

**Phase II Determination of Eligibility
for Two Historic Properties:
Chambers' Quarry and LS&M Railroad,
Chambers Grove Park,
Duluth, St. Louis County, Minnesota**

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ABSTRACT

Eligibility for the National Register of two historic properties located in Chambers Grove Park was reviewed in this report. The LS&M Railroad: Fond du Lac to Thomson Segment (XX-RRD-026) is considered a linear feature that includes structures such as culverts. The Chambers' Quarry (21SL1162) is considered both as a structure and as an archaeological site. Potential impacts from Park improvements to both historic properties were identified during a Phase I archaeological survey of Chambers Grove Park.

The LS&M Railroad: Fond du Lac to Thomson Segment was considered not eligible to the National Register as a consequence of fragmentation of the physical remnants. The portion within the Park appears intact but much of the grade to the west along the St. Louis River has received impacts from erosion and construction; review for the T.H. 210 reconstruction determined that the entire segment is not eligible. Impacts from the Park improvements (specifically hillside stabilization) do not have to be considered for this historic property.

The Chambers' Quarry was considered not eligible as a structure as a consequence of the lack of structural remnants and foundations. However, it was considered eligible as an archaeological site under Criterion D. Impacts from Park improvements, including but not limited to hiking trails through the site, do need to be considered. Consultation with SHPO is recommended.

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TABLE OF CONTENTS

ABSTRACT.....	ii
BACKGROUND INFORMATION.....	1
INTRODUCTION.....	1
LOCATION.....	1
LAKE SUPERIOR AND MISSISSIPPI RAILROAD: THOMSON TO FOND DU LAC.....	6
BACKGROUND.....	6
EVALUATION.....	9
RECOMMENDATION.....	11
CHAMBERS' QUARRY 21SL1162.....	12
BACKGROUND.....	12
EVALUATION: STRUCTURE.....	14
RECOMMENDATION: STRUCTURE.....	16
EVALUATION: ARCHAEOLOGICAL SITE.....	16
RECOMMENDATION: ARCHAEOLOGICAL SITE.....	18
SUMMARY AND CONCLUSIONS.....	20
REFERENCES CITED.....	22

List of Appendices

Appendix I. Additional Background Information for the Chambers' Quarry Site (21SL1162)...	24
Appendix II. Historic Contexts Relating to the Brownstone Industry..	32

List of Tables

Table 1. Historic Properties in Chambers Grove Park.....	4
Table 2. Quarry Features, 21SL1162.....	18

List of Figures

Figure 1. Location of Chambers Grove Park. 1:100,000 USGS topographic map.	2
Figure 2. Location of historic properties. 1:24,000 USGS topographic map.	5
Figure 3. Location of the Lake Superior and Mississippi Railroad: Thomson to Fond du Lac Segment (XX-RRD-0026). 1:100,000 USGS topographic map.....	7
Figure 4. Sketch map of Chambers' Quarry site (21SL1162) and portion of the Lake Superior and Mississippi Railroad: Thomson to Fond du Lac Segment (XX-RRD-0026).....	13

BACKGROUND INFORMATION

INTRODUCTION

The objective of this cultural resources investigation was to conduct Phase II determination of eligibility (DOE) assessments for two historic properties (Chambers' Quarry, 21SL1162, and the LS&M railroad, XX-RRD-026) within Chambers Grove Park on the St. Louis River in the City of Duluth, St. Louis County, Minnesota (Figure 1). The investigation was conducted for the City of Duluth Parks and Recreation Department in advance of improvements to the Park. The proposed Park improvements have the potential to cause impacts to the historic properties within Chambers Grove Park. Since funding for the restoration project is supplied by the State of Minnesota through the Legacy program, compliance with State laws and regulations is required. The State Historic Preservation Office (SHPO) has review and concurrence responsibilities in this process.

Cultural resource investigations were previously conducted in Chambers Grove Park and the adjacent segment of the St. Louis River, including a privately owned island (Mulholland et al. 2014). Standard Phase I field survey (pedestrian walkover and shovel testing) on the terrestrial portion and underwater survey (remote sensing and visual components) in the channel of the St. Louis River between the island and the mainland recorded three historic properties. The two historic properties in the Park include the Chambers' Quarry (21SL1162) and the Lake Superior and Mississippi (LS&M) Railroad: Fond du Lac to Thomson Segment (XX-RRD-026). The third property, the Bayless Cabin (21SL1218), is on private land outside the Park boundaries.

The current project focuses on consideration of the eligibility of the two historic properties located within the Park to the National Register of Historic Places (NRHP). The NRHP is the nation's official list of places deemed worth of preservation. For a property to qualify for listing in the National Register it must be at least 50 years old (or be of exceptional importance) and possess the quality of significance in American history, architecture, archaeology, engineering, and culture as present in districts, sites, buildings, structures, and objects under the four evaluation criteria:

- A. association with events that have made a significant contribution to the broad patterns of our history; or
- B. association with the lives of persons significant in our past; or
- C. embodiment of the distinctive characteristics of a type, period or method of construction

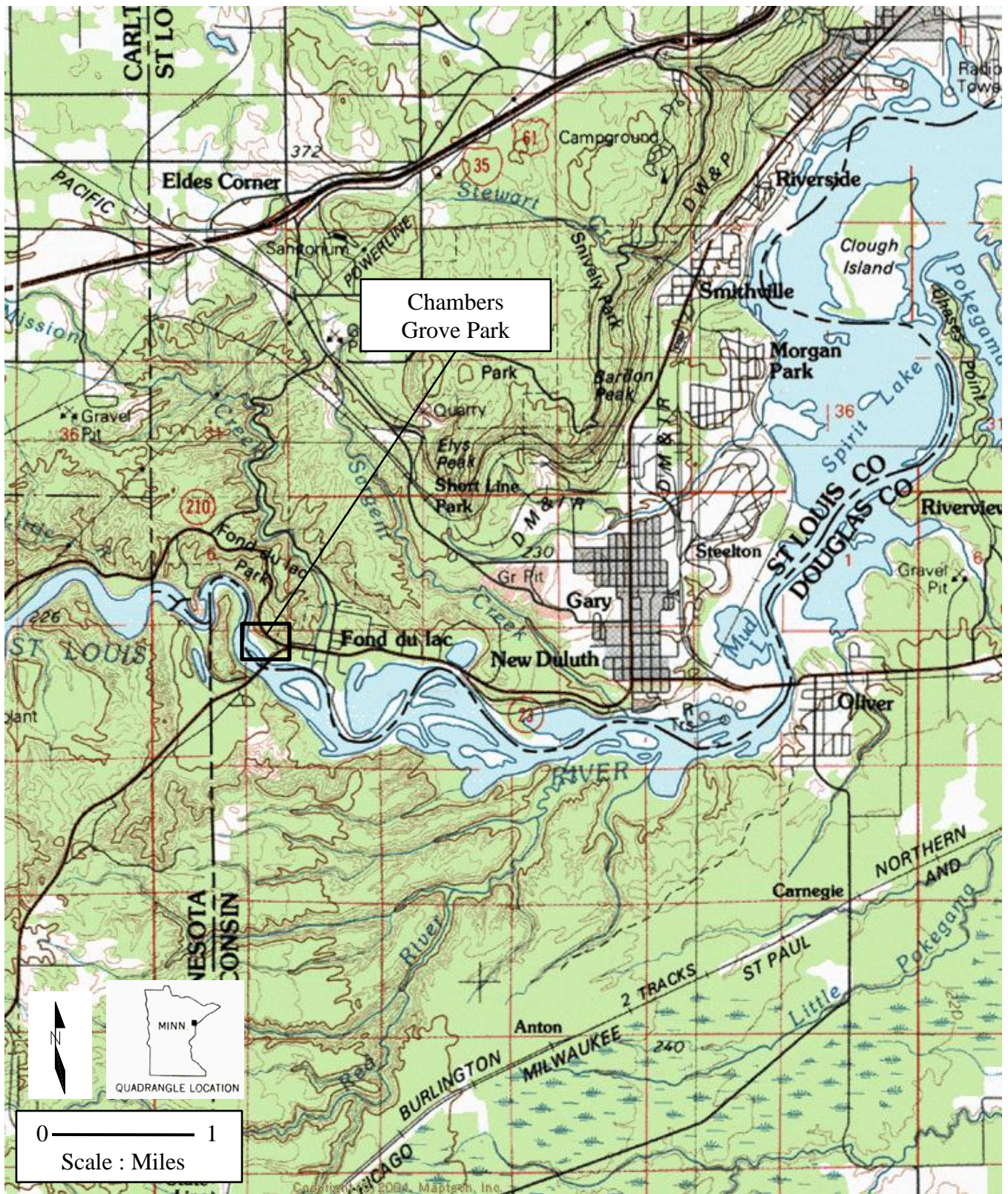


Figure 1. Location of the Chambers Grove Park. Duluth, Minn. 1980. 1:100,000 USGS topographic map.

or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

D. have yielded, or may be likely to yield, information important to prehistory or history. These criteria can be applied to historic contexts at the national, state, or local levels of significance.

To be listed in the NRHP, a property must not only be significant under one or more of the evaluation criteria listed above, it also must possess sufficient integrity to convey its significance. Evaluating integrity is sometimes subjective but always must be grounded in an understanding of a property's physical features and how they relate to its significance. Historic properties either retain integrity or they do not. The NRHP identifies seven aspects or qualities that define integrity: location, design, setting, materials, workmanship, feeling and association. To retain historic integrity a property always will possess several, if not most, of these aspects. The retention of these specific aspects of integrity is paramount for a property to convey its significance.

In addition to the typical considerations of significance in terms of the evaluation criteria and the integrity in terms of the seven aspects, it is important to keep in mind whether the historic property in question can be considered under multiple types of historic properties. The regulations in 36 CFR 800 list five types of historic properties, which are usually considered in DOE investigations: districts (larger areas with multiple properties), sites (archaeological), buildings (structures that enclose human activities), structures (usually engineering in nature), and objects (smaller items such as statues). Recently, linear features (such as roads and railroads) and landscapes (large areas modified by human activity) have also been considered for NRHP eligibility. A specific historic property may be considered under one or more types, as well as part of the larger types (district, landscape). In particular, remnants of buildings and structures may be eligible to the NRHP as archaeological sites even if the property is not eligible as a standing structure because of lack of integrity.

This report considers eligibility of two historic properties, Chambers' Quarry and the LS&M railroad, both within the Park and in terms of significance to the region. Both properties are considered as structures as well as a linear feature (the railroad) and an archaeological site (the quarry).

LOCATION

Chambers Grove Park is a 10-acre park on the north side of the St. Louis River in the City of Duluth, St. Louis County, Minnesota (Figure 2). It is located in the Fond du Lac neighborhood (approximately 13400 West 3rd Street) in T48N, R15W, section 7, northwest of the junction of Minnesota State Highways 23 and 210. The river forms the boundary with the State of Wisconsin to the west and south, with Douglas County on the Wisconsin side. The two historic properties within Chambers Grove Park include the Chambers' Quarry (21SL1162) on the north side of the Park and a portion of the LS&M Railroad: Thomson to Fond du Lac Segment (XX-RRD-0026) on the west side of the Park (Table 1). The historic properties are under the jurisdiction of the City of Duluth.

Table 1. Historic Properties in Chambers Grove Park

PROPERTY	NORTHERN END	SOUTHERN END
Chambers' Quarry	0554667E / 5167972N	0554656E / 5167878N
LS&M Railroad	0554735E / 5167729N	0554914E / 5167623N

Universal Transverse Mercator (UTM) Coordinates; 1983 North American Datum (NAD), zone 15

The LS&M Railroad: Thomson to Fond du Lac Segment is considered primarily as a linear feature/structure (for the entire railroad corridor). Specific components such as culverts and retaining walls present within the railroad can also be considered as individual structures. The segment extends from Thomson to Fond du Lac and only a portion lies within the Park boundaries (see above). However, the entire segment is considered in the review for NRHP eligibility.

Chambers' Quarry is considered as both an archaeological site and a structure. Since the two property types have different expressions, the eligibility is reviewed separately for each type. The entire historic property is within the Park boundary.

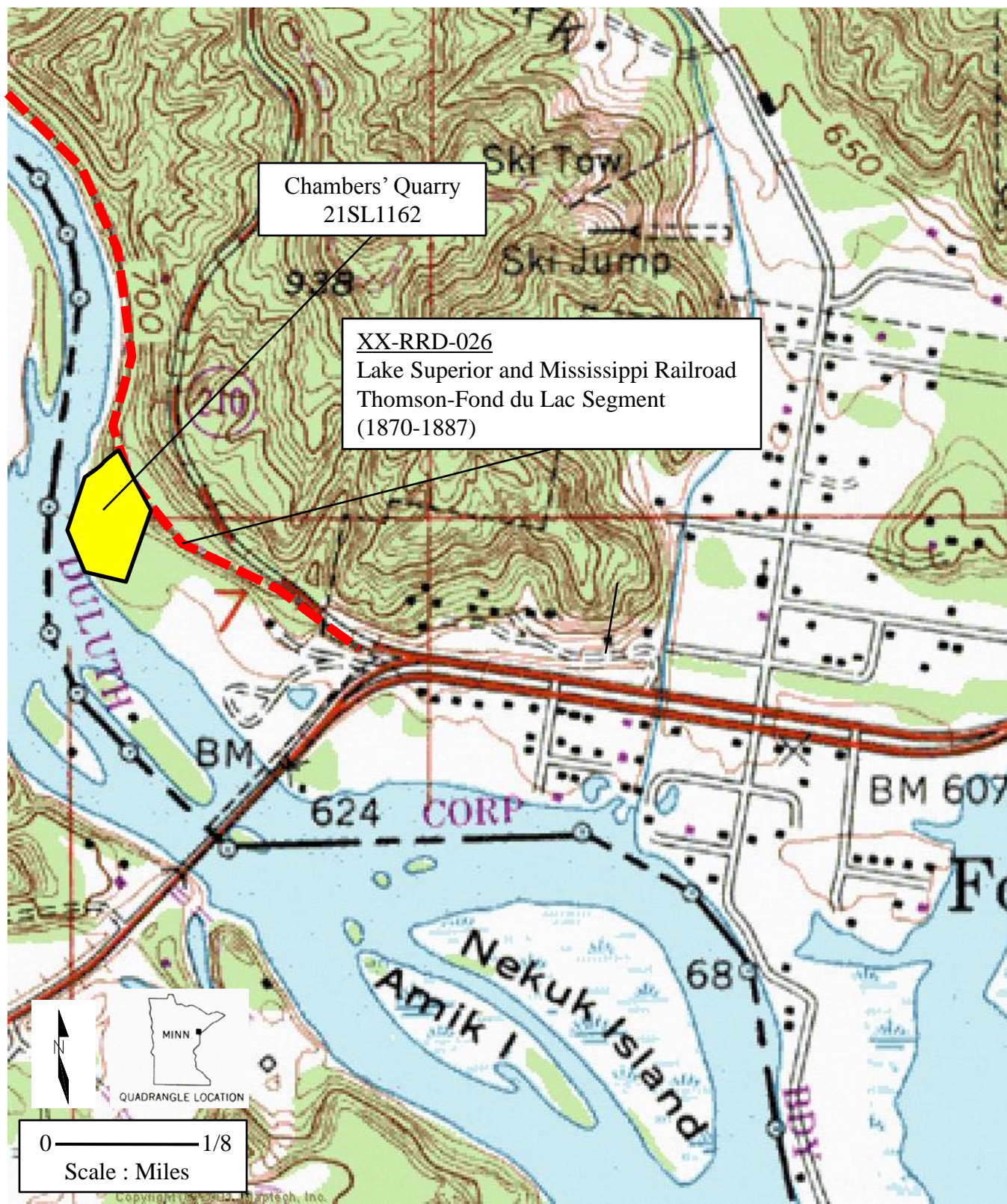


Figure 2. Location of historic properties. Esko, Minn.-Wis. 1953 (1993). 1:24,000 USGS topographic map.

**LAKE SUPERIOR AND MISSISSIPPI RAILROAD:
THOMSON TO FOND DU LAC SEGMENT
XX-RRD-0026**

BACKGROUND

Location

The Lake Superior and Mississippi (LS&M) Railroad: Thomson to Fond du Lac Segment (XX-RRD-0026) is located in Sections 1, 2, 8, 9, 10 and 11 in Township 48N, Range 16W and in Sections 6, 7 and 8 in Township 48N, Range 15 W, Duluth, St. Louis County and Thomson, Carlton County, Minnesota (Figure 3). It consists of a segment of abandoned railroad grade that is visible along the St. Louis River until about halfway between Thomson and Fond du Lac. It is likely that nothing remains of the segment beyond that point because of modern construction activity (see Arnott and Maki 2014 for more detailed description).

Property Description

The property consists of an original segment of the Lake Superior and Mississippi Railroad grade between Thomson and Fond du Lac. The LS&M was the first railroad line completed between Duluth and St. Paul. The first train arrived at Duluth from St. Paul on August 1, 1870. Between St. Paul and Carlton the route followed the present-day Burlington Northern-Santa Fe (BNSF) line, but from Thomson to Fond du Lac the original LS&M route followed the north bank of the St. Louis River through what is now Jay Cooke State Park. Because of the terrain, this route featured steep grades and high timber trestles that presented severe operating and maintenance problems (King 1976:183). The trestles were especially difficult to maintain and were subject to fire danger from sparks coming from wood-burning locomotive stacks (Fritzen 1978:20). Especially in the spring, mud slides also were common. One account tells of a locomotive that slid into the river a short distance above Fond d Lac. This locomotive was visible during low water periods as late as the 1970s (Fritzen 1978:21).

Between Thomson and Fond du Lac only traces of the original LS&M line remain. The scenic drive through Jay Cooke State Park follows portions of the LS&M right of way. West of the Thomson hydroelectric facility portions of the original rail line are still visible on aerial photographs

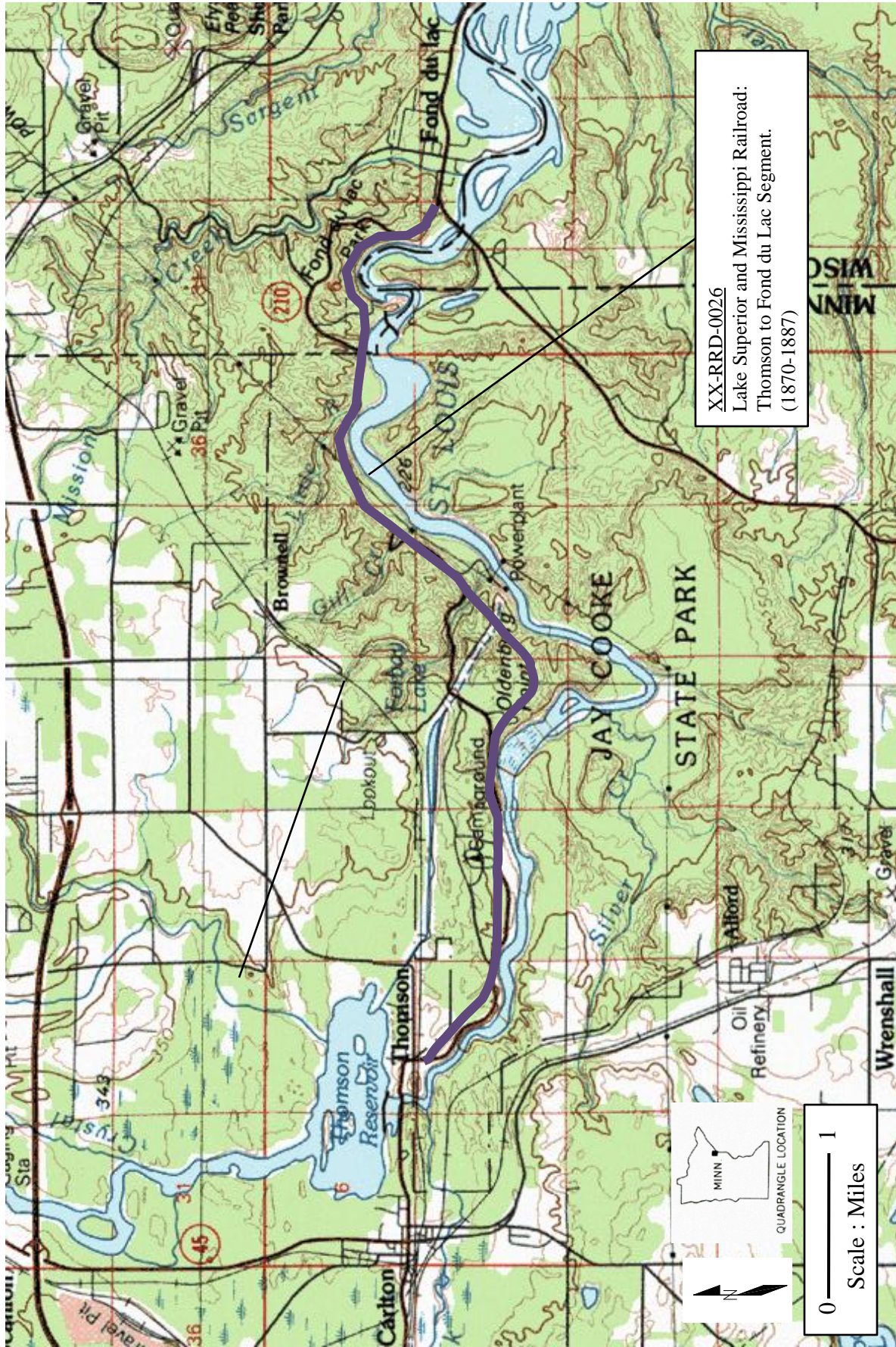


Figure 3. Location of the Lake Superior and Mississippi Railroad: Thomson to Fond du Lac Segment (XX-RRD-0026). Duluth Minnesota-Wisconsin 1980. 1:100,000 USGS topographic map.

and USGS topographical maps. The segment between Fond du Lac and Gary New Duluth is mostly gone, having received impacts by road construction and development. Between Gary New Duluth and West Duluth, however, the original LS&M line is still intact and still used for excursion train operations sponsored by the Lake Superior Railroad Museum.

Within Chambers Grove Park a section of the original LS&M railroad grade along with remnants of a brownstone retaining wall and man-made drainage channels still are evident. Just east of Chambers Grove Park the original LS&M depot, dating from 1870, still stands at 13308 West Third Street in Fond du Lac. For many years this building housed a restaurant (*Duluth News Tribune*, January 6, 1981).

Historical Overview

The Lake Superior and Mississippi Railroad was the first rail line to reach Duluth from St. Paul. The LS&M was organized in 1863 following a decade of effort to authorize and construct a rail line that would connect the Mississippi River with Lake Superior and therefore provide lower transportation costs for farm products, lumber, and other commodities. Construction started at St. Paul in 1863 but because of the Civil War and financing problems, the line was not completed until 1870. The first train traveling over the line arrived at Duluth on August 1, 1870 (Fritzen 1978:20).

The portion of the LS&M route along the St. Louis River between Thomson and Fond du Lac presented significant operating and maintenance problems because of steep grades, high trestles, and unstable soil conditions that resulted in frequent mud slides. In 1886 the St. Louis Bay Bridge connecting Duluth and Superior was completed providing a direct link to the Northern Pacific line at Superior. Also in 1886 the Duluth Short Line railroad completed a new, shorter route between Duluth and West Duluth Junction. The completion of these alternate routes into Duluth and the destruction of the largest trestle by fire in 1894 hastened the abandonment of the original LS&M route along the St. Louis River by 1900. At about the same time, the LS&M Railroad company itself was absorbed into the Northern Pacific system (King 1976:183).

When construction of the Thomson hydroelectric station and dam started in 1905, the contractor laid track along the old LS&M grade between Fond du Lac and Thomson to transport supplies to the construction site. A gasoline-powered Mack rail car also was put in service to transport workers. This rail car remained in service until October 5, 1949. The car then was sold for

scrap and the rail line was once again abandoned (Beck 1985:99).

For about 30 years after 1900 the Northern Pacific operated commuter cars along the section of the LS&M line between Duluth and Fond du Lac. The portion of this line between West Duluth and Gary New Duluth is still used for excursion train operations sponsored by the Lake Superior Railroad Museum.

EVALUATION

Minnesota Historic Context

The Lake Superior and Mississippi Railroad: Thomson to Fond du Lac Segment is considered under the Minnesota SHPO Thematic Context C: *Minnesota Statewide Historic Railroads Study* (State Historic Preservation Office 2010:17). Additional information is contained in the Multiple Property Documentation Form *Railroads in Minnesota, 1862-1956* (Schmidt et al. 2007).

Significance

The Lake Superior and Mississippi Railroad: Thomson to Fond du Lac Segment is here evaluated as a linear feature-railroad grade under NRHP Criterion A as a property “associated with events that have made a significant contribution to the broad patterns of our history.” The specific category is TRANSPORTATION, “The process and technology of conveying passengers or materials.”

The Lake Superior and Mississippi Railroad is associated with the early settlement, growth, and development of Duluth commerce and industry between about 1870 to about 1900. The LS&M in this report is being considered under the local level of significance.

Integrity

The National Register criteria stipulate that a property must possess integrity of location, design, setting, materials, workmanship, feeling, and association. *National Register Bulletin 15* states that “integrity is the ability of a property to convey its significance.” “To retain historic integrity a property will always possess several, and usually most, of the aspects.” (Andrus and Shrimpton 1997:44).

Location: The place where the historic property was constructed or the place where the historic event occurred.

The Lake Superior and Mississippi Railroad: Thomson to Fond du Lac Segment retains integrity of location.

Design: The combination of elements that create the form, plan, space, structure, and style of a property.

The design aspect of integrity does not apply to the Lake Superior and Mississippi Railroad: Thomson to Fond du Lac Segment.

Setting: The physical environment of a historic property.

The Lake Superior and Mississippi Railroad: Thomson to Fond du Lac Segment retains integrity of setting.

Materials: The physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property’

The Lake Superior and Mississippi Railroad: Thomson to Fond du Lac Segment does not retain integrity of materials because the rails have been removed.

Workmanship: The physical evidence of the crafts of a particular culture or people during any given period in history or prehistory.

The workmanship aspect of integrity does not apply to the Lake Superior and Mississippi Railroad: Thomson to Fond du Lac Segment.

Feeling: A property’s expression of the aesthetic or historic sense of a particular period of time.

The Lake Superior and Mississippi Railroad: Thomson to Fond du Lac Segment does not retain integrity of feeling because most of the structures throughout the segment have been disturbed.

Association: The direct link between an important historic event or person and a historic property.

The Lake Superior and Mississippi Railroad: Thomson to Fond du Lac Segment does not retain integrity of association because most of the physical structures in this segment have been disturbed.

RECOMMENDATION

The Lake Superior and Mississippi Railroad: Thomson to Fond du Lac Segment is not recommended as eligible for listing in the National Register of Historic Places as a linear feature or a structure. The historic property, especially the short segment within Chambers Grove Park, possesses only two of the seven aspects of integrity: location and setting. These are not sufficient to consider that the historic property retains integrity. Today, only a few physical remnants of the original line can be found in the field. In addition, the Thomson to Fond du Lac Segment of the original LS&M route along the St. Louis River was used for only a few years from 1870 until 1886 when alternate routes into Duluth were completed.

The entire Thomson to Fond du Lac Segment was independently and concurrently evaluated as a linear feature (railroad corridor) and as a linear archaeological resource (Arnott and Maki 2014:73-79). Many portions of this segment were found to be completely gone as a consequence of erosion or later construction, either for highway corridors or a spur railroad. Trestles are largely gone, with only a few locations still retaining foundation blocks. Culverts are present in some sections of the grade that are still intact. However, fragmentary nature of the original grade (which is in many portions co-located with the highway, the spur rail line, paths and trails as well as entirely missing in some portions) indicates a lack of integrity. The historic property was considered not eligible under any criterion of eligibility for either a linear feature or an archaeological resource.

CHAMBERS' QUARRY

21SL1162

BACKGROUND

Location

Chambers' Quarry (21SL1162) is located in the SW1/4 of the SE1/4 of Section 6, Township 48N, Range 15 W, Duluth, St. Louis County, Minnesota. The quarry is located at the north end of Chambers Grove Park in the Fond du Lac neighborhood at the far western edge of Duluth.

Property Description

Chambers' Quarry was one of three brownstone quarries that operated in the Fond du Lac area between about 1870 and 1910. Archaeological investigations in 2012 (Mulholland and Mulholland 2012) and 2014 (Mulholland et al. 2014) included the main stone quarry site as well as several additional pits (Figure 4). Blocks of stone and talus piles are scattered near the quarry sites. No building foundations or other remains were noted in the quarry vicinity. Besides the quarry remnants, a railroad grade runs immediately adjacent to the quarry site area. This grade was associated with the Lake Superior and Mississippi Railroad, the first railroad to reach the head of Lake Superior from St. Paul. Michael Chambers, owner of the quarry, is said to have shipped stone from his quarry on the Lake Superior and Mississippi Railroad, which is adjacent to the site.

Historical Overview

Chambers' Quarry was one of three brownstone quarries that operated in the Fond du Lac area between about 1870 and 1910. Michael Chambers, owner of the quarry, was an auctioneer and commission merchant in St. Paul before moving to Fond du Lac in 1869. The *Duluth Minnesotian* of May 29, 1869 reported that:

Col. Carlton's old farm and homestead at Fond du Lac, 120 acres, containing a fine meadow, and wild plum orchard and a sandstone quarry, was sold this past week to Mr. Chambers, auctioneer from St. Paul, Price \$5,000. The same party has purchased the Farm lying on the St. Louis River about halfway between here and Fond du Lac (site of

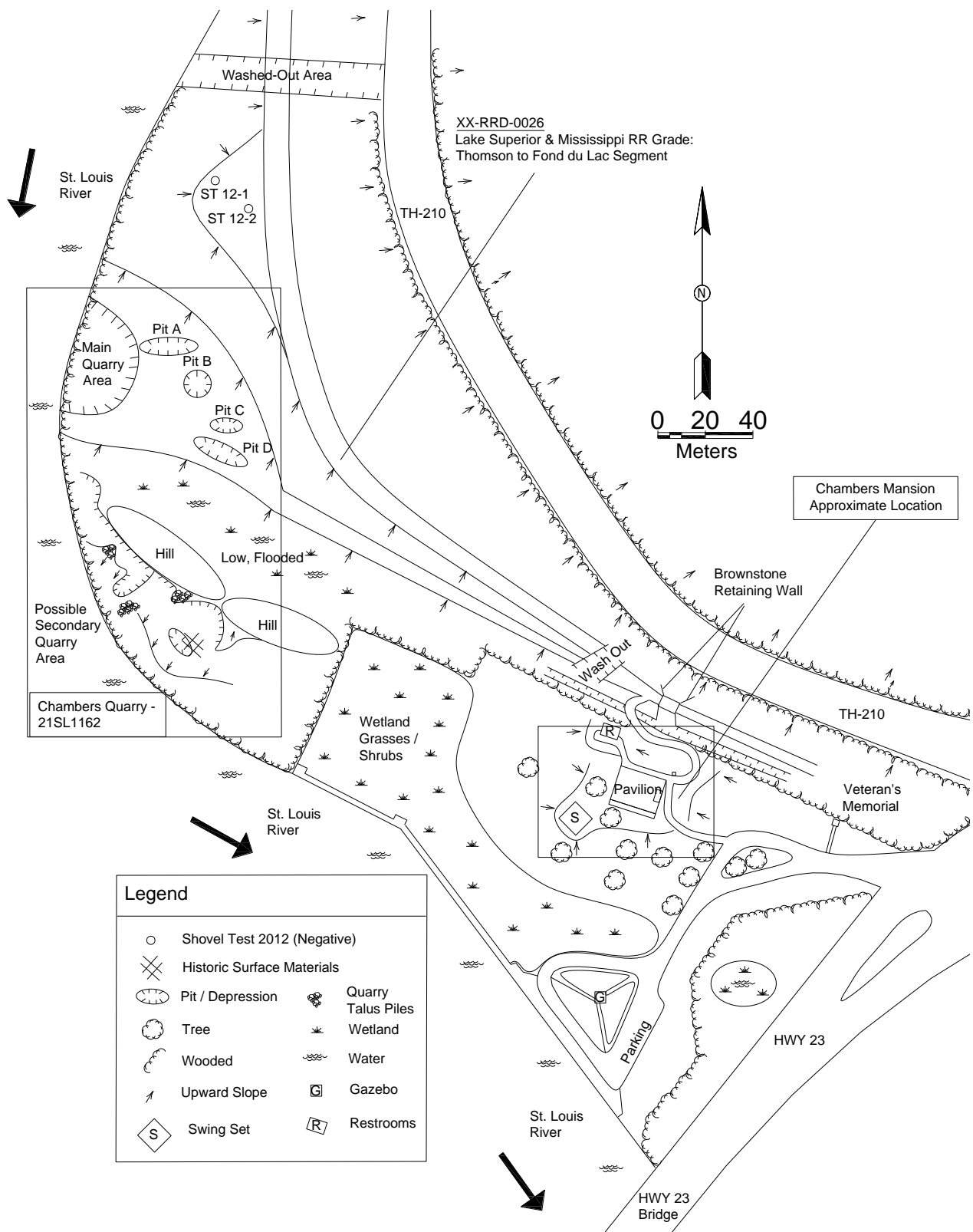


Figure 4. Sketch map of Chambers' Quarry site (21SL1162) and portion of the Lake Superior and Mississippi Railroad: Thomson to Fond du Lac Segment (XX-RRD-0026).

present Morgan Park) and known as “Sebastopol” at \$7.00 per acre (Coventry 1987:10).

Chambers was an opportunist who saw great potential in Duluth’s growing business community. He also was fully aware that the Lake Superior and Mississippi Railroad was due to enter Duluth through Fond du Lac. The route passed adjacent to his property. Chambers hoped that the new railroad would encourage easy transport of passengers, freight, and brownstone from the quarry he now owned to Duluth (Coventry 1987:10).

In 1870 Chambers also began constructing a large mansion on his newly acquired property. He used brownstone from his nearby quarry as the primary building material. Although the mansion attracted considerable attention, the first commercial building to be constructed of stone from Chambers’ Quarry was the Banning and Branch Block that was completed in 1872. This three-story structure stood on the northeast corner of Superior Street and Second Avenue West (Coventry 1987:10). The Grand Opera House at the corner of Superior Street and Fourth Avenue west also was constructed in 1873 of stone from Chambers’ Quarry (Coventry 1987:60).

Following the financial panic and recession/depression that began in 1873 and continued for several years, Chambers faced financial setbacks, legal and property disputes as well as health issues that continued for the rest of his life. His mansion was destroyed by an arson fire in 1891. Chambers died in 1895. In 1926 the City of Duluth acquired 577 acres of property from Chambers’ wife Emily. A portion of this property, including the former quarry site, became Chambers Grove Park.

Only three buildings were constructed of brownstone from Chambers’ Quarry: Chambers’ house, the Banning and Branch Block, and the Grand Opera House (Coventry 1987:60). None of these buildings are extant today.

EVALUATION: STRUCTURE

Minnesota Historic Context

Chambers’ Quarry should be considered under the Minnesota SHPO Thematic Context: *Quarries and Mines* (State Historic Preservation Office 2010:17). However, the only document under this context deals only with prehistoric quarries (Dobbs 1988:269-271); a document for historic quarries was never developed. Instead, information from the NRHP registration form for the Kettle River Sandstone Company Quarry was consulted (Koop 1990).

Significance

Chambers' Quarry is here being evaluated as a structure under NRHP Criterion A as a property "associated with events that have made a significant contribution to the broad patterns of our history." The specific category is INDUSTRY, "The technology and process of managing materials, labor, and equipment to produce goods and services."

Chambers' Quarry is associated with the early development of the Lake Superior brownstone industry that furnished stone used in the construction of numerous buildings throughout the country from about 1870 to about 1910. Chambers' Quarry is being considered under the local level of significance.

Integrity

The National Register criteria stipulate that a property must possess integrity of location, design, setting, materials, workmanship, feeling, and association. *National Register Bulletin 15* states that "integrity is the ability of a property to convey its significance". "To retain historic integrity a property will always possess several, and usually most, of the aspects". (Andrus and Shrimpton 1997:44).

Location: The place where the historic property was constructed or the place where the historic event occurred.

Chambers' Quarry retains integrity of location as it is in situ.

Design: The combination of elements that create the form, plan, space, structure, and style of a property.

The design aspect of integrity does not apply to the Chambers' Quarry as it is not a building or structure.

Setting: The physical environment of a historic property.

Chambers' Quarry retains integrity of setting as it has not been developed or changed.

Materials: The physical elements that were combined or deposited during a particular period of time

and in a particular pattern or configuration to form a historic property.

Chambers' Quarry retains integrity of materials as the features are not disturbed.

Workmanship: The physical evidence of the crafts of a particular culture or people during any given period in history or prehistory.

The workmanship aspect of integrity does not apply to the Chambers' Quarry.

Feeling: A property's expression of the aesthetic or historic sense of a particular period of time.

Chambers' Quarry does not retain integrity of feeling because the structures and equipment from the operations are not present, although the quarry face is present.

Association: The direct link between an important historic event or person and a historic property.

Chambers' Quarry does not retain integrity of association because remnants of the structures and equipment from the operations are not present.

RECOMMENDATION: STRUCTURE

Chambers' Quarry is not considered eligible for listing in the National Register of Historic Places under Criterion A as a structure. Chambers' Quarry was used by Chambers for only a short time between 1870 and 1873, although it was later leased to other operators. Only three buildings are known to have been constructed of stone from the quarry; none of the three buildings are extant today. In contrast, the other Fond du Lac area quarries operated from the 1870s until about 1910. At least two dozen buildings in the Duluth-Superior region were constructed of stone from these other quarries. Many of those buildings still stand and remain in use today.

Chambers' Quarry, however, may be eligible for listing in the National Register of Historic Places as an archaeological site under Criterion D as a property "that has yielded, or may be likely to yield, information important to prehistory or history".

EVALUATION: ARCHAEOLOGICAL SITE

Minnesota Historic Context

Chambers' Quarry should be considered under the Minnesota SHPO Thematic Context:

Quarries and Mines (State Historic Preservation Office 2010:17). However, the only document under this context deals only with prehistoric quarries (Dobbs 1988:269-271); a document for historic quarries was never developed. Instead, information from the NRHP registration form for the Kettle River Sandstone Company Quarry was consulted (Koop 1990).

Significance

Chambers' Quarry is here being evaluated as an archaeological site under NRHP Criterion D as a property "that has yielded, or may be likely to yield, information important to prehistory or history." Archaeological sites are generally comprised of archaeological features and/or associated sedimentary deposits containing artifacts from the activities conducted at the site. The three-dimensional structure of the features and artifacts can inform about the specific activities conducted at the site.

Chambers' Quarry is associated with the early development of the Lake Superior brownstone industry that furnished stone used in the construction of numerous buildings throughout the country from about 1870 to about 1910 (Appendix I). Chambers' Quarry is being considered under the local level of significance.

Integrity

See the section above for discussion of the seven aspects of integrity. However, for archaeological sites the amount of physical disturbance to surface features and sediment deposits is critical to evaluation of site integrity.

Surface Features: The site was identified by a post-Contact stone quarry face and four adjacent pits (Mulholland and Mulholland 2012). In addition, a railroad grade was recorded immediately adjacent (northeast) of the site area (the LS&M Railroad discussed above). Additional survey identified a possible secondary quarry area south of the main area (Mulholland et al. 2014:34). Several surface features associated with the site are still largely intact, although a hiking trail immediately south of the quarry face does cross a pit edge (Table 2). The railroad grade might be associated with the quarry for transportation of the stone; however, the only transport method documented to date is by scow on the St. Louis River (see Figure A-2 in Appendix I).

Table 2. Quarry Features, 21SL1162

FEATURE	LENGTH	WIDTH	DEPTH
main quarry face	35 m	20 m	7.5 m
Pit A (ovate)	15 m	3 m	3 m
Pit B (circular)	4 m	4 m	3 m
Pit C (ovate)	5 m	3 m	2 m
Pit D (ovate)	10 m	2 m	1.5 m
second quarry face	100 m	20 m	2-5 m (variable)
pit at second quarry	8.5 m	6.3 m	1 m

Site Deposits: No subsurface investigations have been conducted at the Chambers' Quarry site. However, no surface indications of disturbance (such as recent holes) were observed during any field investigation. No evidence of building remnants or structures associated with the quarrying activity were observed but artifacts may be present in the sediments and rock piles associated with the quarry. No metal detection survey has been conducted by cultural resource professionals.

RECOMMENDATION: ARCHAEOLOGICAL SITE

Chambers' Quarry is considered eligible to the NRHP as an archaeological site under Criterion D. The surface features, including the quarry face and several pits, appear from a walkover inspection to be intact. A possible secondary quarry face is also present. The site has the potential to provide information relevant to the brownstone industry in Duluth and specifically to the methods used to quarry this valuable stone resource.

Chambers' Quarry was only one of three brownstone quarries in the Fond du Lac neighborhood of Duluth (Coventry 1987:5-13). Ingalls Quarry was operated as the Duluth Brownstone Quarry but is actually located on the Wisconsin side of the St. Louis River opposite Chambers' Quarry. Krause's Quarry was located upstream from the Village of Fond du Lac on Mission Creek, approximately a mile from Chambers' Quarry. Both quarries produced more volume of stone than Chambers' Quarry but from the same geologic bedrock deposit of Fond du Lac

sandstone. The Fond du Lac locality was one of five quarry groups that contributed to the regional brownstone industry: Kettle River by Hinckley, the South Shore in Wisconsin, Chequamegon area in Chequamegon Bay, and Portage Entry on the Keewenaw Peninsula in Michigan (B. Klawiter, personal communication 2015).

A historic district comprised of the three Fond du Lac quarries would have the greatest potential to contribute to the understanding of the Fond du Lac locality of the brownstone industry. Alternatively, the Ingalls and Krause Quarries could be evaluated independently for eligibility to the NRHP.

The Lake Superior brownstone industry is a significant historic context in northeastern Minnesota that also relates to urban development across the country. Several thematic contexts, some developed in Multiple Property Documentation Forms, relate to the industry and therefore to Chambers' Quarry (Appendix II). These contexts form a framework in which this site can be evaluated in relation to the industry.

SUMMARY AND CONCLUSIONS

Determination of Eligibility (DOE) was conducted for two historic properties located within the Chambers Grove Park in Duluth, Minnesota. No additional field work was conducted; literature review and research forms the basis for these recommendations.

The Lake Superior & Mississippi Railroad (LS&M) extended from St. Paul to Duluth. The segment from Thomson to Fond du Lac was relatively short-lived because of the steep terrain and difficulty in maintaining the track north of the St. Louis River; an alternate route, the Duluth Short Line, was constructed in 1887. The Thomson to Fond du Lac Segment is considered not eligible to the NRHP as a linear feature/structure in its entirety (Arnott and Maki 2014:78-79).

The portion of the railroad grade within the Park is intact except for the lack of railroad ties and track; this part of the grade contains a brownstone-walled culvert and a retaining wall that could receive impacts from the planned Park improvements, specifically slope stabilization. However, this grade is a short portion of the entire railroad segment and by itself is not considered eligible to the NRHP as a result of lack of integrity in materials, feeling, and association.

Chambers' Quarry (21SL1162) is a discrete locus of quarrying activity located on the northern side of the Park. It is bounded on the north and west by the St. Louis River, which was used for transport of the stone, and on the east by the LS&M railroad which may also have been used for transportation. The southern edge of the site appears to be within the wooded portion of the Park, north of and away from the open area which appears to have been filled to remove low saturated ground (Mulholland et al. 2014:14). No obvious disturbances to the site were noted during two surveys (Mulholland and Mulholland 2012, Mulholland et al. 2014).

Chambers' Quarry is recommended as potentially eligible to the NRHP as an archaeological site under Criterion D. It is an historic site that has the potential to inform about the methods used to quarry brownstone, an important resource in Duluth and nationally. However, the quarry itself was short-lived and no extant buildings or structures comprised of stone from this quarry can be documented. However, an historic district comprised of Chambers' Quarry together with the other two quarries in the area (Ingalls Quarry, Krause's Quarry) could provide the greatest amount of information on the Fond du Lac locality in the brownstone industry.

It is recommended that the grade and structural elements of the portion of the LS&M

Railroad: Thomson to Fond du Lac Segment within Chambers Grove Park do not meet the criteria for eligibility to the NRHP. Therefore, Park improvements do not have to consider the effects on this historic property. However, the Chambers' Quarry does meet the eligibility criteria, either singly or as part of a historic district, and therefore Park improvements do need to consider effects on this historic property. In particular, construction of a hiking trail through the site needs to be designed to avoid or minimize impacts to the various components of the site. Consultation with the MnSHPO during design and construction is recommended.

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**APPENDIX I: Additional Background Information for the Chambers' Quarry Site
(21SL1162)**

The Michael E. Chambers Brownstone Quarry: Brian Klawiter

The Michael E. Chambers Quarry was a local (and to a limited extent regional) participant in a nationwide Victorian Era brownstone boom. Three major factors fueled the nearly four-decade bull market in brown sandstone: 1) the popularity of Romanesque Revival (also known as Richardsonian Romanesque) architecture; 2) the surge of ‘brownstone’ townhouses in urban development, particularly in New York City; and 3) a demand for fireproof construction materials following the Chicago Fire of 1872. The tractability of brownstone as a dimension stone, being amenable to cutting and carving, contributed strongly to its desirability and good reputation in the construction industry of the time. Excellent summaries of the contemporary social and economic demands for brownstone are found in Williams (2009) and in Eckert (2000).

Geologically, the stone quarried from Michael Chambers’ property belongs to a formation called the Fond du Lac Sandstone (FdLS). The bedrock exposures along the St. Louis River (including the Chambers’ Quarry itself) are, in fact, the type location at which the FdLS was first formally studied and described by geologists (e.g. Winchell 1899). Newton Horace Winchell, Minnesota’s first State Geologist, described it thus in 1884:

At Fond du Lac this stone, while in general of a reddish-brown color, is variously marked with spots and stripes of lighter shade. It also has occasional grains of quartz as large as a pea, or even as large as a hen's egg, distributed especially through the lighter colored portions... The strata are of all thicknesses up to three or four feet, and very large blocks are obtainable. The principal quarry is owned by Mr. M. Boyle [sic]. It is situated in the bluff of the St. Louis river a short distance above Fond du Lac, at the first rapids, and was first opened by Mr. M. E. Chambers in 1870. The stone appears, and has been worked, on both sides of the river, but the principal excavation is on the Minnesota side from twenty to forty feet above the water, near the St. Paul and Duluth railroad. (Winchell 1884; note that he mistook the quarry ownership)

The FdLS is a two-thousand-foot-thick sedimentary member of the otherwise primarily igneous Keweenaw Supergroup which comprise the rocks of the 1.1 Ga Mid-Continent Rift. The sandstones of the Mid-Continent Rift are the product of extensive erosion, fluvial transport, and alluvial (delta) deposition of clastic sediments into rift-flanking basins, and appear to be the final filling-in of the massive continent-splitting rift valley after volcanism had gone quiet (Tryhorn and Ojakangas 1972, Morey 1972).

The FdLS is mineralogically immature sandstone known as “arkose”. An arkose is characteristically rich in feldspar grains, as opposed to mineralogically ‘mature’ sandstones composed more homogeneously of the quartz grains that are the durable end member of chemical and physical weathering. The high feldspar content of the arkose (up to 30%) is accompanied by a number of other trace minerals, including iron oxides and clay minerals. Altogether, this mineralogical formula lends the sandstone a characteristically dark reddish brown color and a relatively weak crush strength.

The arkosic sandstone of the Fond du Lac Formation is closely related to the more quartz-rich (>95% quartz) Hinckley Sandstone formation, the source for stone of the Kettle River quarries in Pine County, Minnesota. Also, the Fond du Lac Formation correlates geologically with the Orienta Sandstone of the Bayfield Group in northern Wisconsin, and likely with the Jacobsville Sandstone formation in northern Michigan (Ojakangas and Morey 1982). Both of these latter formations hosted a number of brownstone quarries which were fierce competitors to the Chambers' Quarry (Eckert 2000).

The documented history of brownstone extraction from Fond du Lac starts in 1855, when some stone was quarried for use in a local steam-driven sawmill built by Henry Wheeler. Commercial exploitation of quarries in the area (Figure A-1), however, does not appear in the historical record until 1870, the same year that Duluth was first incorporated as a city and the Lake Superior & Mississippi Railroad connected Duluth to St. Paul via Fond du Lac (Coventry 1987:10-13). Michael Chambers had moved from St. Paul the year prior. The *Duluth Minnesotian* newspaper of May 29, 1869, reported:

Colonel Carlton's old farm and homestead at Fond du Lac, 120 acres, containing a fine meadow, and wild plum orchard and a red sandstone quarry, was sold the past week to Mr. Chambers, auctioneer from St. Paul, price \$5,000. The same party has purchased the farm lying on the St. Louis River about halfway between here and Fond du Lac and known as "Sebastopol" at \$7.00 per acre.

In 1870 Chambers used stone from the quarry on his land to begin construction on what would be a twenty-eight room mansion for himself and his wife. At the same time, another quarry directly across the St. Louis River was being opened up by Edmund Ingalls. This competing quarry operation would come to be known as the Duluth Brownstone Company.

The first recorded commercial venture to employ stone from the Chambers' Quarry was the Banning and Branch Block, a three-story structure built in 1872 at the northeast corner of Superior Street and Second Avenue West in downtown Duluth. Also in 1872, a third commercial quarry venture was launched in the Fond du Lac neighborhood, this time by Charles Adolph Krause on property he purchased on Mission Creek, less than a mile northeast from the Chambers and Ingalls quarries.

A financial panic hit the nation in 1873 and Chambers was hit hard by it. He tried selling the quarry that year but found no buyer. A string of bleak years followed. The *Duluth Weekly Tribune* in March of 1879 reported him to have had "an attack of neuralgia which partially demented him" but that he had since recovered his senses. Even with senses restored, Chambers lost much of his interest in brownstone, and afterward leased the operation of his quarry to others; first to Martin Boyle in 1881, then to Alphonse Guerard around 1888. Boyle and Chambers made the newspapers in 1882 when they engaged in a violent argument aboard a train. Apparently, this was only one of several times that Michael Chambers made the news for inspiring violence against himself (Coventry 1987).

The Chambers' Quarry was hampered throughout its operational existence not only by the mercurial personality of its owner but also by the unreliable nature of the St. Louis River. The quarry was

served by a spur of the old Lake Superior and Mississippi Railroad but the preferred means of transport seems to have been via the adjacent river channel. Chambers used a scow and tug for transport down river some dozen miles to the port of Duluth. Photos in the collection of the UMD Martin Library Archive show this scow moored alongside the Chambers' Quarry in 1881 (Figure A-2). In 1903 Captain D.D. Gaillard of the US Army Corps of Engineers reported:

Mr. M.E. Chambers, the owner of a brownstone quarry in the village of Fond du Lac, dredged a channel about 500 feet long through a bar in the river on the Minnesota side about the year 1888, for the purpose of giving access to his quarry for tugs and scows. The cost of this improvement is stated to have been about \$1,000. The channels have since become partly silted up by flood deposit so that it is now impossible for tugs to reach the quarries.

Apparently, the navigation channel had become increasingly clogged with sawdust and escaped logs swept downriver from sawmills and pulp mills further up stream. By 1903 the river channel here was only four feet deep. After many repeated pleas for assistance over the previous two decades, in 1904 the Army Corps of Engineers formally investigated. They declined to spend taxpayer money to dredge the shipping channel to the quarries (Gaillard 1903).

Yet despite these detrimental factors, the Chambers' Quarry seems regularly to have employed from two to four dozen men per season for some three decades or more, much longer than average in the crowd of competitors amongst the boom-and-bust brownstone quarries of the Lake Superior region. At the peak of brownstone's popularity five more quarries opened on or near the south shore of Lake Superior in northern Wisconsin – the Cranberry in 1884, Amnicon in 1886, Port Wing and Siskiwit in 1888, and Iron River in 1889 (Eckert 2000) – but three of these lasted less than a decade, and only two of them outlived the Chambers' Quarry, even though they were touted in the newspapers of the time as having the most modern of steam-powered machinery (Coventry 1987).

Photos of the Chambers' Quarry in 1881 show that small, hand-cranked derricks and wheelbarrows were used to move blocks of stone from the riverfront bluff face to the waiting scow moored alongside (Figure A-2).

Rough stone was transported to stone yards in the harbor of Duluth. These stone yards handled material from many different quarries. Here, the stone was cut, shaped, and loaded onto trains for transport to destinations like Omaha, Kansas City, Chicago, or New York City. In 1889-1890, the peak years for the regional brownstone industry, the stone yards are reported to have employed some 500 men. This was second only to the then-booming lumber industry as top employer in Duluth (Coventry 1987). According to *Stone: An Illustrated Magazine*, volume 4 (1891), the average wages of a brownstone quarryman in Minnesota at this time were \$1.53/day, or \$353.43/year.

It's hard to say when the Chambers' Quarry ceased to operate; probably in the early to mid 1890s (see Gaillard 1903). Michael Chambers died in 1895, at a time of terminal decline in the brownstone industry (and also the same year that the village of Fond du Lac was formally annexed by the growing city of Duluth). The other two quarries in the Fond du Lac neighborhood seem to have coasted to a halt around 1909-1910 (Coventry 1987). The brownstone boom had gone bust.

A combination of several factors precipitated the demise of the brownstone industry, not least of which was what would be revolutionary developments in urban construction methods. The first fully structural steel “skyscraper” in Duluth, the Lonsdale Building, had been built in 1895. Following quickly on the heels of structural steel, concrete began to be used in Duluth construction around 1904, at the same time that the railroads were doing the same. The Romanesque Revival style of architecture had fallen out of favor, replaced by Classical Revival designs (such as the Duluth Civic Center buildings) demanding paler, brighter-looking stone. Also, the unscrupulous sale of inferior product during its booming heyday had tainted the reputation of brownstone as a building material (Bowles 1918). At best, Fond du Lac brownstone had a crushing strength of about 6,000 pounds per square inch, compared to 15,000 for Indiana limestone and 30,000 for St. Cloud granites (Bowles 1918; Thiel and Dutton 1935), a factor which became more important when buildings got taller at the same time that walls got thinner.

Sadly, not a single known building remains with a clear, uncontested documentary provenance linking the stone back to the Chambers’ Quarry.

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Figure A-1. Chambers' Quarry at Fond du Lac, Minnesota, 1881. University of Minnesota Duluth. Kathryn A. Martin Library, Northeast Minnesota Historical Center Collections.



Figure A-2. River transport of brownstone from Chambers' Quarry, 1881. University of Minnesota Duluth. Kathryn A. Martin Library, Northeast Minnesota Historical Center Collections.

APPENDIX II: Historic Contexts Relating to the Brownstone Industry

Minnesota Tourism and Recreation in the Lakes Regions 1870-1945

Minnesota has a rich tradition of recreation, beginning with escapes from the developed instate core to its fringes – places like White Bear Lake or Lake Minnetonka, to extended vacations in outstate centered on hunting, fishing, or simply partaking in the good health of clean air. As railroads created a spider web network throughout the state, vacationers and entrepreneurs were quick to capitalize on their use throughout southwestern, central, and northern Minnesota. Seasonal residence to the region even came from other regions of the U.S. to escape summer's heat, engage in recreation, or capitalize on commercial aspects. Economic drivers often turned early industrial activities into recreational ones – with the shift of lumber camps and private lodges or residences into recreational ones. Minnesota expanded this opportunities during the years of the Great Depression by expanding its state parks and forest system. After WWI, improving roads, automobile usage, promotion, and perceived increases in leisure time all facilitated a rapid expansion of this context into the precursor of the industry we recognize today.

Example property types specifically mentioned in the context narrative include: seasonal estates; sites associated with boating and fishing; public amenities for tourists; and structures associated with travel to and from, and within, the resort area.

In terms of the Chambers' Quarry, this location could have provided raw materials directly associated with the growth of this industry. Similar, the house associated with the quarry has some potential evidence for its use as a hotel. The location of Quarry itself would have lent to as an idea location for access to recreational activities. Finally, its conversion into a park (what is the history of this) gives it a double tie to the context.

Additional short list of example references:

- Aguar, Charles E. 1971 "Exploring St. Louis County's Historic Sites";
- Sommer, Lawrence J. 1984 "Duluth Historic Resources Survey: Final Report";
- Bulena, Gordon L. "Recreation in the Upper Great Lakes Area: a summary of social research";
- Heald, Sara T. "History and Development of the Summer Resorts Region";
- Sielaff, Richard O. 1958 "Economics of the vacation and travel industry in nineteen century northern Minnesota counties";
- numerous National Register Nominations for resort/recreation properties.

Urban Centers 1870-1940

Overlapping with the previous context, is a more narrow understanding of a few places within Minnesota that became centers for economic and political activity that then cast their shadows over the entire region. There is of course a series of scaling points for these urban centers and often these represent geographic accommodations with the understanding that there can be only so many centers to which the surrounding periphery can be attached and drawn in. Initially, and Duluth is certainly included in this understanding, is that these locations are dependent on resource-extractive industries. Duluth is uniquely situated in that it provides not only the resources of lumber, iron ore, and sandstone, but also is a prime resource for the transition between land and water and the storing of materials mentioned above. Indeed, St. Paul's rise to prominence closely mirrors this relationship. Similarly these locations become increasingly non-residential and more the place that individuals travel to and from during their work day, be that political, commercial, educational, etc. Indeed, this set of dynamic movements as they are called between residence and workplace / work and leisure, are some of the center characterizations identified by SHPO in writing this context.

In considering Minnesota, therefore, one can easily see the two-tiered network of urban centers in the State with the Twin Cities of St. Paul and Minneapolis representing the political and economic heart of the State and Duluth its primary artery then smaller communities of St. Cloud, Mankato, Rochester, etc. representing the second rung of urban life. Property types here highlight office buildings, factories, government buildings, police and fire stations, streetcar lines, etc.

What is critical for the Quarry is that these locations mentioned are dependent upon building materials for their construction – a central role that this Quarry played in the regions development. Its chronological ascension and association with the first rail-line would have given it a leg up on other quarries in the region. The fact that these specific property types (quarries, lumber camps, etc. are not mentioned as examples of property types associated with the context – I feel is an oversight on the part of its original authors.

Two listed examples of references for this context are:

Clark, Clifford Jr. 1989 "The Network of Urban Centers" in *Minnesota a Century of Change*;
Westrooks, Nick 1983 "A Guide to the Industrial Archaeology of the Twin Cities".

Multiple Property Documentation Form – Railroads in Minnesota, 1862-1956.

Railroads are a critically important event in the development of much of Minnesota, especially those areas outside of SE Minnesota and the immediate Twin Cities area. As frontier expansion and settlement continued immediately after statehood, railroads and the economies that they fostered, shaped the landscape of settlement, often making or breaking entrepreneurs and communities in the process.

Railroad associated properties are prominently mentioned in several of the broad, post-contact context narratives that have developed for Minnesota including: St. Croix Triangle Lumbering (1830-1900s); Railroads and Agricultural Development (1870 – 1940); Northern Minnesota Lumbering (1870-1930s); Minnesota's Iron Ore Industry (1880s – 1945); Urban Centers (1870 – 1940); and Minnesota Tourism and Recreation in the Lakes Region (1870 – 1945). Indeed, for several of these, the author's make statements that included, "Primary features in the area's development were the network of railroads" (Railroads and Agricultural Development), "The development of railroads, however, was the single most important factor in the industry's rapid growth..." (Northern Minnesota Lumbering), and "Railroads were the first important mean of access to resort areas in out-state Minnesota." (Minnesota Tourism and Recreation in the Lakes Region). The fact that the quarry in question was the first to be directly connected to the first railroad operating in the Duluth area should not be overlooked in terms of eligibility. 1870's railroad development is part of the "Golden Age" or railroad development in the State (1865 through WWI). In the years from 1865 to 1873 there was a burst of pioneering expansion from instate to outstate locations. Early routes were generally constructed to connect existing nodes of production and population – typically along navigable waterways. In 1870 there were just over 1,000 miles of track in the state. By a decade later, this number had tripled (Stover 1970: 154). Later, northern Minnesota railroad networks, did not truly begin to take shape until the 1890s.

Associated Property types within this MPDF that could relate to the quarry include: Railroad Corridor Historic Districts – which at a minimum includes a railroad roadway, which is the portion of the right of way modified to support the railroad tracks, and may in addition associated railroad-related support buildings and structures: stations, yards, depots, separation structures, house, offices, shops, shelters, towers, etc.

In terms of significance, the authors of the context state that "it is unlikely that a railroad corridor historic district would meet Criterion D." However, they do state that further study must be likely to yield important information on the evolution or development of corridor design, operation, or "the inter-relationships between railroads and the industrial and commercial operations they served (pg. 197)". This could directly relate to the potential for the Quarry. Finally, the authors end the section on Criterion D by stating "Future Studies, however, in which archaeological analysis is combined with analysis of the extant built environment, could provide important new information significant under Criterion D. (pg. 197)".

Additional references for research could include the following:

Berg, Walter G. 1900 "Buildings and Structures of American Railroads";

Brochert, John R. 1989 "Network of Urban Centers" in *Minnesota a Century of Change*, edited by Clifford E. Clark;

Crooks, W. 1905 "The First Railroads in Minnesota"; Stover, John F. 1970 "The Life and Decline of the American Railroad".

Multiple Property Documentation Form - Minnesota's Lake Superior Shipwrecks (1650-1945)

This MPDF is connected to six different associated historic contexts, five of which could have association with either direct use of Quarry materials or similar resource/industry locations or parallels: Settlement & Fishing on Lake Superior (1854-1930); Minnesota's Iron Ore Industry (1880s-1945); Northern Minnesota Lumbering (1870-1930s); Railroads and Agricultural Development (1870-1940); and North Shore Tourism and Recreation (1870-1945).

Property Types that are directly related to the Chambers Quarry and its associated Fond du Lac Brownstone would be Bulk Freight Steamers (1865-1945). In terms of eligibility, Criterion D is one of the most commonly satisfied criteria for establishing site significance. Issues which may apply to shipwrecks and this criterion are the potential for learning about site formation process and impacts of post deposition activity, shipwreck salvage techniques, and the presence of cultural materials relating to shipboard life, cargoes, etc. Great Lakes bulk freighters are screw steamers designed for the carriage in bulk of cargoes including iron ore, grain, coal or limestone. The first bulk freighters were built in around 1865 and later hybrid models of a few years later are entirely unique to the Great Lakes. Specific to the period in question for the rise of the Chambers Quarry – between 1869 and the Panic of 1873, 47 bulk freighters were built. They played a key role in the development of several Minnesota industries as a cost-effective transportation system to lower Lakes markets – and are represented in both of the two resource based contexts for the region (lumbering and iron ore), creating easy overlap with quarry activities.

One should be able to document specific wrecks that were carrying stone.

Additional references could include some of the following:

- Board of Engineers for Rivers and Harbors 1930 "Transportation on the Great Lakes";
- Bowen, Dana T. 1952 "Shipwrecks on the Lakes"; Butler, James D. "Early Shipping on Lake Superior";
- Duluth Journal of Commerce, 1886 "City of Duluth, with a Review of Its Trade, Commerce, and Industries";
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Multiple Property Documentation Form - Historic Resources of Duluth's Central Business District

This MPDF has the best connection to the Chambers' Quarry. Because of its contextual importance for potential eligibility of the Chambers Quarry, I have scanned and included it in its entirety for this document (see email). What follows below is a brief summary.

The District consists of a "variety of commercial, social, and recreation buildings located in the central business district of Duluth" and encompasses the blocks of downtown Duluth extending from Superior Street to 1st Street and from 3rd Avenue East to 3rd Avenue West. The District includes historic aspects of several other listed contexts: Railroads and Agricultural Development (1870 – 1940); Northern Minnesota Lumbering (1870-1930s); Minnesota's Iron Ore Industry (1880s – 1945); and Urban Centers (1870 - 1945). The buildings for this district contain the greatest concentration of properties related to the commercial development in Duluth and were identified through intensive survey conducted by the City of Duluth Planning Department in 1994. The Chambers Quarry period of activity closely mirrors the early fits and starts that Duluth itself experienced with initial success, then the Panic and stagnation in 1873 followed by rebirth.

Property types associated with the MPDF includes the Commercial Historic District itself with an associated group of architects; Commercial Buildings; Fraternal and Social Buildings. For each of these there is a focus on 1872 to 1933 for the period of significance. As this was the Chambers Quarry's period of highest use ahead of the Panic of 1873, it stands to reason that stone from it could have been used. Similarly, in order to be eligible, the buildings must retain integrity of materials specifically the materials used to construct the building. Not surprisingly, Criterion D is not used for this MPDF as it only examines extant, standing, buildings.

A complete list of references is included in the MPDF and is strongly suggested for future research.

Related National Register Sites

A search under Quarry for National Register Sites in Minnesota returned seven records searches. One was for the Grand Mound Quarry Archaeological District in operation from 8000BC to AD 1600. Another was for the Plummer House in Rochester that is on Quarry Hill. The remaining properties were all historic quarries: the Kettle River Sandstone Company Quarry, Sandstone, Pine County; the Jasper Stone Company and Quarry in Jasper, Rock County; two quarries located in the State Reformatory for Men Historic District in St. Cloud, Sherburne County; and the Clark and McCormack Quarry and House in Stearns County.

Of the six properties that were historic quarries, the most recently documented was the Kettle River Sandstone Company Quarry (1991). This property is similar to the Chambers' Quarry in several key aspects: 1) it is an abandoned quarry (not still in operation), 2) after the quarry closed all of the buildings and equipment were either destroyed or salvaged, 3) the property was designated a city park in 1960 with a series of trails being created, 4) the quarry had an associated rail spur to it 5) the third of three contributing elements for the quarry is its "Quarry site ruins" which consists of exposed sandstone walls, evidence of drill marks, walls, well, rail beds, foundations, dam remains, and piles of block.