Gothic Revival church built of rough-faced Jacobsville sandstone with a prominent square entry tower on the front (Sixth Street) elevation. Temple Square also includes the 1897 Young Men's Christian Association building (25701 Wedge Street), which after 1908

[198] Vanderhovel and Dykens, "Charles K. Shand"; Morgan Davis, "Charles W. Maas, Frederick Maas, Maas Brothers," *Copper Country Architects* (website), http://www.cca.ss.mtu.edu/ma_build.htm (both accessed September 2020).
[199] Peavey, et al., "Buildings by Charlton and Gilbert"; Hoagland, "Frank W. Hessenmueller"; Brandon M. Herman, "Byron H. Pierce," *Copper Country Architects* (website), http://www.cca.ss.mtu.edu/pb_build.htm (accessed September 2020).

was remodeled to house the Benevolent Protective Order of Elks. It is a one-story rectangular building set on a raised basement. The building has a hipped roof and is constructed of rough-faced Jacobsville sandstone, with a one-story addition on the north side. This addition was originally an open porch with neoclassical columns; it is now sided in clapboard, but the classical style influence is still evident in the pedimented entry area.

Inventory of Resources, Landscape Character Area D: Civic Core

(ID numbers are keyed to the attached maps)

*NOTE: three contributing buildings (ID #s 101, 103, 105) were removed from this table and the corresponding map after they were destroyed by fire during the final review of this nomination. ID# 101 was subsequently reused in LCA C-Agassiz Park for a newly constructed fieldhouse.

ID#	HISTORIC NAME (CURRENT NAME)	ADDRESS	STREET	TYPE	STATUS
NA	Civic Core Landscape	NA	NA	Site	Contributing
094	Tambellini Service Station	501	Elm St.	Building	Noncontributing
095	Residence	509	Elm St.	Building	Noncontributing
096	Union Building (Keweenaw NHP Visitor Center)	98	Fifth St.	Building	Contributing
097	Public Chevrolet Dealership Building	100	Fifth St.	Building	Noncontributing
098	John Green Building	101	Fifth St.	Building	Contributing
099	Calumet Block	104	Fifth St.	Building	Contributing
100	Commercial Building	107	Fifth St.	Building	Noncontributing
102	Hermann Block	111	Fifth St.	Building	Contributing
104	Commercial Building	113	Fifth St.	Building	Noncontributing
106	Hennes Block	117	Fifth St.	Building	Contributing
107	Jacka Block (Merchants and Miners Bank)	200	Fifth St.	Building	Contributing
108	Baer & Dymock Meat Market	201	Fifth St.	Building	Contributing
109	Sauer Building	205	Fifth St.	Building	Contributing
110	IOOF Building	206	Fifth St.	Building	Contributing
111	Commercial Building	208	Fifth St.	Building	Contributing
112	Sauer Residence/Commercial Building	209	Fifth St.	Building	Contributing
113	Ruppe Block	210	Fifth St.	Building	Contributing
114	Ruppe Department Store Bldg.	211	Fifth St.	Building	Contributing
115	Commercial Building	216	Fifth St.	Building	Noncontributing
115	Commercial Building, Garage	216	Fifth St.	Building	Noncontributing
116	Woolworth Building	217	Fifth St.	Building	Noncontributing
117	Commercial Building	218	Fifth St.	Building	Contributing
118	Commercial Building	220	Fifth St.	Building	Contributing
119	Caesar Block	221	Fifth St.	Building	Contributing
120	Shea Block	300	Fifth St.	Building	Contributing
121	Murphy Block	301	Fifth St.	Building	Contributing

122	Paine, Webber & Company Building	303	Fifth St.	Building	Contributing
123	Levin Building	305	Fifth St.	Building	Contributing
124	Quello Block	308	Fifth St.	Building	Contributing
125	F. M. Kirby Co. 5 and 10 Cent Store	310	Fifth St.	Building	Contributing
126	Michigan American Water Company Building	311	Fifth St.	Building	Noncontributing
127	Taylor Building	312	Fifth St.	Building	Noncontributing
128	Commercial Building	315	Fifth St.	Building	Contributing
129	Commercial Building	316	Fifth St.	Building	Noncontributing
130	Commercial Building	317-321	Fifth St.	Building	Noncontributing
131	Commercial Building	318	Fifth St.	Building	Contributing
131	Commercial Building, Garage	318	Fifth St.	Building	Noncontributing
132	Commercial Building	320	Fifth St.	Building	Contributing
133	Commercial Building	322	Fifth St.	Building	Noncontributing
134	Commercial Building	323	Fifth St.	Building	Noncontributing
135	Commercial Building	324	Fifth St.	Building	Noncontributing
136	Commercial Building	326	Fifth St.	Building	Noncontributing
137	Commercial Building	330	Fifth St.	Building	Contributing
138	Carlton Block	333	Fifth St.	Building	Contributing
139	Butler Building	335	Fifth St.	Building	Contributing
140	Kekonen Block	336	Fifth St.	Building	Noncontributing
141	Commercial Building	339	Fifth St.	Building	Contributing
142	Commercial Building	400	Fifth St.	Building	Contributing
143	Commercial Building	403	Fifth St.	Building	Contributing
144	Commercial Building	412	Fifth St.	Building	Contributing
145	Commercial Building	414	Fifth St.	Building	Contributing
146	Residence	414 1/2	Fifth St.	Building	Contributing
146	Residence, Outbuilding	414 1/2	Fifth St.	Building	Contributing
147	Commercial Building	421	Fifth St.	Building	Noncontributing
148	Commercial Building	423	Fifth St.	Building	Contributing
149	Commercial Building	425	Fifth St.	Building	Contributing
150	Commercial Building	426	Fifth St.	Building	Noncontributing
151	Agnitz Block	427	Fifth St.	Building	Contributing
152	Commercial Building	428	Fifth St.	Building	Noncontributing
153	Dunstan Block	429	Fifth St.	Building	Contributing
154	Reding Building	430	Fifth St.	Building	Contributing
155	J.W. Isakson Building	431	Fifth St.	Building	Contributing
156	Lambert Building	433	Fifth St.	Building	Contributing

157	Christ Church Episcopal	57031	Fifth St.	Building	Contributing
158	First Presbyterian Church (Scottish)	57055	Fifth St.	Building	Contributing
159	Sorsen Block	507	Oak St.	Building	Contributing
160	Pinten Block	460-464	Pine St.	Building	Contributing
161	Tambellini Block	508-510	Portland St.	Building	Contributing
162	Commercial Building	512	Portland St.	Building	Contributing
163	Kinsman Building	513-515	Scott St.	Building	Contributing
164	Olson Block	25703	Scott St.	Building	Contributing
165	Saint Anne's Rectory	25719	Scott St.	Building	Contributing
166	Saint Anne's (French- Canadian) Catholic Church (Keweenaw Heritage Center)	25725	Scott St.	Building	Contributing
167	Kinsman Block	101	Sixth St.	Building	Contributing
168	Hermann Block	104-106	Sixth St.	Building	Contributing
169	Ruppe Residence/Knights of Columbus Hall	109	Sixth St.	Building	Contributing
170	Bosch Building	117	Sixth St.	Building	Contributing
171	Gas Station	200	Sixth St.	Building	Noncontributing
172	United States Post Office	201	Sixth St.	Building	Noncontributing
173	Commercial Building	208	Sixth St.	Building	Noncontributing
174	V. Coppo Block	215-217	Sixth St.	Building	Contributing
175	Vertin's Department Store	216-220	Sixth St.	Building	Contributing
176	Calumet State Bank	219	Sixth St.	Building	Contributing
177	Bosch Brewing Company (Michigan House)	300	Sixth St.	Building	Contributing
178	Lisa Block	301	Sixth St.	Building	Contributing
179	Ryan Warehouse and addition	304-310	Sixth St.	Building	Noncontributing
180	New Edward Ryan Block	305-307	Sixth St.	Building	Contributing
181	Commercial Building	311	Sixth St.	Building	Noncontributing
182	Asselin Block	312-314	Sixth St.	Building	Contributing
183	Gasparovich Building	316	Sixth St.	Building	Contributing
184	Commercial Building	318	Sixth St.	Building	Contributing
185	Curto Block	322	Sixth St.	Building	Contributing
186	Red Jacket Village Fire Hall	327	Sixth St.	Building	Contributing
187	Commercial Building	333	Sixth St.	Building	Contributing
188	Calumet Theatre	340	Sixth St.	Building	Contributing
189	Commercial Building	400	Sixth St.	Building	Noncontributing
190	Schumaker Block	401	Sixth St.	Building	Contributing
191	Michigan Auto Company Building	416	Sixth St.	Building	Noncontributing
192	Carmel Lutheran Church (Swedish)	37030	Sixth St.	Building	Contributing
193	Young Men's Christian Association (Calumet Elks Lodge No. 404)	25701	Wedge St.	Building	Contributing

Integrity Assessment

The **Civic Core** has not substantially changed since the 1989 NHL nomination and continues to contribute to the historic character of the district. Contributing resources include the landscape (one contributing site) and seventy-two buildings. The character area retains integrity in the aspects of location, setting, design, association, feeling, workmanship, and materials. The Civic Core is integral to the character of the overall district as the Calumet community's downtown commercial district during the period of significance. The village plat established in 1868 by C&H founder Edwin Hulbert and developed by the company and members of the community during the period of significance remains evident in the patterns displayed by streets and buildings in the area. Most alterations and additions to buildings within the character area are compatible with the historic character of the commercial district. Similarly, a few buildings have been lost, but the losses do not appreciably impact the overall character of the district. The continued use of the buildings for commercial and institutional uses reflects the historic land use and strengthens the connection between this area and its significant historic role as part of the greater Calumet community.

As noted above, only minor changes have occurred to resources within this area of the 1989 NHL boundary. There are no reductions or deletions to this part of the 1989 NHL boundary.

6. **Landscape Character Area E: Blue Jacket Housing Location** (See Maps 4: S-1, 9: LCA-E, and 5: H-1 Housing Locations)

   Contributing: 96 Buildings, 1 Site
   Noncontributing: 25 Buildings

Description

The **Blue Jacket Housing Location** LCA was historically associated with the Calumet & Hecla Mining Company as one of the company's unincorporated housing locations. The majority of the frame houses date from the mid-1880s to around 1900. Until the mid-1890s, a branch of the Mineral Range Railroad passed south of houses fronting the south side of Cedar Street; the presence of this rail line resulted in the subsequent arrangement of varying lot depths that responded to the curve of the track. The line was removed after 1893, Elm Street was extended east beyond Fourth Street, and between 1897 and 1900 the company built twelve houses along Elm Street. The housing location was historically bounded roughly by Fourth Street on the west, Waterworks Street on the east, Pine Street on the north, and Elm Street on the south. The location also includes houses on the west side of Fourth Street, around the intersection of Elm and Waterworks Streets; on the north side of Pine Street between Third and Waterworks Streets; on either side of Waterworks Street north of Pine Street; and the extant boilerhouse and pumphouse at the waterworks on Calumet Lake (Calumet & Hecla Pond).

This character area was included in the 1989 NHL nomination. The boundary remains largely unchanged, with two exceptions. The frame, two-story Lincoln School (57474 Waterworks Street) on the southeast corner of Pine and Waterworks Streets had been converted to commercial use by the 1950s and has low integrity due to two large one-story shed additions added to the east (2017-2018) and south (2020-2021) sides; it has therefore been eliminated from the district (See Map 4: S-1). Curiously, the resources on the west side of Fourth Street and the east side of Fifth Street were both included in the original nomination, but the boundary was drawn to eliminate the interior of the block. To simplify the boundary on this block, the second change to the boundary includes this formerly excluded area, while maintaining the boundary established in 1989 that excludes certain

commercial parcels fronting on the south side of Pine Street (which lack integrity) from Fourth to Fifth Street. There are ninety-seven contributing and twenty-five non-contributing resources.

The Blue Jacket Housing Location is north of and divided from the Agassiz Park (LCA C) by Elm Street, and east of the Civic Core (LCA D). It is set on relatively level ground and is spatially defined by the orthogonal street grid continued from the adjoining Village of Calumet. However, the street grid is irregular in this area, reflecting the evolution of the housing location. Fourth Street and Waterworks Street are the chief north-south roads, and Cedar Street asymmetrically bisects the long block. Second and Third Streets are shorter north-south roads running from Cedar Street to Pine Street. The lots are relatively small, evenly spaced, and rectangular with their short sides facing the street. Historically, the lots facing Pine Street were more irregular, reflecting their mixed commercial, residential, and institutional uses.

The streets are narrow but level and paved with asphalt. The north end of Waterworks Street becomes a dirt road north of the residential area; it curves to the east to enter Waterworks Park (not in the district), while just beyond the curve is a dirt area in front of the Calumet & Hecla waterworks. A dirt track that was a former railroad grade and now serves as a multi-use snowmobile trail also crosses Waterworks Street just south of the area where it begins to curve. The streets have no curbs or sidewalks. The lots typically do not have driveways; parking is generally on the street and the garages that do exist in the landscape character area are often set only slightly back from the street with a short asphalt or concrete apron in front. A few houses do have asphalt or gravel parking areas beside the house; this is more common on Waterworks Street north of Pine Street. There is also a large, paved parking area on the west side of Waterworks Street south of Pine Street. Pine Street (M-203) is a major east-west surface road and has the character of a busy thoroughfare. The Copper Range Railroad formerly ran through this character area, cutting through Waterworks Street north of Pine. Only traces of the corridor remain visible, mostly in compacted soil and tree openings. Because the rail corridor in this area is not sufficiently intact or cohesive to be identified as a distinct resource or historic associated feature, it is described as an element of the landscape.

The eighty-two extant, contributing historic residential properties in the Blue Jacket Housing Location date from the late nineteenth century. Most were built by company employees on lots leased from the company; however, the company built twelve houses on Elm Street facing Agassiz Park as rental properties in the late 1890s. Houses south of Pine Street are uniformly built close to the streets, with small rear yards. The most common house type in the character area is a two- to two-and-one-half story, front-gabled, rectangular plan house with a one-story, three-quarter to full-width enclosed porch on the front. Scattered throughout are a few L-plan and T-plan houses and several houses that were originally duplexes (e.g. two adjoining houses at 57435 and 57433 Fourth Street). The Elm Street houses were originally identical two-story, front-gable houses. The houses are more varied in form and character along Pine Street. For example, 708 Pine Street is a large, two-story side-gabled duplex with entries on either end. Exterior materials are typically wood clapboard or shingle; some houses have asphalt roll siding or, less commonly, aluminum/vinyl replacement siding. Roofs are generally asphalt shingle with some metal roofs; dormers are present only on some of the side-gabled houses. Windows are usually double-hung, one-over-one units, with two-over-two or three-over-one windows common on enclosed porches. Single-leaf entry doors are typically located on the front elevation, sometimes within open or enclosed porches. Most houses have porches, typically a full-length enclosed or open porch, especially on the gable-front buildings. Garages, where present, are either one-story, single-car additions to the side of the house (earliest examples, e.g., 25918, 25924, 25940, and 25954 Elm Street), or newer garages set back from the house in rear or side yards (examples are at 25867 and 25877 Cedar Street). There are also a number of smaller outbuildings, typically sheds of varying dates. These are usually set along the rear property lines.

There are three non-residential contributing properties in the landscape character area. At the end of Waterworks Road near Calumet Lake is a ca. 1880 brick Boilerhouse. The lake was created in the late 1860s by damming a stream in order to provide a reliable source of water for early Calumet & Hecla milling operations, and some stamp sand "beaches" along the lake's edge date to this early milling period. The Boilerhouse, however, was likely built for the waterworks facility that replaced the short-lived stamp mill, [redacted] On Pine Street are two Finnish Lutheran churches. The Old Apostolic Lutheran Church, on the northeast corner of Pine and Third (25890 Pine St.), is the older church, constructed between 1890-1893. It is simple, wood-framed gable-front building with Gothic lancet windows. The ca. 1900 First Apostolic Lutheran Church at Pine and Waterworks (25971 Pine St.) is a larger, cross-gabled building with a stone foundation, clapboard siding, and round-arched windows.

The four non-contributing primary resources are two residences and 57467 Waterworks Street, a ca. 1982 T-shaped building that was originally built as a senior living center by the First Apostolic Lutheran Church, and currently houses a residential substance abuse recovery facility (Phoenix House). On the far west side of Blue Jacket, west of Fourth Street, there is a non-contributing metal Quonset hut (no address) along the lot line between Fourth and Fifth Streets. It is unclear if it is associated with a property on either of those streets.

The areas around the buildings include lawn, canopy and ornamental trees (the most common are maple (*Acer* spp*)*, oak (*Quercus* spp), pine (*Pinus* spp*),* and apple (*Malus* spp)), ornamental shrubs and foundation plantings (in particular lilac (*Syringa* spp), and a few vegetable and flower gardens.

Inventory of Resources, Landscape Character Area E: Blue Jacket Housing Location

(ID numbers are keyed to the attached maps)

ID #	HISTORIC NAME (CURRENT NAME)	ADDRESS	STREET	TYPE	STATUS
NA	Blue Jacket Housing Location Landscape	NA	NA	Site	Contributing
194	Residence	25837	Cedar St.	Building	Contributing
195	Residence	25842	Cedar St.	Building	Contributing
195	Residence, Garage	25842	Cedar St.	Building	Contributing
196	Residence	25843	Cedar St.	Building	Contributing
197	Residence	25855	Cedar St.	Building	Contributing
197	Residence, Garage	25855	Cedar St.	Building	Contributing
198	Residence	25866	Cedar St.	Building	Contributing
199	Residence	25867	Cedar St.	Building	Contributing
199	Residence, Garage	25867	Cedar St.	Building	Contributing
200	Residence	25877	Cedar St.	Building	Contributing
200	Residence, Garage	25877	Cedar St.	Building	Contributing
201	Residence	25917	Cedar St.	Building	Contributing
202	Residence	25932	Cedar St.	Building	Contributing
202	Residence, Outbuilding	25932	Cedar St.	Building	Noncontributing
203	Residence	25933	Cedar St.	Building	Contributing

204	Residence	25942	Cedar St.	Building	Contributing
205	Residence	25950	Cedar St.	Building	Contributing
206	Residence	25951	Cedar St.	Building	Contributing
207	Residence	25962	Cedar St.	Building	Contributing
208	Residence	25963	Cedar St.	Building	Contributing
208	Residence, Garage	25963	Cedar St.	Building	Contributing
209	Residence	25970	Cedar St.	Building	Contributing
210	Residence	25979	Cedar St.	Building	Contributing
210	Residence, Outbuilding	25979	Cedar St.	Building	Contributing
211	Residence	25990	Cedar St.	Building	Contributing
212	Residence	29503	Cedar St.	Building	Contributing
213	Residence	57426	Cedar St.	Building	Contributing
213	Residence, Garage	57426	Cedar St.	Building	Noncontributing
213	Residence, Outbuilding	57426	Cedar St.	Building	Noncontributing
214	Residence	Unk	Cedar St.	Building	Contributing
215	Residence	25770	Elm St.	Building	Contributing
216	Residence	25782	Elm St.	Building	Contributing
216	Residence, Garage	25782	Elm St.	Building	Contributing
217	Residence	25792	Elm St.	Building	Contributing
217	Residence, Garage	25792	Elm St.	Building	Noncontributing
218	Residence	25804	Elm St.	Building	Contributing
219	Residence	25822	Elm St.	Building	Contributing
220	Residence	25838	Elm St.	Building	Contributing
220	Residence, Outbuilding	25838	Elm St.	Building	Noncontributing
221	Residence	25850	Elm St.	Building	Contributing
221	Residence, Outbuilding	25850	Elm St.	Building	Noncontributing
222	Residence	25860	Elm St.	Building	Contributing
223	Residence	25870	Elm St.	Building	Contributing
224	Residence	25880	Elm St.	Building	Contributing
224	Residence, Outbuilding	25880	Elm St.	Building	Noncontributing
225	Residence	25886	Elm St.	Building	Contributing
226	Residence	25906	Elm St.	Building	Contributing
227	Residence	25918	Elm St.	Building	Contributing
228	Residence	25924	Elm St.	Building	Contributing
229	Residence	25940	Elm St.	Building	Contributing
229	Residence, Outbuilding	25940	Elm St.	Building	Noncontributing
230	Residence	25954	Elm St.	Building	Contributing

231	Residence	25964	Elm St.	Building	Contributing
213	Residence, Garage	25964	Elm St.	Building	Noncontributing
232	Residence	25985	Elm St.	Building	Contributing
232	Residence, Garage	25985	Elm St.	Building	Noncontributing
233	Residence	57386	Fourth St.	Building	Contributing
234	Residence	57395	Fourth St.	Building	Contributing
235	Residence	57396	Fourth St.	Building	Contributing
236	Residence	57407	Fourth St.	Building	Contributing
237	Residence	57408	Fourth St.	Building	Contributing
238	Residence	57415	Fourth St.	Building	Contributing
239	Residence	57424	Fourth St.	Building	Contributing
240	Residence	57425	Fourth St.	Building	Contributing
241	Residence	57433	Fourth St.	Building	Contributing
241	Residence, Garage	57433	Fourth St.	Building	Noncontributing
242	Residence	57435	Fourth St.	Building	Contributing
243	Residence	57436	Fourth St.	Building	Contributing
244	Residence	57444	Fourth St.	Building	Noncontributing
245	Residence	57456	Fourth St.	Building	Contributing
245	Residence, Garage	57456	Fourth St.	Building	Noncontributing
246	Residence	57464	Fourth St.	Building	Contributing
246	Residence, Garage	57464	Fourth St.	Building	Noncontributing
247	Residence	57465	Fourth St.	Building	Contributing
248	Quonset Hut	Unk	Fourth St.	Building	Noncontributing
249	Residence	708	Pine St.	Building	Contributing
250	Old Apostolic Lutheran Church	25890	Pine St.	Building	Contributing
251	Residence	25901	Pine St.	Building	Noncontributing
252	Residence	25926	Pine St.	Building	Contributing
253	Residence	25937	Pine St.	Building	Contributing
254	Residence	25937	Pine St.	Building	Contributing
255	Residence	25962	Pine St.	Building	Contributing
256	First Apostolic Lutheran Church	25971	Pine St.	Building	Contributing
257	Residence	25988	Pine St.	Building	Contributing
258	Residence	57437	Second St.	Building	Contributing
258	Residence, Outbuilding	57437	Second St.	Building	Noncontributing
259	Residence	57440	Second St.	Building	Contributing
260	Residence	57471	Second St.	Building	Contributing
261	Residence	57476	Second St.	Building	Contributing

261	Residence, Garage	57476	Second St.	Building	Noncontributing
262	Residence	25947	Second St.	Building	Contributing
263	Residence	57463	Second St.	Building	Contributing
264	Residence	57438	Third St.	Building	Contributing
265	Residence	57439	Third St.	Building	Contributing
266	Residence	57453	Third St.	Building	Contributing
267	Residence	57461	Third St.	Building	Contributing
268	Residence	75434	Third St.	Building	Contributing
269	Residence	57309	Waterworks St.	Building	Contributing
269	Residence, Garage	57309	Waterworks St.	Building	Noncontributing
270	Residence	57381	Waterworks St.	Building	Contributing
270	Residence, Outbuilding	57381	Waterworks St.	Building	Contributing
271	Phoenix House	57467	Waterworks St.	Building	Noncontributing
271	Phoenix House, Garage	57467	Waterworks St.	Building	Noncontributing
272	Residence	57523	Waterworks St.	Building	Contributing
273	Residence	57524	Waterworks St.	Building	Contributing
274	Residence	57543	Waterworks St.	Building	Contributing
275	Residence	57559	Waterworks St.	Building	Contributing
275	Residence, Outbuilding	57559	Waterworks St.	Building	Contributing
275	Residence, Outbuilding	57559	Waterworks St.	Building	Noncontributing
275	Residence, Outbuilding	57559	Waterworks St.	Building	Noncontributing
276	Residence	57560	Waterworks St.	Building	Contributing
276	Residence, Garage	57560	Waterworks St.	Building	Contributing
277	Residence	57578	Waterworks St.	Building	Contributing
277	Residence, Garage	57578	Waterworks St.	Building	Noncontributing
278	Residence	57593	Waterworks St.	Building	Contributing
278	Residence, Barn	57593	Waterworks St.	Building	Contributing
279	Residence	57611	Waterworks St.	Building	Contributing
279	Residence, Garage	57611	Waterworks St.	Building	Noncontributing
280	Residence	57612	Waterworks St.	Building	Contributing
281	Residence	57629	Waterworks St.	Building	Contributing
282	C&H Waterworks Boiler House and Pump Station	Unk	Waterworks St.	Building	Contributing

Integrity Assessment

The **Blue Jacket Housing Location** LCA has not substantially changed since the initial 1989 NHL nomination and continues to contribute significantly to the historic character of the district. Contributing resources include the landscape (one contributing site) and ninety-six buildings. The character area retains integrity in the aspects

of location, setting, design, association, feeling, workmanship, and materials. The Blue Jacket Housing Location is integral to the character of the overall district as a Calumet & Hecla Mining Company owned and operated housing location during the period of significance. Additionally, it is an excellent illustration of the contrast between the uniform company-built houses along Elm Street and the worker-built houses which, although generally built to similar plans, exhibit greater variation and personalization. The small, evenly spaced lots platted by the company created a dense residential neighborhood that is still evident in the patterns displayed by streets, buildings, and residential vegetation. The houses retain their historic setting, form, workmanship, and materials with few alterations, most of which are compatible with their historic character.

The construction of recent outbuildings and addition of garages and entries to some of the buildings have created a variety of adaptations, but the scale, rhythm, and character of the historic residences remains apparent. The majority of non-contributing resources are residential garages and outbuildings from the mid-twentieth century. They were not included in the resource count for the original NHL designation. They are one-story, generally located to the rear of property parcels, and do not substantially detract from the pattern of historic housing in this LCA. The continued use of historic houses for residences reflects the historic land use and strengthens the connection between this area and its significant historic role as a part of the Calumet & Hecla Mining Company operations.

As noted above, only minor alterations have been made to the 1989 NHL boundary in this area.

7. Landscape Character Area F: Village of Calumet Housing (See Maps 4: S-1, 8: LCA-D F, and 5: H-1 Housing Locations)

Contributing: 133 Buildings, 1 Site, 1 Object
Noncontributing: 63 Buildings

Description

The **Village of Calumet Housing** LCA historically provided the largest concentration of non-company housing within the district. The houses here exhibit a much more wide-ranging character than the company housing locations, reflecting the fact that the village was home not only to the company's rank and file workers, but also the families of the company's management, clerks, and engineers, as well as inhabitants who owned and worked in non-company professions such as commercial stores, professional offices, and public institutions. The majority of the houses date between 1880 and 1910 and are located on about a dozen blocks on Seventh, Eighth, and Ninth Streets, as well as the northernmost block of Sixth Street. It is situated west of the Civic Core (LCA D).

Portions of this LCA were included in the 1989 NHL nomination boundary, chiefly in the corridor of houses to either side of Oak Street. The original nomination notes that the boundary "includes a representative sampling of housing that served company employees. This sampling includes the neighborhoods and streetscapes that appear to possess the highest degree of integrity for the period that ended in 1930. The sample was designed to represent the various types of housing used by miners and other company employees."[200] The current nomination expands the boundary to encompass the entire village housing stock from Birch Lane (the alley between Sixth and Seventh Streets) on the east to the Ninth Street/railroad corridor on the west, and from Pine Street on the north to Scott Street on the south. Survey and research undertaken for this nomination—particularly involving comparison with historic Sanborn maps and analysis of the area's architectural and

[200] Kathleen Lidfors, Mary Jo Hrenchir and Laura Feller, "Calumet Historic District" National Historic Landmark Nomination Form (Washington, DC: US Department of the Interior, National Park Service, February 1988).

landscape character and integrity—demonstrate that the area within the expanded boundary contains a significant concentration of historic resources that represent the major themes of the nomination. There are some pockets of vacant land or later infill, for example on the west side of Seventh Street between Elm and Oak Streets, and along the east side of Ninth Street adjoining the railroad corridor. However, the overall character of the area as a densely packed residential streetscape where a majority of contributing buildings remains from the period of significance. Furthermore, areas on the western edge of the village were historically more sparsely occupied during the period of significance, so the presence of some vacant lots within that area is reflective of the historic condition. There are one hundred and thirty-five contributing and sixty-three non-contributing resources.

The southern portions of the Village of Calumet LCA are on relatively level ground, but the topography slopes gently higher to the north. The area is spatially defined by the parallel north-south streets of Sixth, Seventh, Eighth, and Ninth Streets, which are oriented to match the orthogonal grid. From south to north, these streets are bisected by Scott, Portland, Oak, and Elm Streets. The blocks north of Oak Street are longer north-south than east-west, while the blocks south of Oak Street are square. The lots are rectangular with their short sides mostly fronting on the numbered streets, creating a densely packed residential pattern. A variation to this pattern is along the northern blocks of Eighth Street, which contained the homes of some of the village's most elite residents on more spacious lots.

The streets in the LCA are paved with asphalt and have curbs and sidewalks, with the exception of Ninth Street, which is a dirt/gravel road that was part of the railroad corridor. Seventh Street between Scott and Oak Streets is paved with concrete. There are alleys through the center of the blocks between Sixth and Ninth Streets. Parking is generally on the street. Where garages exist, most are placed in line with or slightly in front of the front the attached houses, creating very short driveways. However, some houses have detached garages in the side or rear yards, accessed either by a driveway on the side of the house, or through the alley. A few paved parking lots are present next to scattered commercial buildings and churches. Along the west side of the landscape character area, where it borders the Yellow Jacket Housing Location Landscape Character Area, is the former railroad corridor of the Mineral Range Railroad, running north-south. Sections of Ninth Street run on either side of the railroad corridor. Although the tracks have been removed, the corridor is still highly evident on the landscape, consisting of a linear visual corridor framed by buildings and trees and surfaced with packed dirt and gravel. The Hancock-Calumet Trail now runs along this corridor. The presence of the Mineral Range Railroad Passenger Depot reinforces the association of this corridor with the Mineral Range Railroad.

Residential buildings dating from the period of significance typically face onto the main north-south streets (Sixth, Seventh, Eighth, and Ninth), are built close to the street, and take up most of the lot. Larger and more elaborate houses in the district, as well as some newer infill, tend to be on larger lots and set back further from the street. An idiosyncrasy of the Calumet village plat is that some lots had two dwellings, one facing the street and one facing the alley. In most cases, only one of the houses on these lots remain, generally the rear house, creating an odd setback on the streetscape. However, a few two-house lots are still visible, for example on the east side of Seventh Street between Oak and Elm, and further south between Scott and Portland, where there are three dwellings on one lot (104 Seventh Street). The large house on this lot was originally the Saint Anne's Church rectory, moved here during the period of national significance.

Most of the extant historic housing properties in the Village of Calumet Housing LCA date from approximately 1880 to 1910 and are frame construction. Houses range from simple vernacular worker housing to elaborate upper middle-class homes designed by architects. An example of an architect-designed home is the ca. 1906 Ulseth House (416 Eighth Street), designed by the Maass Brothers for local builder Edward Ulseth. The two and one-half story, cross-gabled house shows the influence of the Queen Anne and Classical Revival styles, has

a wraparound front porch, and a Palladian window in the front gable end. The house sits on a large, open lot. The two and one-half story Queen Anne style house at 811 Portland reflects the style's combination of irregular massing, large, corbelled chimney, bay windows, multiple types of wall siding, and a large front porch.

Most houses are two- to two-and-one-half stories high, and many are front-gabled. Higher style homes are typically Queen Anne or Craftsman style, such as the series of homes along the west side of Eighth Street just south of Pine (439, 433, 431, 427, and 419 Eighth Street). Materials range from wood clapboard and shingle siding to brick, asphalt roll, and in a few cases replacement aluminum or vinyl siding. Roofs are generally asphalt shingle with some metal roofs. Dormers are common on foursquare/bungalow houses and less so on front-gabled houses. Windows vary widely, from double-hung, one-over-one units to multi-lite configurations and some early twentieth century three-over-one units, typically on enclosed porches. Single-leaf entry doors are mostly located on the front elevation, sometimes within open or enclosed porches. Most houses have porches, typically a full-length enclosed or open porch, especially on the gable-front buildings (a series of these are located on either side of Sixth Street south of Pine Street: 421, 423, 425, and 428 Sixth Street). Garages, where present, are either one-story, single-car additions to the side of the house (earliest examples) or newer garages set back from the house in rear or side yards. There are also a number of smaller outbuildings, typically sheds of varying dates. These are usually set along the rear property lines.

Scattered throughout the Village of Calumet LCA are some commercial and institutional properties; most command dominant corner lots. These include the 1900 Finnish National Lutheran Church (now National Lutheran Church) at the southwest corner of Elm and Eighth Streets (804 Elm Street), a rectangular, front-gabled Gothic Revival church with a sandstone foundation, wood clapboard walls, and a corner tower. Diagonally across the street at 320 Eighth Street is the 1919-1920 M. M. Morrison Elementary School, a three-story Collegiate Gothic style building with a raised basement constructed of red brick with limestone trim and a flat roof. It was designed by John Chubb. Views of this building have been impacted by the recent construction of a parking complex on a vacant lot on Seventh Street adjacent to the school. South of the school at 308 Eighth Street is the 1886 Finnish Temperance Hall, which accommodated a Finnish folk school on the first floor and a social hall on the second. While closely similar to the standard gable-front house form found within the neighborhood, it is distinguished by an asymmetrical gable with a lower eave on the north side through which extend a series of pedimented wall dormers. The building was converted into residential apartments during the NHL period of significance. At the south end of the 300 block stands the 1908 St. Joseph's Church (Slovenian), now known as St. Paul the Apostle Church, at the northwest corner of Oak and Eighth Streets (301 Eighth Street). It is the largest and grandest church in Calumet, designed in the Romanesque Revival style and rendered in rusticated Jacobsville sandstone, with a triple-arched entry and two corner towers. The firm of (Charles K.) Shand & (George D.) Eastman designed the building, with interior design provided by local architect Paul Humphrey Macneil.

On Seventh Street, the 1899 Norwegian Lutheran Church stands at the southeast corner of Seventh and Elm Streets (700 Elm Street). It is a simple cross-gabled Gothic Revival church with a Jacobsville sandstone foundation, wood clapboard siding, and a corner tower. Its design is attributed to local builder Edward Ulseth. At the northeast corner of Seventh and Elm stands the simple, two-story Croatian Cooperative Store (400 Seventh Street), built in 1907 from designs provided by the Maass Brothers. The Croatian presence in this area had been further represented by two St. John the Baptist Roman Catholic Churches; the original burned in 1926 and the second, built in 1940, stood a few lots south of the Norwegian Lutheran Church. It burned in 2018. South of the Morrison School at 315 Seventh Street is the 1914 St. Anthony of Padua convent, designed by Charles Maass. It was built for the no longer extant Polish church of the same name, which stood immediately to the south of the convent (demolished after 1945). The convent is brick and references the Craftsman style with its exposed rafter tails. The steep pyramidal hipped roof includes a central, gabled wall dormer. Further

south along Seventh Street stands the Lucas Block at 101 Seventh Street. The rectangular, two-story frame building historically had two storefronts. The building featured a wide front porch with ribbon windows, oriel windows and an oriel tower capped with a bellcast roof at the corner, and a metal cornice featuring a center peak with decorative scrollwork.

Local architect Frank Hessenmueller designed the 1908 Mineral Range Railroad Depot at the corner of Oak and Ninth Streets (25480 Oak Street), a Renaissance Revival style, rectangular building with its long side facing the tracks. It is constructed of red brick with hipped roofs. The depot has a central two-story section flanked by one-story wings. There are also a few small-scale commercial buildings in the district, survivors of a larger number once found on Oak, Seventh and Eighth Streets.[201]

The residential streetscape has a mature vegetative character, including mown lawns, canopy and street trees (especially along Eighth Street), ornamental shrubs and foundation plantings, and a few vegetable and flower gardens. The most common trees are maple (*Acer* spp*)*, oak (*Quercus* spp), pine (*Pinus* spp*),* and apple (*Malus* spp). Some yards are enclosed with low masonry walls and iron fencing. On the west side of Seventh Street north of Elm Street is a memorial on the site of the Italian Hall (20HO311), where a false shout of "fire" on Christmas Eve 1913, during the Copper Country Strike, caused a panic that killed 73 people. Italian Hall was demolished in 1984 and the memorial, which incorporates the building's rebuilt doorway arch, commemorative plaques and a brick path, was established in 1989. A State of Michigan Historic Site marker, a black granite memorial stone identifying victims, and a National Park Service interpretive sign and facility identification sign are also located on the site. Because the memorial is made out of a portion of the historic building, is located on its historic site, and commemorates an event that took place during the nationally significant period, it is considered contributing.

Non-contributing houses include some mobile homes along Ninth Street, and about half a dozen ranch houses dispersed throughout the district that have replaced earlier dwellings. Most are compatible with the scale and massing of the district.

Inventory of Resources, Landscape Character F: Village of Calumet Housing

(ID numbers are keyed to the attached maps)

ID #	HISTORIC NAME (CURRENT NAME)	ADDRESS	STREET	TYPE	STATUS
NA	Village of Calumet Housing Location	NA	NA	Site	Contributing
283	Residence	100	Eighth St.	Building	Contributing
284	Residence	101	Eighth St.	Building	Contributing
284	Residence, Garage	101	Eighth St.	Building	Noncontributing
285	Residence	108	Eighth St.	Building	Contributing
285	Residence, Outbuilding	108	Eighth St.	Building	Contributing
286	Residence	111	Eighth St.	Building	Contributing
287	Residence	112	Eighth St.	Building	Contributing

[201] Jane C. Busch, "Copper Country Survey Phase III: Houghton County North, C&H Core District" (Keweenaw National Historical Park Advisory Commission, August 2013); Vanderhovel and Dykens, "Charles K. Shand"; Morgan Davis, "Charles W. Maas, Frederick Maas, Maas Brothers"; Hoagland, "Frank W. Hessenmueller"; A. K. Hoagland, "John D. Chubb," *Copper Country Architects* (website), http://www.cca.ss.mtu.edu/cj_build.htm (accessed September 2020).

288	Duplex Residence	112A	Eighth St.	Building	Contributing
289	Residence	118	Eighth St.	Building	Contributing
290	Residence	200	Eighth St.	Building	Contributing
291	Residence	203	Eighth St.	Building	Noncontributing
292	Residence	205	Eighth St.	Building	Noncontributing
293	Residence	208	Eighth St.	Building	Contributing
294	Residence	210	Eighth St.	Building	Contributing
295	Residence	211	Eighth St.	Building	Contributing
296	Residence	214	Eighth St.	Building	Contributing
297	St. Joseph's Church (St. Paul the Apostle Church)	301	Eighth St.	Building	Contributing
298	Residence	304	Eighth St.	Building	Contributing
298	Residence, Outbuilding	304	Eighth St.	Building	Contributing
299	St. Paul's Rectory	307	Eighth St.	Building	Noncontributing
299	St. Paul's Rectory, Garage	307	Eighth St.	Building	Noncontributing
300	Finnish Temperance Hall	308	Eighth St.	Building	Contributing
301	Residence	319	Eighth St.	Building	Contributing
301	Residence, Garage	319	Eighth St.	Building	Noncontributing
302	M.M. Morrison School	320	Eighth St.	Building	Contributing
303	Residence	327	Eighth St.	Building	Noncontributing
304	Residence	329	Eighth St.	Building	Noncontributing
305	Residence	332	Eighth St.	Building	Contributing
305	Residence, Garage	332	Eighth St.	Building	Contributing
306	Residence	335	Eighth St.	Building	Contributing
307	Residence	336	Eighth St.	Building	Contributing
307	Residence, Garage	336	Eighth St.	Building	Noncontributing
308	Residence	400	Eighth St.	Building	Noncontributing
309	Residence	401	Eighth St.	Building	Noncontributing
310	Residence	406	Eighth St.	Building	Contributing
310	Residence, Garage	406	Eighth St.	Building	Noncontributing
310	Residence, Outbuilding	406	Eighth St.	Building	Contributing
311	Residence	411	Eighth St.	Building	Contributing
312	Residence	413	Eighth St.	Building	Contributing
312	Residence, Garage	413	Eighth St.	Building	Noncontributing
313	Ulseth Residence	416	Eighth St.	Building	Contributing
314	Residence	419	Eighth St.	Building	Contributing
314	Residence, Outbuilding	419	Eighth St.	Building	Contributing
315	Residence	420	Eighth St.	Building	Contributing

316	Residence	424	Eighth St.	Building	Contributing
317	Residence	426	Eighth St.	Building	Contributing
318	Residence	427	Eighth St.	Building	Contributing
319	Residence	428	Eighth St.	Building	Contributing
319	Residence, Outbuilding	428	Eighth St.	Building	Contributing
320	Residence	431	Eighth St.	Building	Contributing
320	Residence, Garage	431	Eighth St.	Building	Noncontributing
321	Residence	433	Eighth St.	Building	Contributing
322	Residence	439	Eighth St.	Building	Contributing
323	Residence	443	Eighth St.	Building	Contributing
324	Residence	434-436	Eighth St.	Building	Contributing
325	Residence	707	Elm St.	Building	Noncontributing
326	Duplex Residence	709-711	Elm St.	Building	Contributing
327	Finnish National Lutheran Church and Rectory	804	Elm St.	Building	Contributing
328	Residence	809	Elm St.	Building	Contributing
329	Commercial Building	813	Elm St.	Building	Noncontributing
330	Residence	312	Ninth St.	Building	Noncontributing
331	Residence	316	Ninth St.	Building	Noncontributing
332	Residence	318	Ninth St.	Building	Noncontributing
333	Residence	320	Ninth St.	Building	Noncontributing
333	Residence, Outbuilding	320	Ninth St.	Building	Noncontributing
334	Residence	322	Ninth St.	Building	Noncontributing
334	Residence, Garage	322	Ninth St.	Building	Noncontributing
335	Residence	324	Ninth St.	Building	Noncontributing
336	Residence	326	Ninth St.	Building	Noncontributing
337	Residence	427	Ninth St.	Building	Contributing
337	Residence, Garage	427	Ninth St.	Building	Noncontributing
338	Residence	809	Ninth St.	Building	Contributing
339	Residence	819	Ninth St.	Building	Contributing
340	Railroad Warehouse	Unk.	Ninth St.	Building	Contributing
341	Nelson-Schroeder Block	613	Oak St.	Building	Contributing
342	Residence	700	Oak St.	Building	Contributing
343	Commercial Building	701	Oak St.	Building	Noncontributing
344	Duplex Residence	702-704	Oak St.	Building	Contributing
345	Kitti Meat Market	706	Oak St.	Building	Contributing
346	Residence	713	Oak St.	Building	Contributing
347	Residence	716	Oak St.	Building	Noncontributing

347	Residence, Garage	716	Oak St.	Building	Noncontributing
348	Monroe Block	808	Oak St.	Building	Contributing
349	Mineral Range Railroad Depot	25480	Oak St.	Building	Contributing
350	Residence	606	Pine St.	Building	Contributing
350	Residence, Outbuilding	606	Pine St.	Building	Noncontributing
351	Residence	608	Pine St.	Building	Noncontributing
351	Residence, Outbuilding	608	Pine St.	Building	Noncontributing
352	Residence	712	Pine St.	Building	Contributing
353	Residence	714	Pine St.	Building	Contributing
354	Residence	806	Pine St.	Building	Contributing
355	Schlitz Brewing Co. Machine Shed	Unk.	Pine St.	Building	Noncontributing
356	Commercial Building	614	Portland St.	Building	Contributing
357	Residence	701	Portland St.	Building	Contributing
358	Duplex Residence	705-707	Portland St.	Building	Contributing
359	Residence	708	Portland St.	Building	Contributing
360	Residence	711	Portland St.	Building	Contributing
361	Residence	800	Portland St.	Building	Contributing
361	Residence, Garage	800	Portland St.	Building	Contributing
362	Residence	801	Portland St.	Building	Contributing
362	Residence, Garage	801	Portland St.	Building	Noncontributing
363	Residence	806	Portland St.	Building	Contributing
364	Residence	807	Portland St.	Building	Contributing
365	Residence	808	Portland St.	Building	Contributing
366	Residence	810	Portland St.	Building	Contributing
367	Residence	811	Portland St.	Building	Contributing
367	Residence, Garage	811	Portland St.	Building	Noncontributing
368	Residence	815	Portland St.	Building	Contributing
369	Residence	609	Scott St.	Building	Contributing
370	Residence	615	Scott St.	Building	Contributing
371	Residence	709	Scott St.	Building	Contributing
371	Residence, Garage	709	Scott St.	Building	Contributing
372	Residence	805	Scott St.	Building	Contributing
372	Residence, Outbuilding	805	Scott St.	Building	Noncontributing
373	Residence	809	Scott St.	Building	Contributing
373	Residence, Garage	809	Scott St.	Building	Noncontributing
374	Residence	815	Scott St.	Building	Contributing
375	Lucas Block	101	Seventh St.	Building	Contributing

375	Lucas Block, Garage	101	Seventh St.	Building	Noncontributing
376	Former Ste. Anne's Rectory (moved here 1909)	104	Seventh St.	Building	Contributing
377	Residence	104A	Seventh St.	Building	Contributing
378	Residence	104B	Seventh St.	Building	Contributing
379	Residence	105	Seventh St.	Building	Contributing
379	Residence, Garage	105	Seventh St.	Building	Noncontributing
380	Residence	111	Seventh St.	Building	Contributing
381	Residence	115	Seventh St.	Building	Contributing
381	Residence, Garage	115	Seventh St.	Building	Noncontributing
382	Commercial Building	200	Seventh St.	Building	Noncontributing
383	Residence	205	Seventh St.	Building	Contributing
383	Residence, Garage	205	Seventh St.	Building	Noncontributing
384	Stukel Building	211	Seventh St.	Building	Contributing
384	Stukel Building, Garage	211	Seventh St.	Building	Noncontributing
385	St. Jerman Building	218	Seventh St.	Building	Contributing
386	Saint Anthony of Padua Rectory	309	Seventh St.	Building	Contributing
387	Residence	310	Seventh St.	Building	Contributing
387	Residence, Garage	310	Seventh St.	Building	Contributing
388	Duplex Residence	312-314	Seventh St.	Building	Contributing
389	St. Anthony of Padua Convent	315	Seventh St.	Building	Contributing
390	Residence	318	Seventh St.	Building	Contributing
391	Parking Complex	Unk	Seventh St.	Building	Noncontributing
392	Residence	320B	Seventh St.	Building	Contributing
393	Residence	322	Seventh St.	Building	Contributing
394	Saint John the Baptist Rectory	334	Seventh St.	Building	Contributing
395	Norwegian Lutheran Church and Rectory	338	Seventh St.	Building	Contributing
396	Commercial Building	370	Seventh St.	Building	Noncontributing
397	Croatian Cooperative Store	400	Seventh St.	Building	Contributing
398	Croatian Cooperative Store Stable or Storage Building	400A	Seventh St.	Building	Contributing
622	Italian Hall Memorial	405	Seventh St.	Object	Contributing
399	Commercial Building	410	Seventh St.	Building	Noncontributing
400	Residence	415	Seventh St.	Building	Noncontributing
400	Residence, Garage	415	Seventh St.	Building	Noncontributing
401	Residence	418	Seventh St.	Building	Noncontributing
402	Residence	419	Seventh St.	Building	Contributing
403	Residence	420	Seventh St.	Building	Contributing

404	Residence	421	Seventh St.	Building	Contributing
405	Residence	423	Seventh St.	Building	Contributing
406	Residence	426	Seventh St.	Building	Contributing
407	Residence	426 1/2	Seventh St.	Building	Contributing
408	Residence	427	Seventh St.	Building	Contributing
409	Residence	430	Seventh St.	Building	Contributing
410	Residence	431	Seventh St.	Building	Contributing
411	Residence	432	Seventh St.	Building	Contributing
412	Residence	433	Seventh St.	Building	Contributing
412	Residence, Outbuilding	433	Seventh St.	Building	Contributing
413	Residence	435	Seventh St.	Building	Contributing
414	Residence	438	Seventh St.	Building	Contributing
415	Residence	439	Seventh St.	Building	Contributing
415	Residence, Garage	439	Seventh St.	Building	Noncontributing
416	Residence	443	Seventh St.	Building	Contributing
416	Residence, Garage	443	Seventh St.	Building	Noncontributing
417	Residence Garage	409	Sixth St.	Building	Contributing
417	Residence, Garage	409	Sixth St.	Building	Contributing
418	Residence	411	Sixth St.	Building	Noncontributing
419	Residence	416	Sixth St.	Building	Contributing
420	Residence	419	Sixth St.	Building	Contributing
420	Residence, Outbuilding	419	Sixth St.	Building	Noncontributing
421	Residence	421	Sixth St.	Building	Contributing
421	Residence, Outbuilding	421	Sixth St.	Building	Noncontributing
422	Residence	423	Sixth St.	Building	Contributing
422	Residence, Garage	423	Sixth St.	Building	Noncontributing
423	Residence	424	Sixth St.	Building	Contributing
424	Residence	425	Sixth St.	Building	Contributing
424	Residence, Garage	425	Sixth St.	Building	Noncontributing
424	Residence, Outbuilding	425	Sixth St.	Building	Contributing
425	Residence	428	Sixth St.	Building	Contributing
426	Residence	429	Sixth St.	Building	Contributing
426	Residence, Garage	429	Sixth St.	Building	Noncontributing
427	Residence	432-434	Sixth St.	Building	Contributing
428	Residence	433	Sixth St.	Building	Noncontributing
428	Residence, Outbuilding	433	Sixth St.	Building	Noncontributing
429	Residence	436	Sixth St.	Building	Contributing

430	Residence	439	Sixth St.	Building	Contributing
431	Residence	442	Sixth St.	Building	Contributing
431	Residence, Garage	442	Sixth St.	Building	Contributing
431	Residence, Outbuilding	442	Sixth St.	Building	Noncontributing
431	Residence, Outbuilding	442	Sixth St.	Building	Noncontributing
432	Residence	443	Sixth St.	Building	Contributing

Integrity Assessment

The portions of the **Village of Calumet Housing** LCA originally included in the 1989 NHL nomination have not substantially changed since its listing. This and the areas within the expanded boundary retain a high degree of integrity as a concentration of historic resources and contributes significantly to the historic character of the district. Contributing resources include the landscape (one contributing site), one hundred and thirty-three buildings, and one object. The character area retains integrity in the aspects of location, setting, design, association, feeling, workmanship, and materials. The Village of Calumet Housing LCA is integral to the character of the overall district as the Calumet community's downtown residential district during the period of significance. The village plat established in 1868 by C&H founder Edwin Hulbert and developed by the company and members of the community during the period of significance remains evident in the patterns displayed by streets and buildings in the area. Most alterations and additions to buildings within the character area are compatible with the historic character of the residential district. The majority of non-contributing resources are residential garages and outbuildings from the mid-twentieth century. They were not included in the resource count for the original NHL designation. They are one-story, generally located to the rear of property parcels and do not substantially detract from the pattern of historic housing in this LCA. Some buildings have been lost, but the losses do not appreciably impact the overall character of the district. The continued use of the buildings for residential and institutional uses reflects the historic land use and strengthens the connection between this area and its significant historic role as part of the greater Calumet community.

As noted above, the boundary in this area has been significantly expanded since the 1989 NHL nomination.

8. Landscape Character Area G: Yellow Jacket Housing Location (See Maps 4: S-1, 10: LCA G-H, and 5: H-1 Housing Locations)

Contributing: 149 Buildings, 1 Site
Noncontributing: 51 Buildings

Description

The **Yellow Jacket Housing Location** LCA was historically associated with the Calumet & Hecla Mining Company as one of the company's unincorporated housing locations. It lies west of the Village of Calumet (LCA F), across the former Mineral Range Railroad corridor. The majority of the houses date from the 1890s, and nearly all of them were built by workers who leased their lots from the company. The housing location is bounded approximately by Ninth Street/railroad corridor on the east, Pine Street on the north, 1st Street on the west, and Scott Street on the south. The street numbering system here reflects the distinction between the Calumet & Hecla-established location, and the location immediately to the west, created by the Tamarack

Mining Company. The Tamarack Housing Location street numbering system begins on the east side with "1st Street," a street name that has carried through to the present.

Portions of this character area were included in the 1989 NHL nomination boundary, chiefly along Oak and Portland Streets east of Tenth Street. The original nomination notes that the boundary "includes a representative sampling of housing that served company employees. This sampling includes the neighborhoods and streetscapes that appear to possess the highest degree of integrity for the period that ended in 1930. The sample was designed to represent the various types of housing used by miners and other company employees."[202] The current nomination expands the boundary to encompass the entire historic Yellow Jacket Housing Location between Ninth Street on the east, 1st Street on the west, Pine Street on the north, and Scott/Oak Streets on the south. Survey and research undertaken for this nomination, particularly comparisons with historic Sanborn Insurance maps and analysis of the area's architectural and landscape character and integrity, demonstrates that the area within the expanded boundary exhibits a significant concentration of historic resources that represent the major themes of the nomination. There are some pockets of vacant land or later infill, generally closer to Pine Street. However, the overall character of the area is as a densely packed residential streetscape with a majority of contributing buildings remaining from the period of significance. This area contains some of the most intact houses and landscapes of the extant Calumet & Hecla housing locations. Historically, the southwest corner of the location was visually terminated by a massive poor rock pile that came right up to Portland Street. There are one hundred fifty contributing and fifty-one non-contributing resources.

The Yellow Jacket Housing Location LCA is set on relatively level ground and is spatially defined by the orthogonal street grid. However, the street grid contrasts with that of the neighboring Village of Calumet Housing (LCA F), which was largely defined by long north-south blocks with house fronts oriented to the east and west. In Yellow Jacket, this pattern is only reproduced by the central blocks between Tenth and Eleventh Streets; these are oriented in this manner because a branch of the Hecla and Torch Lake Railroad originally ran north-south in the middle of the block. The rail grade is still apparent. On either side, the blocks are longer east-west than north-south, and the rectangular lots have their short sides facing the east-west streets. The lots also tend to be deeper, so while houses are evenly spaced and sit close to the street, the overall effect is of a much more spacious character than the more densely packed houses in other areas of the district. The large rear lots are distinctive from all other LCAs in the NHL boundary, and would have accommodated outbuildings, gardens, or small barns. The Yellow Jacket Housing Location LCA is also distinguished from the Tamarack Housing Location (LCA H) to the west, which has smaller lots and denser housing that only connects to the Yellow Jacket grid at the major cross streets of Elm and Oak Streets. Ninth, Tenth, Eleventh, and 1st Streets are the chief north-south streets. Elm and Oak Street bisect the entire housing location east-west and connect the Yellow Jacket street grid with the Village of Calumet and Tamarack, while Cone and Acorn Streets are interrupted by the long blocks between Tenth and Eleventh Streets. Portland Street, which forms the southern border of the district, ends at Eleventh Street. First Street south of Acorn Street begins to curve southwest until it intersects with Oak Street.

The streets are level and paved with asphalt. They have no curbs or sidewalks. Many lots do not have driveways; parking is generally on the street and the garages that do exist in the district are often set only slightly back from the street with a short asphalt or concrete apron in front. A few houses do have asphalt or gravel parking areas beside the house. The former Hecla and Torch Lake Railroad corridor is represented by a dirt path running north-south in the middle of the blocks between Tenth and Eleventh Streets.

The contributing historic properties in the Yellow Jacket Housing Location almost entirely date to the 1890s. Most were built by company employees on lots leased from the company. The housing stock is typically frame,

[202] Lidfors et al., "Calumet Historic District" National Historic Landmark Nomination Form.

one-and-one-half to two-and-one-half story gable-front, L-, and T-plan houses. A unique house type found only in this location is a one-story, cross-gable roof cross-plan with a shed-roof entry porch in the front east ell. There is a row of four such houses on the north side of Elm Street between 1st and Eleventh Streets (25246 to 25284 Elm Street). There are a few duplex houses scattered through the location (such as 25435-25437 Elm Street and 25254-25256 West Cone Street). Exterior materials are typically wood clapboard or shingle; some houses have asphalt roll siding or, less commonly, aluminum/vinyl replacement siding. Roofs are generally asphalt shingle with some metal roofs; dormers are uncommon. Windows are usually double-hung, one-over-one units. Single-leaf entry doors are typically located on the front elevation, sometimes within open or enclosed porches. Most houses have porches, typically a full-length enclosed or open porch, especially on the gable-front buildings. Several of these have three-over-one wood windows (e.g. 25440 and 25257 Oak Street). Garages, where present, are either one-story, single-car additions to the side of the house (earliest examples), or newer garages set back from the house in rear or side yards. There are also a number of smaller outbuildings, typically sheds of varying dates. These are usually set along the rear property lines. A few houses that convey the typical character of the housing location include 25375 East Acorn, 57477 Tenth Street, and 57436 Eleventh Street. The only contributing non-residential property in the character area is St. Mary's (Italian) Catholic Church (1896, 25419 Portland Street), a Gothic Revival building constructed of Jacobsville sandstone, located on the south side of Portland Street just west of the Mineral Range Railroad corridor/Ninth Street.

The areas around the buildings include lawn, canopy and ornamental trees (the most common are maple (*Acer* spp), oak (*Quercus* spp), pine (*Pinus* spp), and apple (*Malus* spp)), ornamental shrubs and foundation plantings (in particular lilac (*Syringa* spp)), and a few vegetable and flower gardens.

Inventory of Resources, Landscape Character Area G: Yellow Jacket Housing Location

(ID numbers are keyed to the attached maps)

ID #	HISTORIC NAME (CURRENT NAME)	ADDRESS	STREET	TYPE	STATUS
NA	Yellow Jacket Housing Location Landscape	NA	NA	Site	Contributing
433	Residence	25375	East Acorn St.	Building	Contributing
434	Residence	25376	East Acorn St.	Building	Contributing
434	Residence, Outbuilding	25376	East Acorn St.	Building	Contributing
435	Residence	25390	East Acorn St.	Building	Contributing
435	Residence, Garage	25390	East Acorn St.	Building	Noncontributing
435	Residence, Outbuilding	25390	East Acorn St.	Building	Contributing
436	Residence	25403	East Acorn St.	Building	Contributing
437	Residence	25404	East Acorn St.	Building	Contributing
437	Residence, Outbuilding	25404	East Acorn St.	Building	Noncontributing
438	Residence	25409	East Acorn St.	Building	Contributing
438	Residence, Garage	25409	East Acorn St.	Building	Noncontributing
439	Residence	25410	East Acorn St.	Building	Contributing
440	Residence	25420	East Acorn St.	Building	Noncontributing
440	Residence, Outbuilding	25420	East Acorn St.	Building	Noncontributing

441	Residence	25431	East Acorn St.	Building	Noncontributing
442	Residence	25432	East Acorn St.	Building	Contributing
443	Residence	25441	East Acorn St.	Building	Contributing
444	Residence	25442	East Acorn St.	Building	Contributing
444	Residence, Garage	25442	East Acorn St.	Building	Noncontributing
445	Residence	25391	East Cone St.	Building	Noncontributing
446	Residence	25402	East Cone St.	Building	Contributing
447	Residence	25403	East Cone St.	Building	Contributing
448	Residence	25411	East Cone St.	Building	Contributing
449	Residence	25412	East Cone St.	Building	Contributing
450	Residence	25419	East Cone St.	Building	Contributing
451	Residence	25420	East Cone St.	Building	Contributing
451	Residence, Outbuilding	25420	East Cone St.	Building	Contributing
452	Residence	25431	East Cone St.	Building	Contributing
453	Residence	25432	East Cone St.	Building	Contributing
453	Residence, Barn	25432	East Cone St.	Building	Contributing
454	Residence	25439	East Cone St.	Building	Contributing
455	Residence	57182	Eleventh St.	Building	Contributing
455	Residence, Garage	57182	Eleventh St.	Building	Noncontributing
456	Residence	57192	Eleventh St.	Building	Contributing
457	Residence	57204	Eleventh St.	Building	Contributing
458	Residence	57252	Eleventh St.	Building	Contributing
459	Residence	57264	Eleventh St.	Building	Contributing
460	Residence	57276	Eleventh St.	Building	Contributing
461	Residence	57282	Eleventh St.	Building	Contributing
462	Residence	57294	Eleventh St.	Building	Contributing
462	Residence, Garage	57294	Eleventh St.	Building	Noncontributing
463	Residence	57316	Eleventh St.	Building	Noncontributing
464	Residence	57330	Eleventh St.	Building	Contributing
464	Residence, Garage	57330	Eleventh St.	Building	Noncontributing
465	Residence	57356	Eleventh St.	Building	Contributing
466	Residence	57374	Eleventh St.	Building	Contributing
467	Residence	57386	Eleventh St.	Building	Noncontributing
468	Residence	57420	Eleventh St.	Building	Contributing
469	Residence	57436	Eleventh St.	Building	Contributing
470	Residence	57444	Eleventh St.	Building	Contributing
471	Residence	57456	Eleventh St.	Building	Contributing

472	Residence	57474	Eleventh St.	Building	Contributing
473	Residence	25246	Elm St.	Building	Contributing
474	Residence	25247	Elm St.	Building	Contributing
475	Residence	25257	Elm St.	Building	Noncontributing
476	Residence	25258	Elm St.	Building	Contributing
477	Residence	25265	Elm St.	Building	Contributing
478	Residence	25266	Elm St.	Building	Contributing
479	Residence	25276	Elm St.	Building	Contributing
480	Residence	25283	Elm St.	Building	Contributing
481	Residence	25284	Elm St.	Building	Contributing
482	Residence	25360	Elm St.	Building	Contributing
483	Residence	25361	Elm St.	Building	Contributing
483	Residence, Garage	25361	Elm St.	Building	Noncontributing
484	Residence	25377	Elm St.	Building	Contributing
484	Residence, Garage	25377	Elm St.	Building	Noncontributing
484	Residence, Outbuilding	25377	Elm St.	Building	Noncontributing
485	Storage Building	Unk	Elm St.	Building	Noncontributing
486	Residence	25384	Elm St.	Building	Contributing
487	Residence	25385	Elm St.	Building	Contributing
487	Residence, Garage	25385	Elm St.	Building	Noncontributing
488	Residence	25393	Elm St.	Building	Contributing
488	Residence, Outbuilding	25393	Elm St.	Building	Noncontributing
488	Residence, Outbuilding	25393	Elm St.	Building	Noncontributing
488	Residence, Outbuilding	25393	Elm St.	Building	Noncontributing
489	Residence	25394	Elm St.	Building	Contributing
490	Residence	25407	Elm St.	Building	Contributing
491	Residence	25417-19	Elm St.	Building	Noncontributing
492	Residence	25418	Elm St.	Building	Contributing
492	Residence, Garage	25418	Elm St.	Building	Noncontributing
493	Residence	25433	Elm St.	Building	Contributing
494	Residence	25435-37	Elm St.	Building	Contributing
495	Residence	25436	Elm St.	Building	Contributing
495	Residence, Garage	25436	Elm St.	Building	Noncontributing
496	Residence	25447	Elm St.	Building	Contributing
497	Residence	25244	Oak St.	Building	Contributing
497	Residence, Garage	25244	Oak St.	Building	Noncontributing
498	Residence	25244	Oak St.	Building	Contributing

498	Residence, Garage	25244	Oak St.	Building	Noncontributing
499	Residence	25256	Oak St.	Building	Contributing
500	Residence	25257	Oak St.	Building	Contributing
500	Residence, Garage	25257	Oak St.	Building	Contributing
501	Residence	25264	Oak St.	Building	Contributing
501	Residence, Garage	25264	Oak St.	Building	Noncontributing
502	Residence	25265	Oak St.	Building	Contributing
503	Residence	25284	Oak St.	Building	Contributing
504	Residence	25285	Oak St.	Building	Contributing
505	Residence	25307	Oak St.	Building	Contributing
506	Residence	25375	Oak St.	Building	Contributing
507	Residence	25384	Oak St.	Building	Contributing
508	Residence	25385	Oak St.	Building	Contributing
508	Residence, Garage	25385	Oak St.	Building	Contributing
509	Residence	25392	Oak St.	Building	Contributing
510	Residence	25393	Oak St.	Building	Noncontributing
511	Residence	25401	Oak St.	Building	Contributing
512	Residence	25402	Oak St.	Building	Contributing
513	Residence	25412	Oak St.	Building	Noncontributing
514	Residence	25413	Oak St.	Building	Contributing
515	Residence	25422	Oak St.	Building	Contributing
516	Residence	25423	Oak St.	Building	Contributing
517	Residence	25430	Oak St.	Building	Noncontributing
518	Residence	25431	Oak St.	Building	Contributing
519	Residence	25440	Oak St.	Building	Contributing
520	Residence	25440	Oak St.	Building	Contributing
521	Residence	25441	Oak St.	Building	Noncontributing
522	Residence	25450	Oak St.	Building	Contributing
522	Residence, Garage	25450	Oak St.	Building	Noncontributing
523	Residence	25251	Pine St.	Building	Contributing
524	Residence	25259	Pine St.	Building	Contributing
525	Residence	25271	Pine St.	Building	Contributing
526	Residence	25281	Pine St.	Building	Contributing
527	Residence	25319	Pine St.	Building	Noncontributing
528	Residence	25417	Pine St.	Building	Noncontributing
529	Residence	25378	Portland St.	Building	Contributing
529	Residence, Garage	25378	Portland St.	Building	Noncontributing

530	Residence	25379	Portland St.	Building	Contributing
531	Residence	25388	Portland St.	Building	Contributing
531	Residence, Garage	25388	Portland St.	Building	Noncontributing
532	Residence	25389	Portland St.	Building	Contributing
532	Residence, Outbuilding	25389	Portland St.	Building	Contributing
533	Residence	25396	Portland St.	Building	Contributing
533	Residence, Outbuilding	25396	Portland St.	Building	Contributing
534	Residence	25397	Portland St.	Building	Contributing
534	Residence, Outbuilding	25397	Portland St.	Building	Noncontributing
535	Residence	25406	Portland St.	Building	Contributing
536	Residence	25407	Portland St.	Building	Contributing
537	Residence	25418	Portland St.	Building	Contributing
538	St. Mary's Catholic Church	25419	Portland St.	Building	Contributing
539	Residence	25426	Portland St.	Building	Contributing
540	Residence	25436	Portland St.	Building	Contributing
540	Residence, Outbuilding	25436	Portland St.	Building	Contributing
541	Armstrong Thielman Lumber Company	25401	Scott St.	Building	Contributing
542	Residence	25430	Scott St.	Building	Contributing
542	Residence, Garage	25430	Scott St.	Building	Noncontributing
543	Garage	25430	Scott St.	Building	Noncontributing
543	Outbuilding	25430	Scott St.	Building	Noncontributing
544	Residence	57153	Tenth St.	Building	Contributing
545	Residence	57163	Tenth St.	Building	Contributing
546	Residence	57183	Tenth St.	Building	Contributing
547	Residence	57195	Tenth St.	Building	Contributing
548	Residence	57207	Tenth St.	Building	Contributing
548	Residence, Garage	57207	Tenth St.	Building	Contributing
549	Residence	57217	Tenth St.	Building	Contributing
549	Residence, Outbuilding	57217	Tenth St.	Building	Noncontributing
550	Residence Outbuilding	57231	Tenth St.	Building	Contributing
550	Residence, Outbuilding	57231	Tenth St.	Building	Noncontributing
551	Residence	57253	Tenth St.	Building	Contributing
551	Residence, Outbuilding	57253	Tenth St.	Building	Contributing
552	Residence	57265	Tenth St.	Building	Noncontributing
553	Residence	57277	Tenth St.	Building	Contributing
553	Residence, Outbuilding	57277	Tenth St.	Building	Noncontributing

553	Residence, Outbuilding	57277	Tenth St.	Building	Noncontributing
554	Residence	57291	Tenth St.	Building	Contributing
555	Residence	57297	Tenth St.	Building	Noncontributing
556	Residence	57311	Tenth St.	Building	Contributing
557	Residence	57317	Tenth St.	Building	Contributing
557	Residence, Garage	57317	Tenth St.	Building	Noncontributing
558	Residence	57329	Tenth St.	Building	Contributing
559	Residence	57341	Tenth St.	Building	Contributing
560	Residence	57401	Tenth St.	Building	Contributing
561	Residence	57415	Tenth St.	Building	Contributing
562	Residence	57423	Tenth St.	Building	Contributing
563	Residence	57433	Tenth St.	Building	Contributing
563	Residence, Garage	57433	Tenth St.	Building	Noncontributing
563	Residence, Barn	57433	Tenth St.	Building	Contributing
564	Residence	57455	Tenth St.	Building	Contributing
565	Residence	57461	Tenth St.	Building	Contributing
566	Residence	57467	Tenth St.	Building	Contributing
567	Residence	57477	Tenth St.	Building	Contributing
568	Residence	25245	West Acorn St.	Building	Contributing
568	Residence, Garage	25245	West Acorn St.	Building	Contributing
569	Residence	25259	West Acorn St.	Building	Contributing
570	Residence	25260	West Acorn St.	Building	Contributing
570	Residence, Outbuilding	25260	West Acorn St.	Building	Noncontributing
571	Residence	25264	West Acorn St.	Building	Contributing
571	Residence, Barn	25264	West Acorn St.	Building	Contributing
572	Residence	25279	West Acorn St.	Building	Contributing
573	Residence	25280	West Acorn St.	Building	Contributing
574	Residence	25290	West Acorn St.	Building	Contributing
574	Residence, Barn	25290	West Acorn St.	Building	Contributing
574	Residence, Outbuilding	25290	West Acorn St.	Building	Contributing
575	Residence	25291	West Acorn St.	Building	Contributing
576	Residence	25243	West Cone St.	Building	Contributing
577	Residence	25254-56	West Cone St.	Building	Contributing
578	Residence	25261	West Cone St.	Building	Contributing
579	Residence	25269	West Cone St.	Building	Contributing
580	Residence	25270	West Cone St.	Building	Contributing
581	Residence	25278	West Cone St.	Building	Contributing

582	Residence	25286	West Cone St.	Building	Contributing
583	Residence	57417	West Cone St.	Building	Noncontributing

Integrity Assessment

The portions of the **Yellow Jacket Housing Location** LCA originally included in the 1989 NHL nomination have not substantially changed since its listing. This and the area within the expanded boundary retain a high degree of integrity as a concentration of historic resources, and significantly contributes to the historic character of the district. Contributing resources include the landscape (one contributing site) and one hundred forty-nine buildings. The character area retains integrity in the aspects of location, setting, design, association, feeling, workmanship, and materials. The Yellow Jacket Housing Location LCA is integral to the character of the overall district as one of the largest and most cohesive of the company's worker housing locations. The blocks of Oak and Portland Streets between Ninth and Tenth Streets are highly intact historic landscapes that include historic houses of consistent form, scale, spacing, and setback, with strong visual connections to the Village of Calumet. Included among the support buildings are a few surviving historic barns, a rare resource type in Calumet. Other portions of the housing location also retain a high level of integrity. Although some of the houses have been altered with newer siding and garages, their historic forms, spacing, and setbacks are still clearly apparent. The housing location also has a high percentage of extant landscape elements, including streets, outbuildings, and lot arrangements, as well as visible traces of the Hecla and Torch Lake Railroad corridor.

Of the nineteen non-contributing buildings, most are from the period of significance, but their integrity has been impacted by extensive additions. A few later houses are present but are generally of a similar scale and materials to the rest of the district. The majority of non-contributing resources are residential garages and outbuildings from the mid-twentieth century. They were not included in the resource count for the original NHL designation. They are one story, generally located to the rear of property parcels, and do not substantially detract from the pattern of historic housing in this LCA.

As noted above, the boundary in this area has been significantly expanded since the 1989 NHL nomination.

9. Landscape Character Area H: Tamarack Housing Location (See Maps 4: S-1, 10: LCA G-H, and 5: H-1 Housing Locations)

Contributing: 37 Buildings, 1 Site
Noncontributing: 23 Buildings

Description

The **Tamarack Housing Location** LCA is historically associated with the Calumet & Hecla Mining Company as a housing location acquired by the company when it purchased the Tamarack Mining Company in 1917. It lies west of the Yellow Jacket Housing Location (LCA G), beginning on the west side of 1st Street.[203] The Tamarack Mining Company was organized in 1882 by Boston-based investors Horatio and Albert Bigelow, who also controlled the Osceola Mine and several others in the region. Working the Calumet Conglomerate Lode, it quickly became a major producer, peaking around 1899. The Tamarack Mine property included the mine and associated surface plant south of Oak Street, a hospital, a school, the Methodist Episcopal Church, and

[203] Note that Calumet has two sets of numbered street, due to the separate platting of the Village of Calumet and Tamarack. To distinguish them, the streets in Tamarack use numbers (1st, 2nd, etc.) while the streets in the village use letters (Second, Third, etc.)

a large general store run by the Tamarack Cooperative Association, as well as a number of single-family and duplex houses and housing for mine managers. [204] Today the surface plant, school, hospital, church, and general store are no longer extant, and the housing south and west of Oak Street does not retain sufficient integrity to be included in the district. However, the cluster of houses on Maple, Ash, Elm, Poplar, and 2nd Streets represent a dense collection of mine housing with a high degree of integrity. There are thirty-seven contributing and twenty-three non-contributing resources.

The majority of the houses in Tamarack date from the 1880s and 1890s, and nearly all were built by the Tamarack Mining Company on company-owned land. The housing location is bounded approximately by 1st Street on the east, Oak Street on the South, 2nd Street on the west, and Maple Street on the north, with a few houses on the north side of Maple Street and west side of 2nd Street included within the boundary.

This area was not included in the 1989 NHL nomination boundary. The original nomination notes that the boundary "includes a representative sampling of housing that served company employees. This sampling includes the neighborhoods and streetscapes that appear to possess the highest degree of integrity for the period that ended in 1930. The sample was designed to represent the various types of housing used by miners and other company employees."[205] The current nomination expands the boundary to encompass the most intact portions of the historic Tamarack Housing Location immediately west of the historic Yellow Jacket Housing Location. Survey and research undertaken for this nomination, particularly comparison with historic Sanborn maps and analysis of the area's architectural and landscape character and integrity, demonstrate that the area within the expanded boundary exhibits a significant concentration of historic resources that represent the major themes of the nomination. Furthermore, the character area contains several excellent examples of both mine workers' and mine management housing. This area contains some of the most intact houses and landscapes of all the housing locations originally established or subsequently acquired by Calumet & Hecla. The inclusion of this collection of buildings is also important as it represents the type of early company-built standard plan workers' homes that would otherwise be missing from the district.

The Tamarack Housing Location LCA is set on relatively level ground that rises toward the west to a knoll just beyond the west boundary. Unlike the other housing locations and the village, the Tamarack Housing Location begins to depart from the orthogonal street grid (see Map 4: S-1). Because it was platted by a different company, the east-west streets only connect at the major cross streets of Elm and Oak Streets. Maple, Ash, and Poplar Streets do not connect with corresponding streets on the east side of the character area boundary. Poplar Street is oriented east-west where it enters from 1st Street, but then curves north midway through the block and continues north to connect with Ash Street. 2nd Street curves in a gentle arc from northwest to southwest, responding to the topography of the knoll to the west. The south boundary, Oak Street, enters Tamarack on a straight east-west path, then angles northwest through the character area to connect with the street grid of the remainder of Tamarack outside the district boundary, which is set at a 45-degree angle to the village grid.

With the exception of the management housing west of 2nd Street, which sit on generous lots facing east and overlooking 2nd Street, the lots are relatively shallow in comparison to the deeper lots of Yellow Jacket, resulting in a notably more densely packed neighborhood where the houses sit close together on all sides and front on the east-west cross streets. The Mineral Range Railroad tracks originally ran north-south through the location matching the curve of 2nd Street between it and what is now Poplar Street. Historically, the tracks created a strong physical barrier between workers housing on the east and managers housing uphill to the west. Unlike the Hecla and Torch Lake corridor in Yellow Jacket, the visual connection to the former railroad line is

[204] Thurner, *Strangers and Sojourners*, 179; Lankton, *Hollowed Ground*, 139.
[205] Lidfors et al., "Calumet Historic District" National Historic Landmark Nomination Form.

not as readily apparent aside from the open land. The Tamarack Cooperative Association store complex was formerly located to either side of 1st Street north of Oak Street. Nothing remains on the site except a small shed that was added after 1938.

The streets are level and paved with asphalt. They have no curbs or sidewalks. In the worker housing area, houses are set close together, so driveways are typically narrow tracks set between the buildings. Most are unpaved but a few have been surfaced with gravel or concrete. Garages, where they exist, are set in back yards or side lots, in the case of corner lots. Three of the managers' houses (57379, 57361, and 57337 2nd Street) have unpaved driveways on the south sides of the houses; the southernmost (corner) house (57307 2nd Street) has a newer garage set close to the street with a concrete apron in front.

There has been remarkably little loss of historic housing properties in the Tamarack Housing Location, and they generally demonstrate great uniformity of character, as would be expected from company-built homes. The nineteen contributing houses on Ash, Elm, and Poplar Streets are all one-and-one-half story side-gabled, T-plan buildings, while the twelve contributing houses on Maple Street are one-and-one-half story cross-gabled saltbox plans. Exterior materials are typically wood clapboard or shingle (good examples are at 25228 Elm Street and 25226 Ash Street); some houses have asphalt roll siding or, less commonly, aluminum/vinyl replacement siding. Roofs are generally asphalt shingle with some metal roofs and square brick or concrete block chimneys. The original windows were double-hung, four-over-four wood units; a few still exist (such as at 25230 and 25221 Maple Street), but many have been replaced with one-over-one units in wood or vinyl. The saltbox houses have off-center, single-leaf entry doors on the front elevation, most with simple concrete steps. A few (such as 25220 and 25206 Maple) have enclosed doghouse entries. The T-plan houses exhibit more varied entries, from centered doors to side entries (the variety is particularly visible on the five houses along the north side of Ash Street: 25238, 25226, 25218, 25214, 25208). A few houses have enclosed partial or full-width porches (good examples are at 25229b and 25221 Elm Street). Garages, where present, are usually free-standing front-gabled buildings set in back or side yards, although a few have been attached to the houses (25217 Elm Street). These are usually set along the rear property lines.

The four manager houses on the west side of 2nd Street are spatially and visually set apart from the worker housing by their size, styles and position on high ground overlooking the worker housing. Three of these houses (57379, 57361, and 57337) are two-and-one-half story Queen Anne style houses clad in wood clapboard with poor rock foundations and cross-gabled asphalt-shingled roofs, two-story bay windows, and enclosed or partially enclosed porches. The house at 57361 2nd Street, with its four-over-four windows and enclosed porch with four-over-one windows, is especially prominent as it visually anchors the end of Elm Street, one of Calumet's main east-west thoroughfares. The house at 57307 2nd Street, by contrast, is a one-and-one-half story, front-gabled bungalow with poor rock foundation, wood clapboard siding, and a front-gabled, three-quarter-width open front porch. This house likely dates to the end of the period of significance.

The areas around the buildings include lawn, canopy and ornamental trees (the most common are maple (*Acer* spp*)*, oak (*Quercus* spp), pine (*Pinus* spp*),* and apple (*Malus* spp)), ornamental shrubs and foundation plantings (in particular lilac (*Syringa* spp), and a few vegetable and flower gardens.

The only non-residential building is a small one-story, side-gabled shed at 57267 1st St. It has a poor rock foundation and steps, vertical metal siding, and an asphalt-shingled roof. This is on the site of the former Tamarack Cooperative store but was not present on a 1938 aerial photograph. In addition to this building, there are two other non-contributing buildings: 25239 Ash Street, which has been extensively altered, and a mid-century ranch house at 25164 Maple Street.

Inventory of Resources, Landscape Character Area H: Tamarack Housing Location

(ID numbers are keyed to the attached maps)

ID #	HISTORIC NAME (CURRENT NAME)	ADDRESS	STREET	TYPE	STATUS
NA	Tamarack Housing Location Landscape	NA	NA	Site	Contributing
584	Shed	57267	1st St.	Building	Noncontributing
585	Residence	57307	2nd St.	Building	Contributing
586	Residence Outbuilding	57337	2nd St.	Building Building	Contributing Noncontributing
587	Residence	57361	2nd St.	Building	Contributing
588	Residence Garage	57379	2nd St.	Building Building	Contributing Noncontributing
589	Residence Garage	25208	Ash St.	Building Building	Contributing Noncontributing
590	Residence Garage	25214	Ash St.	Building Building	Contributing Contributing
591	Residence Outbuilding	25215	Ash St.	Building Building	Contributing Noncontributing
592	Residence Outbuilding	25218	Ash St.	Building Building	Contributing Noncontributing
593	Residence Garage	25219	Ash St.	Building Building	Contributing Noncontributing
594	Residence Outbuilding	25225	Ash St.	Building Building	Contributing Noncontributing
595	Residence	25226	Ash St.	Building	Contributing
596	Residence	25238	Ash St.	Building	Contributing
597	Residence Garage	25239	Ash St.	Building Building	Noncontributing Noncontributing
598	Residence Garage	25216	Elm St.	Building Building	Contributing Noncontributing
599	Residence	25217	Elm St.	Building	Contributing
600	Residence	25220	Elm St.	Building	Contributing
601	Residence Garage	25221	Elm St.	Building Building	Contributing Noncontributing
602	Residence Outbuilding	25228a	Elm St.	Building Building	Contributing Noncontributing
603	Residence	25228b	Elm St.	Building	Contributing
604	Residence	25229a	Elm St.	Building	Contributing
605	Residence	25229b	Elm St.	Building	Contributing
606	Residence Outbuilding	25164	Maple St.	Building Building	Noncontributing Noncontributing
607	Residence	25176	Maple St.	Building	Contributing
608	Residence Outbuilding	25186	Maple St.	Building Building	Contributing Noncontributing
609	Residence Outbuilding	25198	Maple St.	Building Building	Contributing Noncontributing
610	Residence Outbuilding	25206	Maple St.	Building Building	Contributing Noncontributing
611	Residence	25213	Maple St.	Building	Contributing

612	Residence Outbuilding	25213	Maple St.	Building Building	Contributing Noncontributing
613	Residence	25214	Maple St.	Building	Contributing
614	Residence	25220	Maple St.	Building	Contributing
615	Residence Garage	25221	Maple St.	Building Building	Contributing Noncontributing
616	Residence	25230	Maple St.	Building	Contributing
617	Residence	25231	Maple St.	Building	Contributing
618	Residence Garage	25237	Maple St.	Building Building	Contributing Noncontributing
619	Residence Outbuilding	25220	Poplar St.	Building Building	Contributing Contributing
620	Residence Outbuilding	25230	Poplar St.	Building Building	Contributing Noncontributing
621	Residence Garage	25238	Poplar St.	Building Building	Contributing Noncontributing

Integrity Assessment

The **Tamarack Housing Location** LCA was not included in the 1989 NHL. The resources in this LCA retain a high degree of integrity as a concentration of historic resources that significantly contribute to the historic character of the district. Contributing resources include the landscape (one contributing site) and thirty-seven buildings. The character area retains integrity in the aspects of location, setting, design, association, feeling, workmanship, and materials. The Tamarack Housing Location is integral to the character of the overall district as a cohesive collection of worker and manager housing originally associated with the Tamarack Mining Company that was absorbed into the Calumet & Hecla Company in 1917. The blocks of Maple, Ash, Elm, and Poplar Streets between First and Second Streets are a highly intact historic landscape that include historic houses of consistent form, scale, spacing, and setback. The Tamarack Housing Location is also notable for the survival of a visually prominent row of manager's houses on high ground along 2nd Street. Although some of the houses have been altered with newer siding and garages, their historic forms, spacing, and setbacks are still clearly apparent. The housing location also has a high percentage of extant landscape elements, including streets, outbuildings, and lot arrangements.

There are relatively few impacts to integrity. These include the removal of the Mineral Range Railroad tracks, a few demolished houses, one that has lost integrity, and two buildings added after the period of significance. The majority of non-contributing resources are residential garages and outbuildings from the mid-twentieth century. They were not included in the resource count for the original NHL designation. They are one story, generally located to the rear of property parcels, and do not substantially detract from the pattern of historic housing in this LCA.

Overall Integrity of the District

The Calumet Historic District is important for its ability to represent the process by which copper mining became a dominant industry in both Michigan and the United States during the latter half of the nineteenth century and the first two decades of the twentieth. Its historic integrity is derived from the extent of its collective resources representing the process of mining, the development of a community associated with mining, and the practice of corporate paternalism in Michigan's Copper Country. Integrity is derived not only from the number of extant historic buildings, structures, and objects and the degree to which they have

remained unchanged, but from the integrity of the landscape within each character area and the district as a whole. In other words, the significance and integrity of the district lies not in the integrity of each individual piece, but in its collective ability to convey the national importance of the Calumet & Hecla Mining Company in transforming the American economy in the nineteenth century and representing the development of an industrial community shaped by the practice of corporate paternalism.

Since the decline of the copper industry in Michigan and the final closure of Calumet & Hecla Mining Company operations in 1968, the landscape and resources of the former company have continued to change. Over time, there have been individual changes and cumulative impacts to the historic character of the district; it has not been frozen in time. During the historic period, buildings and structures were built, demolished, or modified to meet new operational requirements. After the historic period, changes gradually occurred in the district, even before it was originally designated in 1989. Contemporary commercial/industrial land uses have become interspersed throughout the district, reflecting the economic adaptations the Calumet community has made in order to survive following the closure of the mine. As people have continued to live in the former company housing locations, houses have been altered, with the addition of garages, new windows, and in some cases replacement siding. Modifications to the landscape include the loss of outbuildings, fences, subsistence gardens, and small-scale features.

While some historic houses have been lost, the infill of newer houses is limited. Although the architectural character of infill housing is generally not complementary to the pre-1923 buildings, their scale, massing, and placement are compatible and do not detract from the overall character of the district. Indeed, additional survey and research, as well as a more comprehensive approach to evaluating the concentration of buildings and landscape features formerly associated with the company, has justified the expansion of the boundary in some areas. Conversely, subsequent commercial development south of the historic downtown, the deterioration of historic resources in the industrial areas beyond this, and a renewed focus on the Calumet community, has resulted in the removal of portions of the industrial core south of the Sixth Street Extension. Within the remaining areas of the Industrial and Management Core, industrial buildings which have not been used in half a century are in varying conditions, from foundations to intact buildings. The use of some of these buildings by Keweenaw National Historical Park and other entities has maintained them with a higher degree of integrity than in some other areas.

The survival of the important components related to the development of a complete mining community, including industrial, management, support, housing, commercial, and public buildings, structures, sites, and landscapes, is key to understanding the significance of the Calumet community. Indeed, physical changes, some of which took place during the period of significance, are illustrative of the story of copper mining and corporate paternalism. In the housing locations, for example, it is the overall form, massing, and pattern of buildings on the landscape that identifies them as company housing. Alterations to what was originally uniform and cheaply built housing, such as asphalt or cement-asbestos siding, replacement windows, and enclosed porches, were often a response to the harsh winters of the Keweenaw Peninsula. Once houses passed from long-term tenancy under the company to private ownership, alterations symbolized that transition: “One way to declare that a house is no longer company owned is to alter it, to make it look different from all others on the street.”[206] However, residents lacked the means to make more significant alterations, or to replace original houses with large buildings, preserving the overall character of the landscape.

[206] Hoagland, “Industrial Housing and Vinyl Siding: Historic Significance Flexibly Applied,” 120.

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Previous documentation on file (NPS):

_X_ Previously listed in the National Register (fill in 1 through 6 below)
__ Not previously listed in the National Register (fill in **only** 4, 5, and 6 below)

1. NR #: 74000985 (Calumet and Hecla Industrial District)
2. Date of listing: 06/28/1974
3. Level of significance: National
4. Applicable National Register Criteria: A__ B__ C__ D__ [Not listed]
5. Criteria Considerations (Exceptions): A__ B__ C__ D__ E__ F__ G__
6. Areas of Significance: Engineering, Industry

Other listings within the district:

Calumet Downtown Historic District (74000986), listed 06/25/1974
Calumet Fire Station (74000987), listed 11/5/1974
Calumet Historic District (89001097), listed 03/28/1989
Calumet Theatre (71000392), listed 08/05/1971
Keweenaw National Historical Park (1000108), listed 10/27/1992

_X_ Previously Determined Eligible for the National Register: Date of determination: May 10, 2005 (landscape components)
_X_ Designated a National Historic Landmark: Date of designation: 03/28/1989
_X_ Recorded by Historic American Buildings Survey: HABS Nos. MI-276, 413 to 418, 423 to 426, 428 to 435, 437
_X_ Recorded by Historic American Engineering Record: HAER No. MI-2
__ Recorded by Historic American Landscapes Survey: HALS No.

Location of additional data:

State Historic Preservation Office: Michigan State Historic Preservation Office
Other State Agency:
Federal Agency: Keweenaw National Historical Park, Calumet (National Park Service)
Local Government:
University: Michigan Technological University
Other (Specify Repository):

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The authors gratefully acknowledge the substantial review provided by Jo Urion Holt, Historian, and Steven DeLong, Landscape Architect, both at Keweenaw National Historical Park; Sean Gohman, Executive Director, Keweenaw National Historical Park Advisory Commission; Alison K. Hoagland, Professor Emerita in History and Historic Preservation at Michigan Technological University; as well as other NPS reviewers at Keweenaw National Historic Park and at DOI Regions 3, 4, 5 (legacy Midwest Regional Office). Their thoughtful discussion and recommendations are woven throughout this document. Historian Larry Lankton, Professor Emeritus in History at Michigan Technological University, also provided important guidance at the beginning of the project.

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