



**Visual Thinking with Spatial Data:
Using Spatial Organization to Access Library Information**



MHS: Who we are

Established 1846

Broad Collections Focus

Library and Exhibits

Statewide Network of
Historic Sites

State Archives

Preservation Outreach-
SHPO



Digital Collections at MHS

Birth and Death Records

Photographs

State Census Records

Maps

Newspapers

Veterans Grave Index



Challenges and Opportunities



- Declining visitation and revenue
- Increasing competition for leisure dollars
- Difficulty in securing state funding



- Internet lets us extend our reach
- New ways of delivering collections materials
- New Partnerships
- New museum experiences

Examples

Employing geospatial data for:

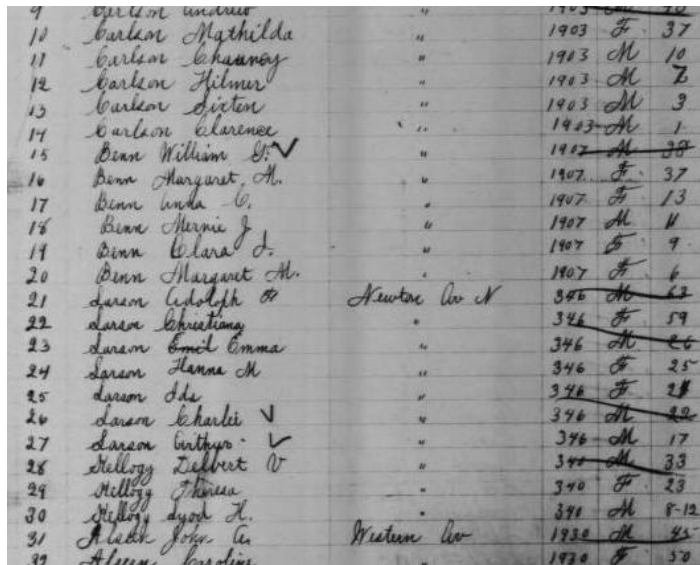
- Research
- Organization
- Presentation
- Virtual Experiences and Programming



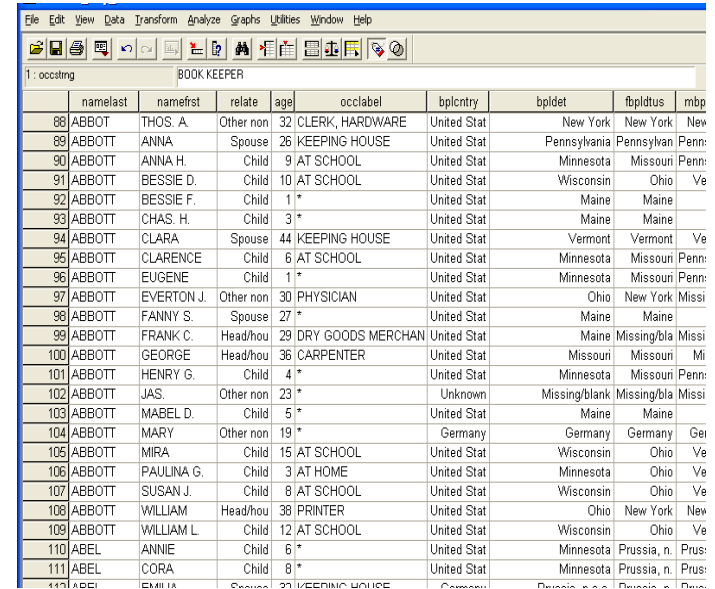
Research

GIS Census Interface

Historic IMPUMS data recently released, provides micro-level census data in spreadsheet format. Perfect for manipulation, searching and accessing



id	name	age	sex
9	Carlson Mathilda	1903	F 37
11	Carlson Ekman	1903	M 10
12	Carlson Hilmer	1903	M 7
13	Carlson Syster	1903	M 3
14	Carlson Clarence	1903	M 1
15	Benn William D.	1907	M 38
16	Benn Margaret A.	1907	F 37
17	Benn Unda C.	1907	F 13
18	Benn Marnie J.	1907	M 11
19	Benn Clara J.	1907	F 9
20	Benn Margaret M.	1907	F 6
21	Larson Edolph	346	M 62
22	Larson Christina	346	F 59
23	Larson Emil Emma	346	M 26
24	Larson Hanna M.	346	F 25
25	Larson Ida	346	F 23
26	Larson Charles	346	M 22
27	Larson Arthur	346	M 17
28	Hillberg Robert	340	M 33
29	Hillberg Theres	340	F 23
30	Hillberg Joseph A.	341	M 8-12
31	Abel John A.	1920	M 45
32	Abel Caroline	1920	F 50



	namelast	namefirst	relate	age	occlabel	bplctry	bpldct	fbpldus	mbp
88	ABBOT	THOS. A.	Other non	32	CLERK, HARDWARE	United Stat	New York	New York	New
89	ABBOTT	ANNA	Spouse	26	KEEPING HOUSE	United Stat	Pennsylvania	Pennsylvan	Penn:
90	ABBOTT	ANNA H.	Child	9	AT SCHOOL	United Stat	Minnesota	Missoun	Penn:
91	ABBOTT	BESSIE D.	Child	10	AT SCHOOL	United Stat	Wisconsin	Ohio	Ve
92	ABBOTT	BESSIE F.	Child	1	*	United Stat	Maine	Maine	
93	ABBOTT	CHAS. H.	Child	3	*	United Stat	Maine	Maine	
94	ABBOTT	CLARA	Spouse	44	KEEPING HOUSE	United Stat	Vermont	Vermont	Ve
95	ABBOTT	CLARENCE	Child	6	AT SCHOOL	United Stat	Minnesota	Missoun	Penn:
96	ABBOTT	EUGENE	Child	1	*	United Stat	Minnesota	Missoun	Penn:
97	ABBOTT	EVERTON J.	Other non	30	PHYSICIAN	United Stat	Ohio	New York	Missi
98	ABBOTT	FANNY S.	Spouse	27	*	United Stat	Maine	Maine	
99	ABBOTT	FRANK C.	Head/hou	29	DRY GOODS MERCHAN	United Stat	Maine	Missing/bla	Missi
100	ABBOTT	GEORGE	Head/hou	36	CARPENTER	United Stat	Missouri	Missoun	Mi
101	ABBOTT	HENRY G.	Child	4	*	United Stat	Minnesota	Missoun	Penn:
102	ABBOTT	JAS.	Other non	23	*	Unknown	Missing/blank	Missing/bla	Missi
103	ABBOTT	MABEL D.	Child	5	*	United Stat	Maine	Maine	
104	ABBOTT	MARY	Other non	19	*	Germany	Germany	Germany	Gei
105	ABBOTT	MIRA	Child	15	AT SCHOOL	United Stat	Wisconsin	Ohio	Ve
106	ABBOTT	PAULINA G.	Child	3	AT HOME	United Stat	Minnesota	Ohio	Ve
107	ABBOTT	SUSAN J.	Child	8	AT SCHOOL	United Stat	Wisconsin	Ohio	Ve
108	ABBOTT	WILLIAM	Head/hou	38	PRINTER	United Stat	Ohio	New York	New
109	ABBOTT	WILLIAM L.	Child	12	AT SCHOOL	United Stat	Wisconsin	Ohio	Ve
110	ABEL	ANNIE	Child	6	*	United Stat	Minnesota	Prussia, n.	Prus:
111	ABEL	CORA	Child	8	*	United Stat	Minnesota	Prussia, n.	Prus:
112	ABEL	EMILIA	Spouse	21	KEEPING HOUSE	Germany	Prussia, n.	Prussia, n.	Prus:

For example, great, great uncle Halloran...

minnesota State Census **INDEX**

[CENSUS HOME](#) | [VIEW ORDER](#) | [LAST SEARCH](#) | [NOTIFY ME](#) | [FAQ](#) | [HELP](#) | [ABOUT THIS INDEX](#)

Now displaying records 1 to 7 of 7.

 [NEW SEARCH](#)

> SEARCH RESULTS

DatabaseID: 1997818

[VIEW IMAGE](#)

Line in Image: 9

HALLORAN, THOMAS

Age: 16

Ethnicity: *WHITE*

Birth place: *MINNESOTA*

CENSUS ID# 1997818

County: *HENNEPIN*

City/Township: *MINNEAPOLIS*

Gender: *MALE*

Census Year: 1895

 [add comment](#) (0)

DatabaseID: 1997819

[VIEW IMAGE](#)

Line in Image: 28

HALLORAN, THOMAS

Age: 57

Ethnicity: *WHITE*

Birth place: *IRELAND*


CENSUS ID# 1997819

County: *HENNEPIN*

City/Township: *MINNEAPOLIS*

Gender: *MALE*

Census Year: 1895

 [add comment](#) (0)

DatabaseID: 1997820

[VIEW IMAGE](#)

Line in Image: 29

HALLORAN, THOMAS

Age: 35

Ethnicity: *WHITE*

Birth place: *IRELAND*


CENSUS ID# 1997820

County: *HENNEPIN*

City/Township: *MINNEAPOLIS*

Gender: *MALE*

Census Year: 1905

 [add comment](#) (0)

CENSUS INDEX INFORMATION

> ABOUT THIS INDEX



This index covers Minnesota State Census records from 1865, 1875, 1885, 1895 and 1905.

> QUESTIONS ABOUT RESULTS

- > How do I order?
- > Why can't I find someone I know should be in the census?
- > What is Soundex?

> ADDITIONAL RESOURCES

- > MHS Library
- > Family History Research
- > Family Tree Chart



SAVE image by pressing the Print Screen key at any zoom level, or use of any screen grabbing software.

24 *alted*

Good Hennepin Substituted in the 1895 Census of *Minnesota* *Minneapolis* *Minneapolis*

Word *7th* State of Minnesota, enumerated by the 1895

1900

Sheet *477 George* P. D.

Name	Sex	Age	Color	Profession	1895		1900		Remarks
					W	N	W	N	
<i>Shields Theodore</i>	✓	70	W	Germany	30		26		
<i>Shields Catharine</i>	✓	67	F	Germany					
<i>Ellis Leo</i>	✓	42	M	Canada	50			1	Car Refiner ✓
<i>Ellis Clara</i>	✓	43	F	Canada					
<i>Ellis Milton</i>	✓	9	M	Canada					
<i>Ellis Rachel</i>	✓	8	F	Canada					
<i>Ellis Ethel</i>	✓	8	F	Canada					
<i>Coleman Kate</i>	✓	81	F	Canada	81			3	Barren WAD ✓ 12
<i>Stevenson Mary</i>	✓	18	F	Canada					
<i>Wright Kate</i>	✓	10	F	Canada					
<i>Missisk J. H.</i>	✓	82	M	Can.	11			1	Sea Expedient 12
<i>Missisk J. P.</i>	✓	84	M	Can.	11			2	Labran ✓ 12
<i>Missisk Mary</i>	✓	84	F	Can.					
<i>Missisk Mary</i>	✓	84	F	Can.					
<i>Schmal John B.</i>	✓	30	M	Germany	17	8	5	5	Clack ✓ 11
<i>Schmal Louis</i>	✓	30	M	Germany					
<i>Schmal Edw M.</i>	✓	30	M	Germany					
<i>Schmal Robert C.</i>	✓	30	M	Germany					
<i>Probst Henry</i>	✓	28	M	Germany					Sanitary
<i>Young John</i>	✓	59	M	Germany	20			7	5
<i>Young Anna M.</i>	✓	56	F	Germany					
<i>Young Anna M.</i>	✓	31	F	Germany					
<i>Haugler Ole</i>	✓	67	M	Germany	7			2	Labran ✓ 5
<i>Haugler Christine</i>	✓	67	F	Germany					
<i>Haugler Arthur</i>	✓	37	M	Germany					
<i>Haugler John</i>	✓	37	M	Germany	36			25	Drummond
<i>Haugler Bridget</i>	✓	34	F	Germany					
<i>Haugler Thomas</i>	✓	34	M	Germany	23			23	Bookkeeper ✓ 12
<i>Halloran Thomas</i>	✓	57	M	Germany	40			12	
<i>Halloran William</i>	✓	30	M	Germany					
<i>Halloran John J.</i>	✓	30	M	Germany	25			12	Student
<i>Halloran Catharine</i>	✓	20	F	Germany					
<i>Halloran M. P.</i>	✓	14	M	Germany					
<i>Halloran M. P.</i>	✓	14	M	Germany	22			1	Sea file ✓ 12
<i>Burns Maggie</i>	✓	17	F	Canada					
<i>Burns Maggie</i>	✓	12	F	Canada					

33

33

33

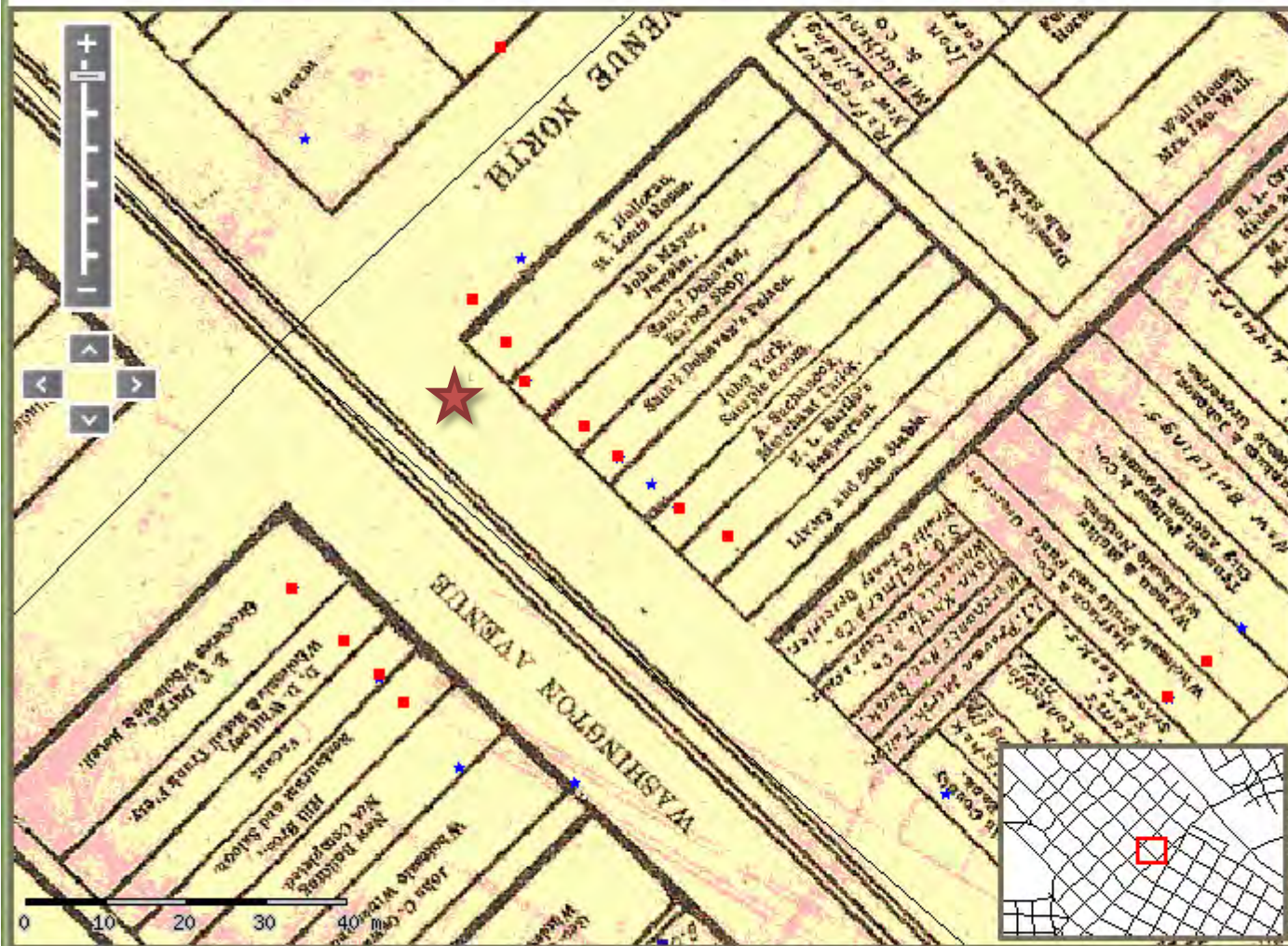
33

33





The MHS Holdings Spatial Federized Project X,Y: 478809.49,4981098.07 Lat, Long: 44.9830,-93.2687



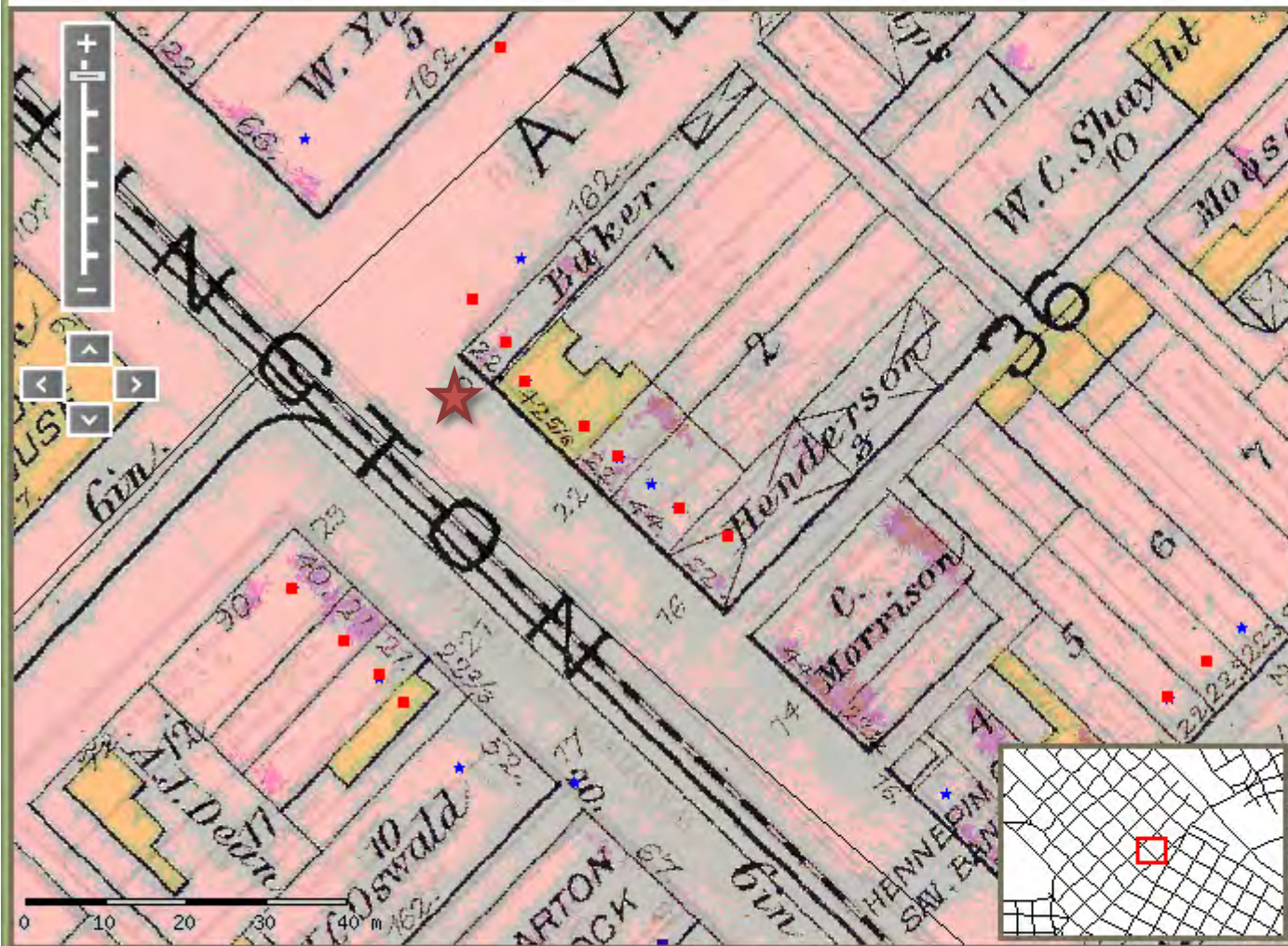
Jump To:

Map Layers Information

MAP LAYERS

- Minneapolis City Historical Residents
- Streets
- Boundaries
- Minneapolis Maps and Images
- MHS Photo Images
 - MHS PHOTO IMAGES
 - Sanborn 1885
 - Minneapolis 1880 Business Map
 - Minneapolis 1880 Census Map
 - Minneapolis 1879 Birdeye View
 - East Hennepin County 1879
 - West Hennepin County 1879
- Imagery and Topo (WMS)
 - 2006 Twin Cities Orthos
 - USGS 7.5' Quads
 - 2003 FSA Orthos





Jump To:

Map Layers Information

INFORMATION

Last Name: HALLORAN
First Name: THOMAS
Age: 41
Birthplace: 41400
Occupation: PROP. BOARDING HOUSE
Address: 30 washington av n

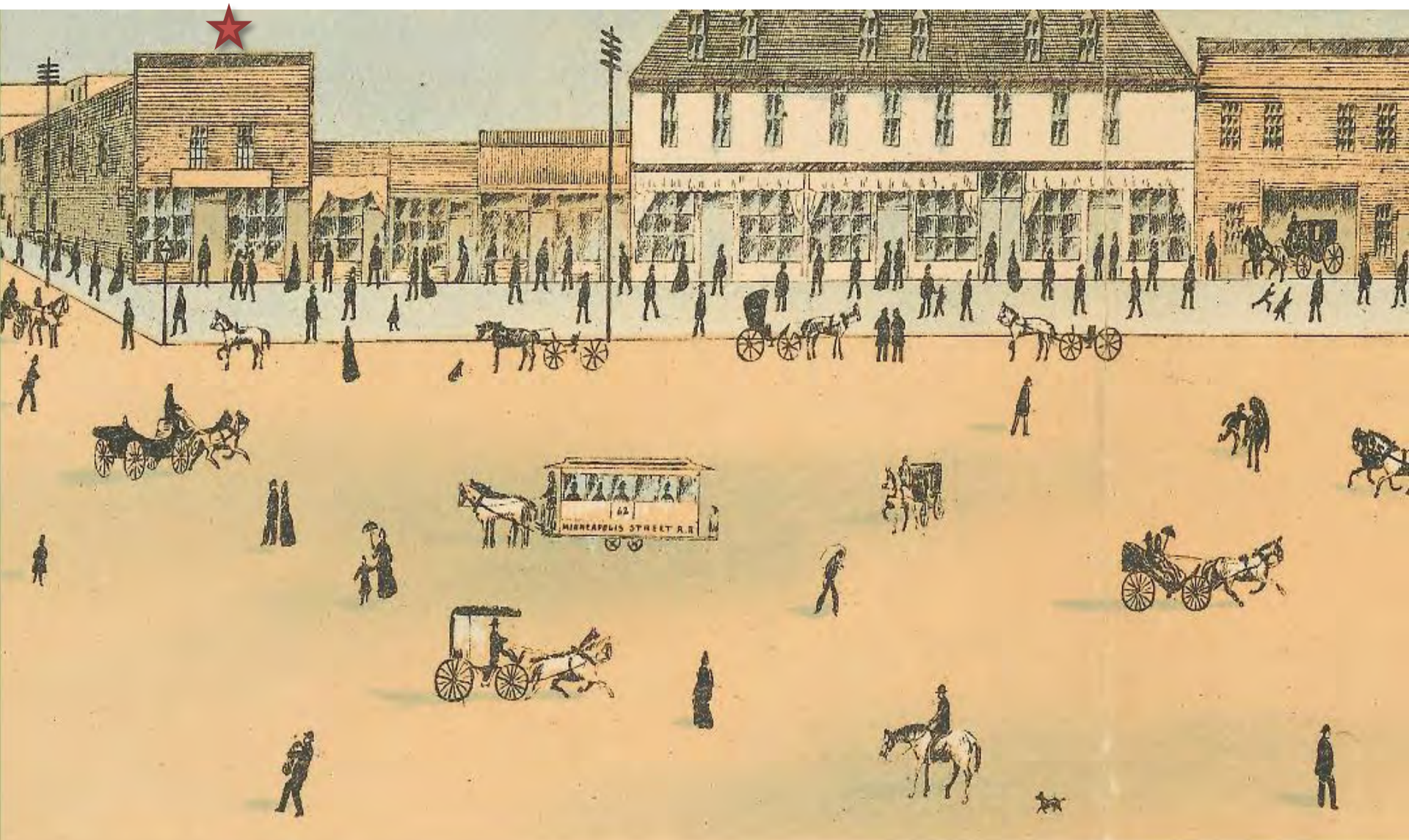
Minneapolis 1880 Census

Last Name: MCGREGOR
First Name: JOHN
Age: 36
Birthplace: 15000
Occupation: LUMBERMAN
Address: 30 washington av n

Minneapolis 1880 Census

Last Name: PARRY
First Name: JOHN
Age: 33
Birthplace: 41200
Occupation: LUMBERMAN
Address: 30 washington av n





& Co.,
Hostiery.

St. Louis House,
T. Halloran, Propr.

J. York,
Saloon.

A. Sucheneck,
Merchant Tailor.

Chas. C. Kesler,
Restaurant.

A. R. Strickland,
City Hack.

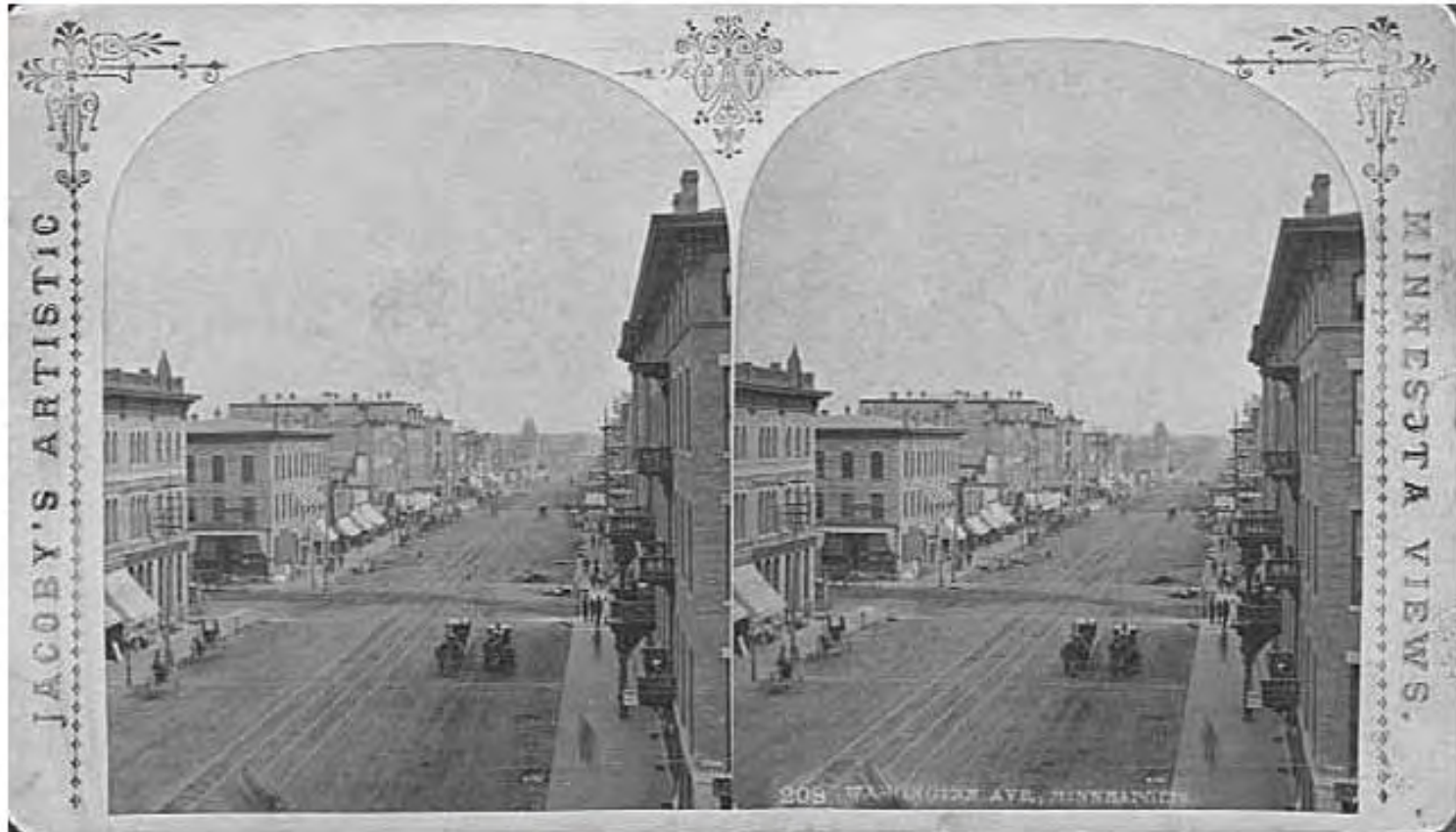
Items with Addresses and Street Cross sections allow for geocoding by lat/long

[VISIT](#) [CALENDAR](#) [LIBRARY](#) [EXHIBITS](#) [FAMILY HISTORY](#) [PEOPLE](#) [PLACES](#) [EVENTS](#) [COLLECTIONS](#) [EDUCATION](#) [ABOUT MHS](#)

Home / Visual Resources Database / Search Results / Image

[Return to Search Results](#) | [View Details](#) | [Ordering & Permission](#)

BUY →



Washington Avenue looking east from Hennepin Avenue, Minneapolis.

Photographer: William H. Jacoby (1841-1906)

Photograph Collection 1880

Location no. MH5.9 MP2.1 r8

Negative no. 5054-A



AVE.

COLLETTA AVE

108

SECOND ST

ST

EAST

124

123

Organization

True North Website

Cull and organize maps, photographs, library resources and helpful web tools

18.

19.

photographs

MAPS | LESSONS | HELP

- Getting Started
- About the Project
- Lesson Downloads
- Additional Resources
- Upcoming Workshops
- Connecting to State Standards

INSTITUTE of Museum and Library SERVICES

Minnesota Historical Society

© 2007 True North

Cull Minnesota's Digital Resources



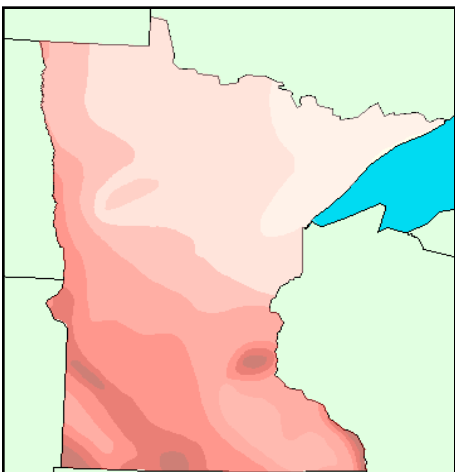
Topographic Maps



Aerial Photos



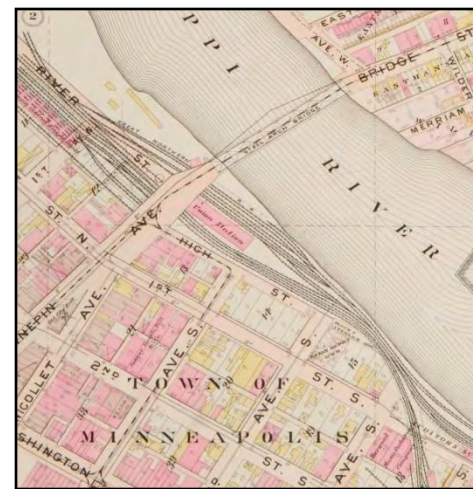
Photographs



GIS Data



Historic Images



Archival Maps

Layer them Together

LAND USE MAPS

Dept. of Natural Resources

ROAD MAPS: Minn. Dept of Transportation

PEOPLE MAPS

MSP Public Library, MHS

ETHNICITY MAPS

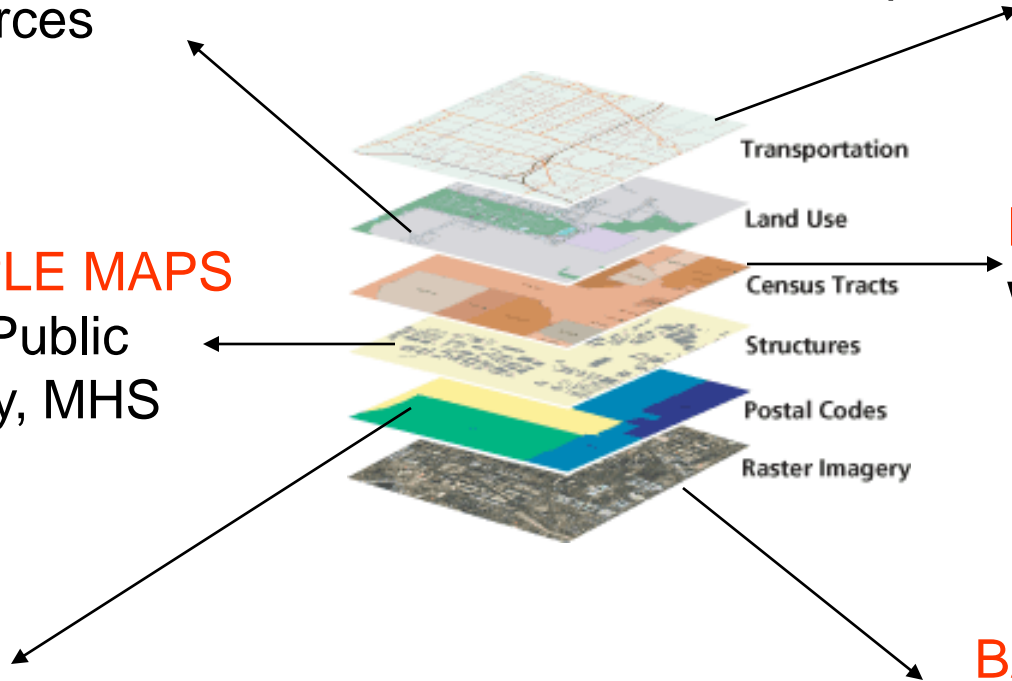
www.census.gov

HISTORY MAPS

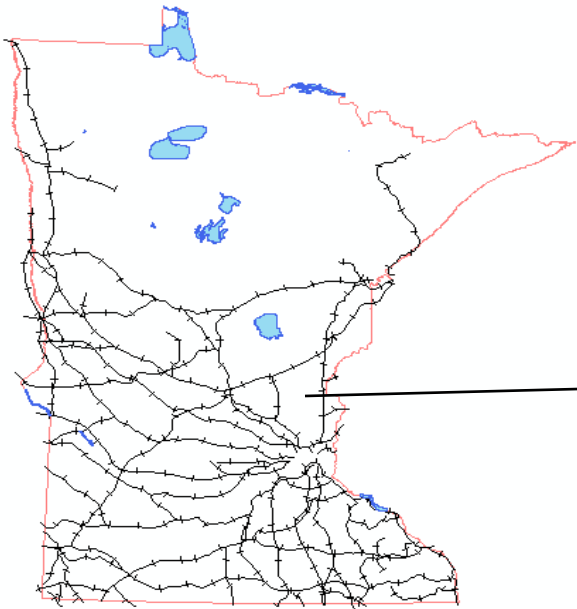
MN Historical Society

BACKGROUND MAPS

Land Management Information Center



And link each map to relevant archival history



Railroads 1880

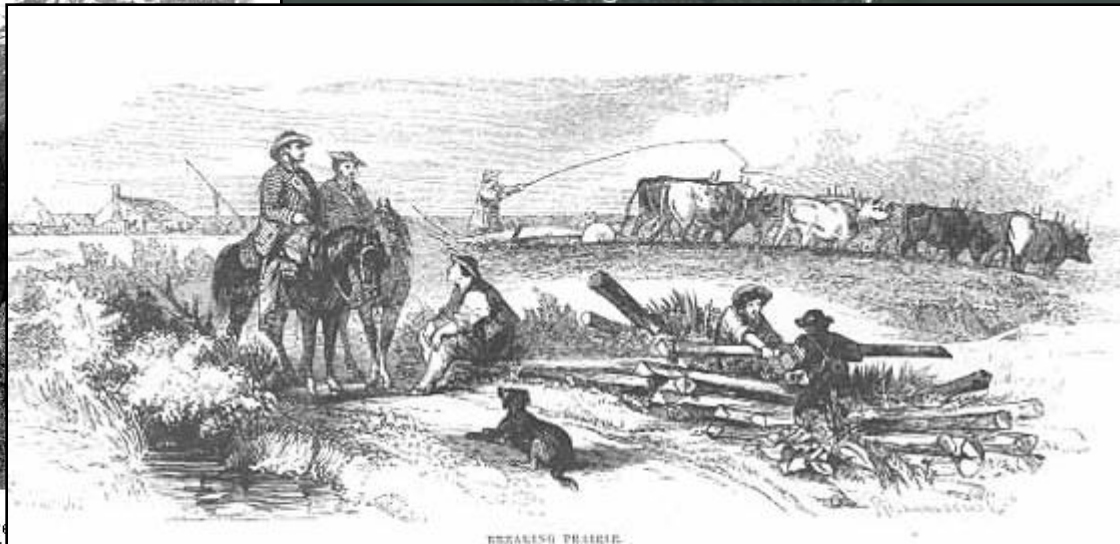


*Chicago & North Western Railway
tracks during "big snow" of 1880.
Photograph Collection 1880
Location no. HE6.43 r25
Negative no. 76*

Example: Public Land Survey History



Survey
Photograph Coll
Location no
Negative n



BREAKING PRAIRIE.

Breaking Prairie
Artist: Richardson & Cox
Art Collection 1858
Location no. SA4.1 p2

*The above Map of Township 19 N 112 North of Range 19 W 35 West of the 5th
Principal Meridian of Minnesota is strictly conformable to the field notes
of the survey thereof on file in this Office, which have been examined and approved.*
Surveyor General's Office, *Charles L. Crocker*
L. Paul December 31, 1858 *Sur. Gen.*

TRUE  NORTH
↳ Mapping Minnesota's History ↳

HISTORY LINKS

Original Vegetation

Visual Resources

[Breaking Prairie, 1858 Painting](#)

[Forests, 1838](#)

[Others...](#)

Catalog

[Others...](#)

External Links

[Old Growth Forests](#)

[Pre-settlement Prairie](#)

[A Key to Natural Communities](#)

Map Source

[Source and more information](#)

Township/Range/Sections

Visual Resources

[Surveyor, 1900](#)

[Surveyors 1893](#)

Catalog

[Map of Historic Surveyors](#)

[Manuscript Collection of Surveyors](#)

[Surveyor Field Notes](#)

External Links

[Background of PLSS System](#)

[Historic Plat Maps](#)

update

clear

SCALE 1: 33546

T29

FIND PLACE: TYPE

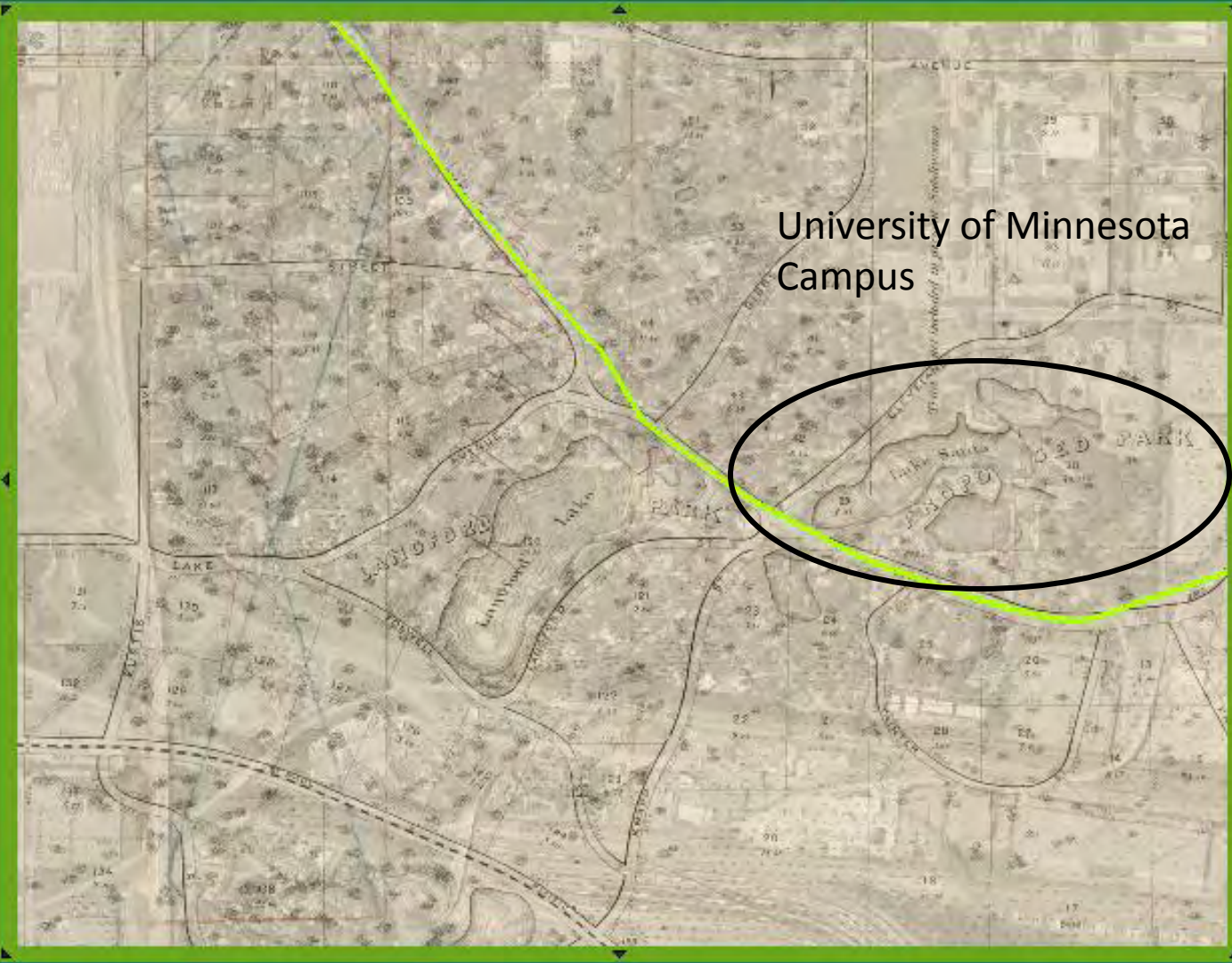


Streetcar Line, 1900

SCALE 1:



FIND PLACE: TYPE



University of Minnesota
Campus

SCALE 1:



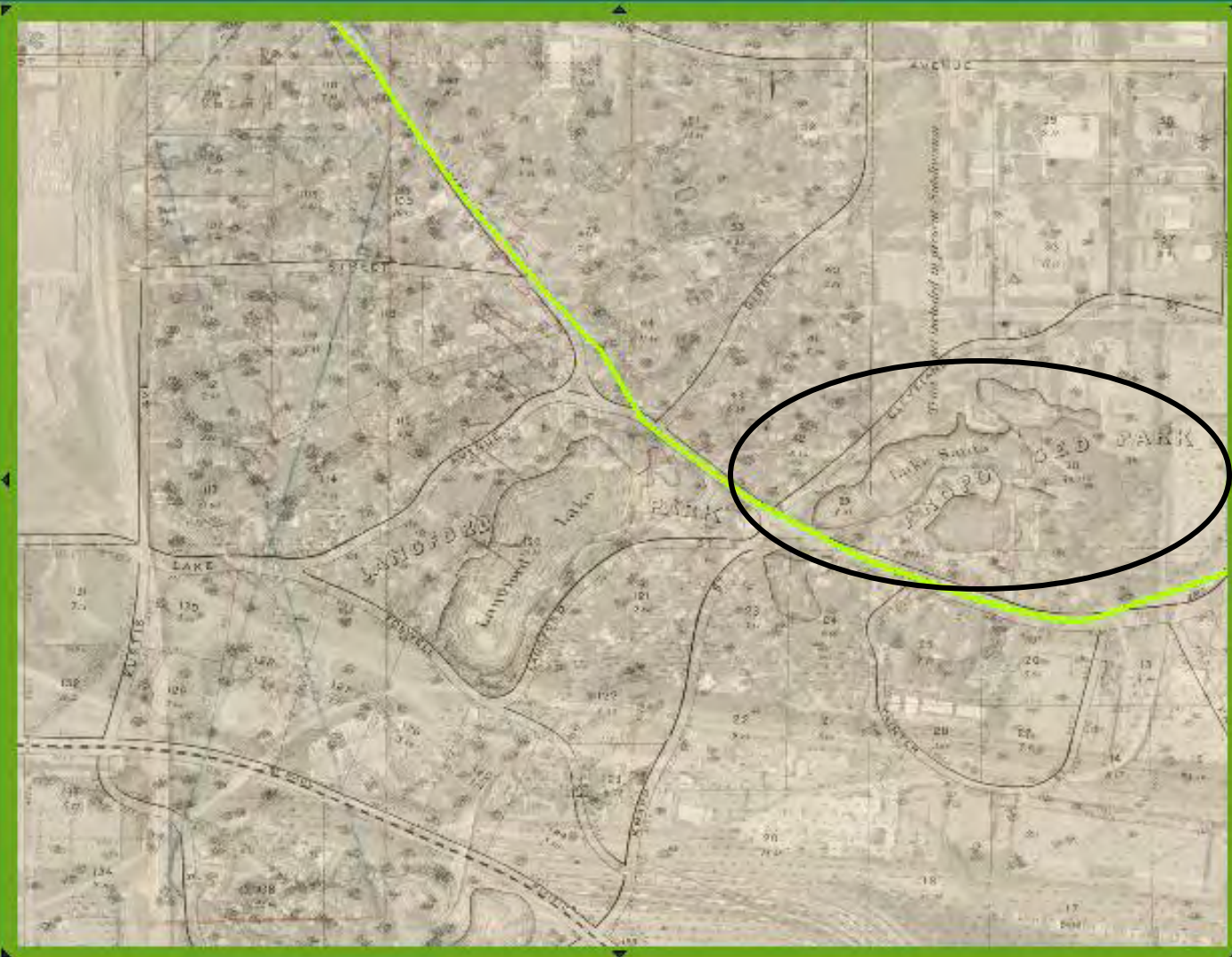
FIND PLACE: TYPE



SCALE 1:



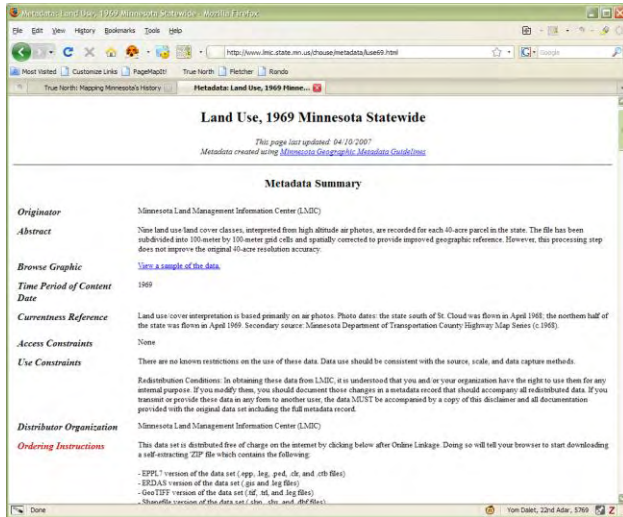
FIND PLACE: TYPE



SCALE 1:



Spatial Metadata



FGDC

Display items in their original format...when possible

Crosswalk between NOAA FGDC, MARC21, and Dublin Core metadata standards						
M v O	FGDC fields	Field Names	MARC21 Fields	Field Names	Dublin Core Elements	Dublin Core Qualifiers
M	3.4.2	Row count	352 d	Row count		
M	3.4.3	Column count	352 e	Column count		
M	3.4.4	Vertical count	352 f	Vertical count		
M	4.1.1.1	Spatial reference information: Latitude resolution	342 c	Geospatial reference data: Latitude resolution		
M	4.1.1.2	Longitude resolution	342 d	Longitude resolution		
M	4.1.1.3	Geographic coordinate units	342 b	Coordinate or distance units		
M	4.1.2.1.1	Map projection name	342 a/ 255 b	Name/ Geographic mathematical data - Statement of projection	Coverage	Spatial
M	4.1.2.1.2.1	Standard parallel	342 e	Standard parallel or		

FGDC/Dublin Core/US MARC metadata crosswalk

Presentation

Google Earth Historic Maps

Displaying archival maps in a familiar interface

Omeka

Presenting information in an exhibit interface with Geo-location

Google Maps Historic Walking Tours

Connecting to Information on a 'street level'

Displaying Historic Maps in Google Earth using Web Mapping Service

Google Earth - Web Mapping Service Parameters

WMS Server: http://www.lmic.state.mn.us/cgi-bin/mapserv?map=/home/httpd/html-LMIC/ghol/ghol_vms.map&request=GetCapabilities&versi

Move layers you want to see from left to right side. Order layers such that transparent layers follow opaque layers in the "Selected Layers" list.

Transparent Layers

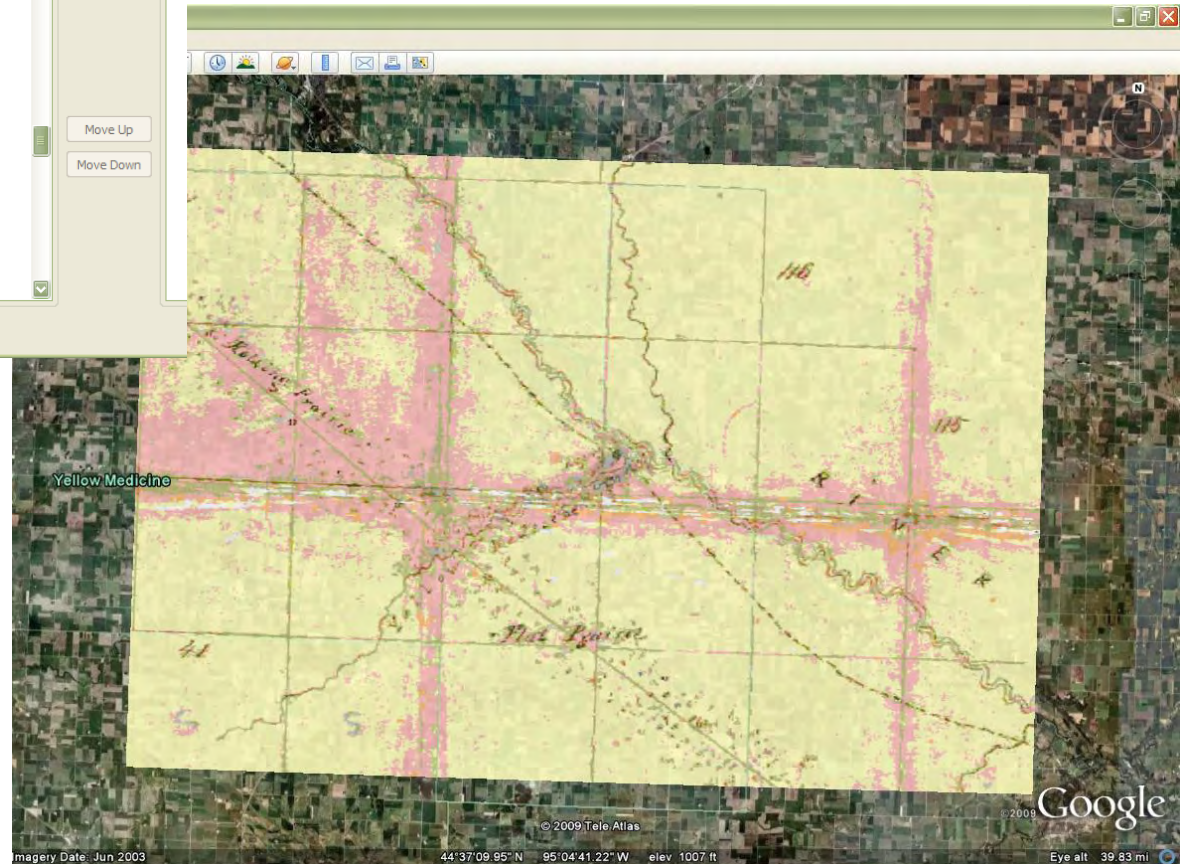
- telephones
- streetcars
- streetcars_1895
- streetcars_1913
- streetcars_1926
- streetcars_1927-50
- bike_1899
- bike_1899
- MAJOR_RIVERS
- dlgrivxy
- bas_land
- g_lake2
- BWCA
- BWCA
- sect_line
- township
- township_full
- township_zoom
- township_names
- BG_BORDER
- BG_BORDER
- MCD_BORDER
- MCD_BORDER
- MUNICIPAL
- MUNICIPAL
- SD06
- SD06
- SD06_names
- SD06_num
- COUNTY_BORDER
- COUNTY_BORDER

Add ->

<- Remove

Move Up

Move Down



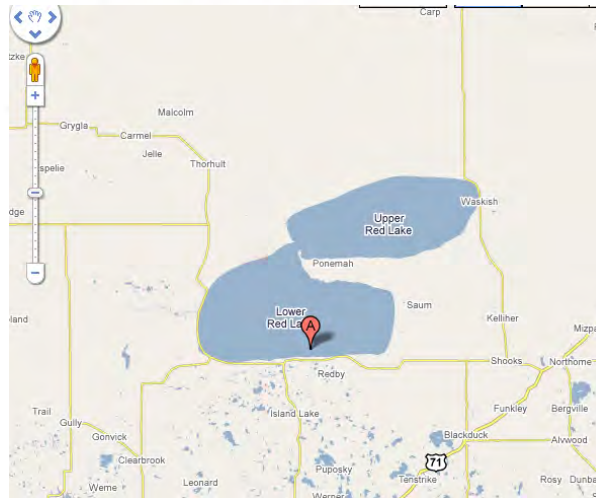
Presenting information in an exhibit interface with Geo-location tool



Map of Red Lake Indian Reservation, 1911 Files



[G4142 R435D2 1911 U55 2F.pdf](#)



Item information

Title

Map of Red Lake Indian Reservation, 1911

Description

This map is featured in a Minnesota Alliance for Geographic Education (MAGE) [curriculum podcast!](#)

Creator

Albert Henderson; United States Office of Indian Affairs

Publisher

[United States] : Dept. of the Interior, Office of Indian Affairs, 1911.

Date

1911

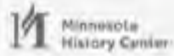
Format

1 map ; 38 x 51 cm

Identifier

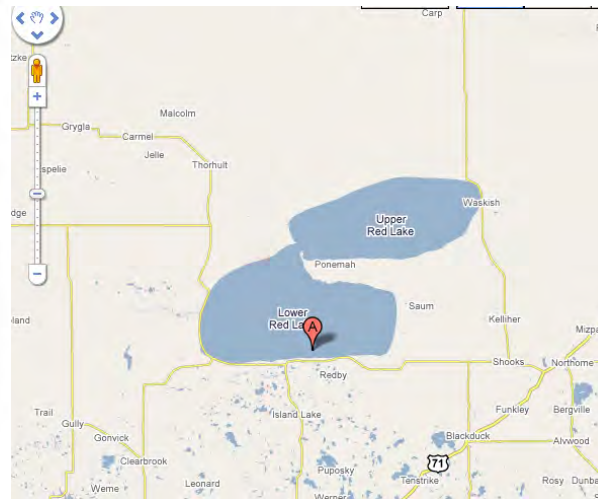
Minnesota Historical Society
Map 2F G 4142 .R435 1911
.U5

scale



Chippewa woman and girls in birchbark canoe, Red Lake.

Files



Item information

Title

Chippewa woman and girls in birchbark canoe, Red Lake.

Subject

Ojibwe

Description

What is it? A photograph of several women in a birch bark canoe. The canoe is light weight, built out of materials easily found in northern Minnesota, and is very maneuverable on the lakes and rivers. Both the Ojibwe and Dakota tribes in Minnesota used canoes to move throughout the area.

Where is it? Red Lake, in northern Minnesota.

When? The photograph was taken in 1898.

Who created it? The photographer is unknown.

Why was it created? The reason the photograph was taken is unknown.

Source

Visual Resource Database

Google Maps Historic Walking Tours

Connecting to Information on a 'street level'



<http://www.youtube.com/watch?v=46dKEICAYHY&feature=Playlist&p=72B2BD13963C529A&index=6>



Enhanced Podcast [1:54m]: [Hide Player](#) | [Play in Popup](#) | [Download](#)

People often ask me, "Where's F. Scott Fitzgerald's house?" Well, as you know, the truth is there isn't just one house - but frequently, this one is the one people are looking for. 599 Summit Avenue is one of two Fitzgerald residences that have a plaque commemorating the author - the other is at his birthplace, a few blocks north of here, at 481 Laurel Avenue.

I've already mentioned how frequently the Fitzgeralds moved when Scott was a boy - particularly when they returned to St. Paul from Buffalo, New York, in 1908, when young Scott was 12 years old. Those moves were all in apartments and houses in the blocks just north of where we're standing at the moment. Now fast forward about ten years, and Fitzgerald is a struggling author, trying to make his way in New York City. His fiancée, Zelda, has broken off their engagement, partially because she doesn't think he can support them with his writing. So F. Scott Fitzgerald, sad and dejected, returned to St. Paul to make one last attempt to revise his manuscript and get it published. By this point his parents were living here, at 599 Summit, and although they didn't approve of his choice of profession, they allowed him to live on the third floor while trying to finish his book. That fall, Scribner's accepted the manuscript, and in the spring of 1920, Scott and Zelda were married and *This Side of Paradise* was published, launching F. Scott Fitzgerald to instant fame.

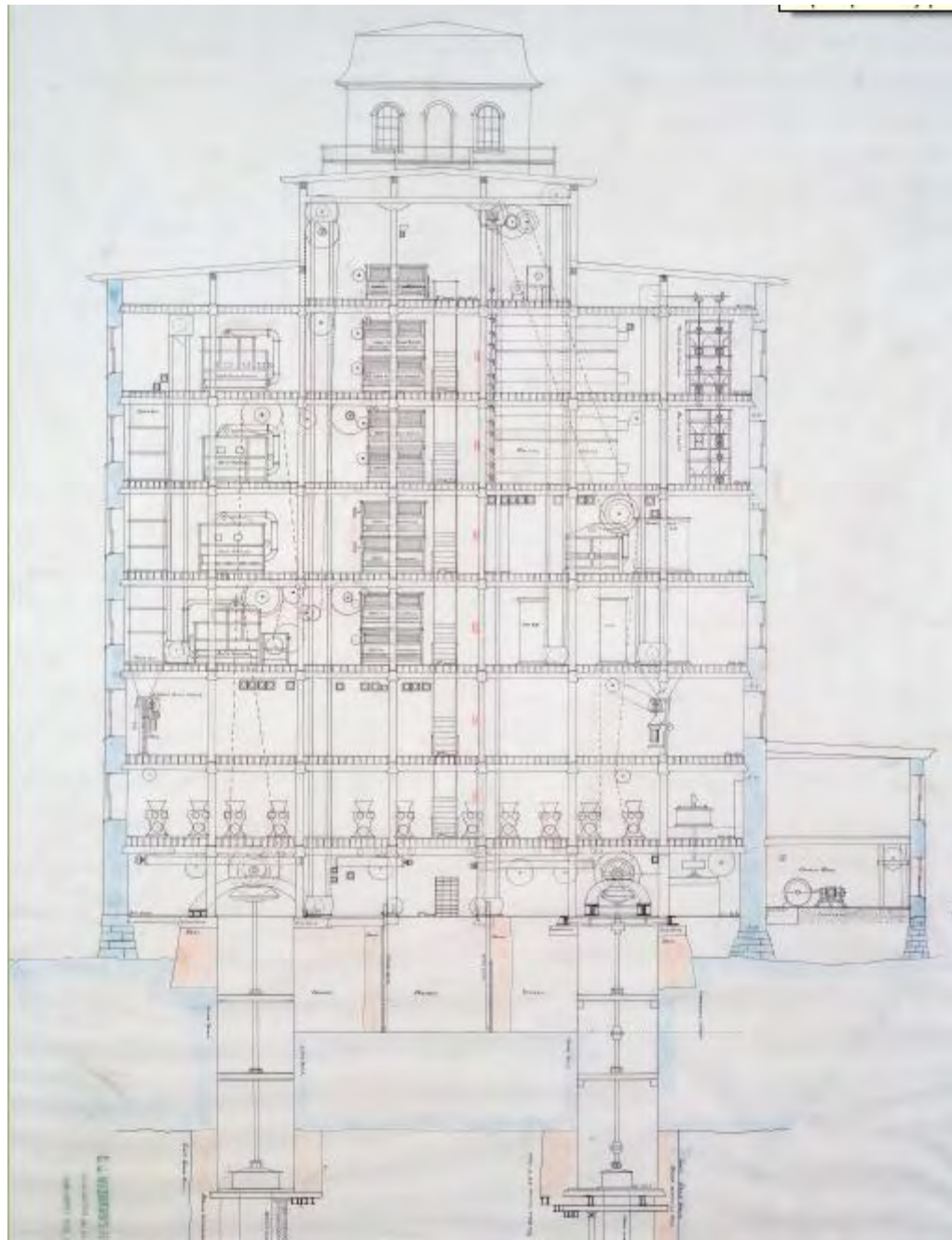
In case you're wondering about the house, it's not quite an apartment and it's not quite a house - it's actually a row house, with each three-storey having its own door.

Our next stop is a bit different once again - this time, it's a garden. I'll see you up the street at the garden gates just past 533 Summit.

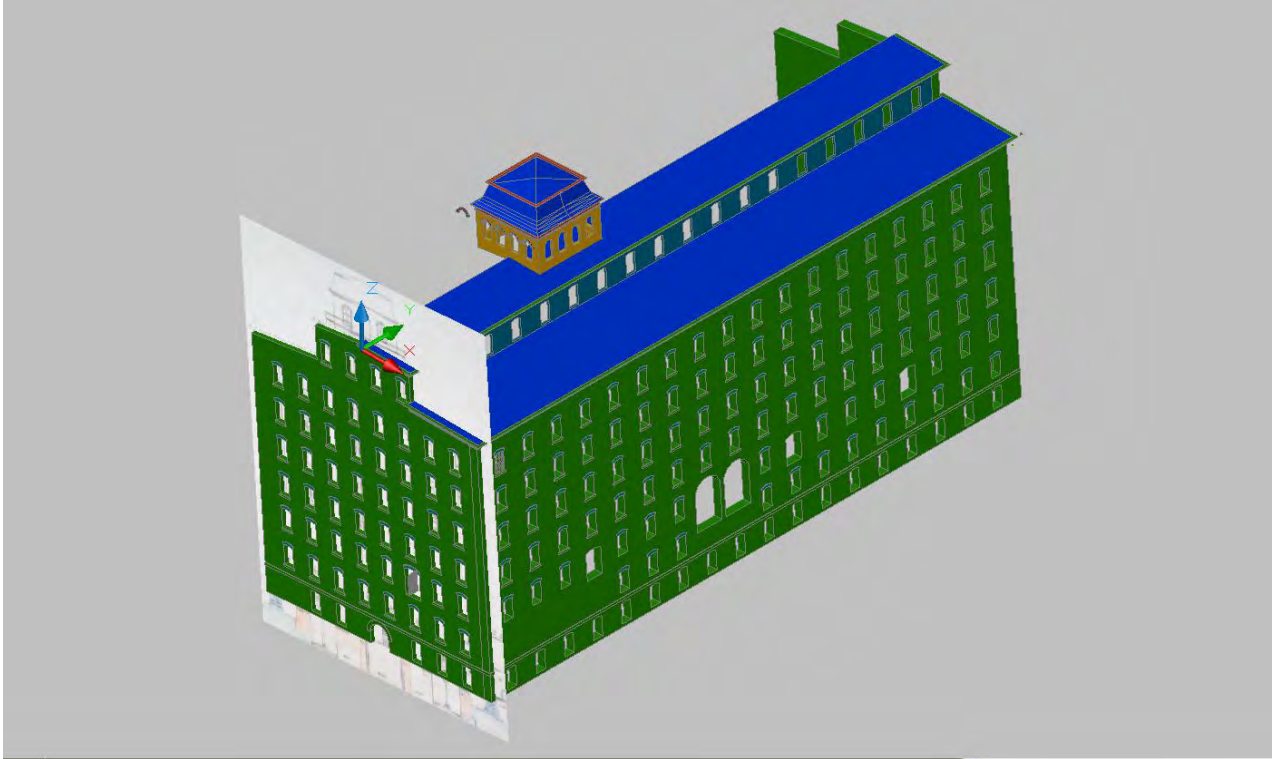
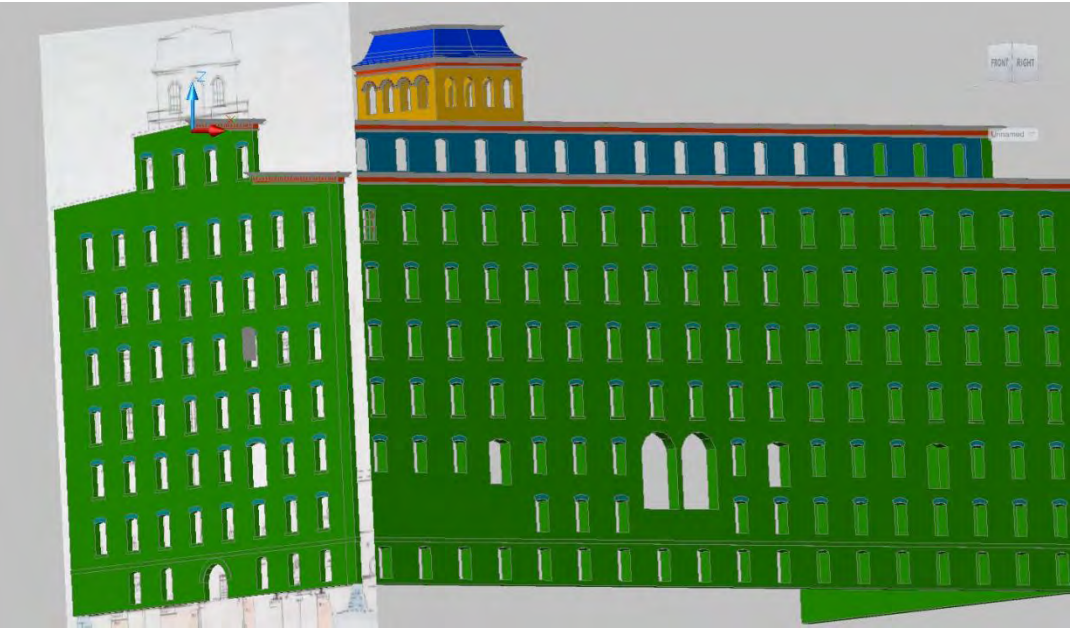
Virtual Experiences and Programming

The Douglass: A Digital Reconstruction of an 18th Century Theatre











Welcome *to the* MONTICELLO EXPLORER



*"I am as happy no where else
and in no other society, and
all my wishes end, where I
hope my days will end,
at Monticello"*

EXPLORE



Explore the PLANTATION

See how Monticello Mountain changed during Jefferson's life with this interactive map of the center of his 5,000-acre plantation in Albemarle County, Virginia.



Explore the HOUSE

Navigate a 3-D recreation of Jefferson's architectural masterpiece and discover the objects, people, stories, and details of Monticello.

TOUR

GENERAL HOUSE TOUR

Journey with Curator Susan R. Stein as she reveals Jefferson through Monticello's rooms, furnishings, and stories.

DOMESTIC LIFE AT MONTICELLO

Discover what life was like for Jefferson, his family, and his enslaved domestic workers with Monticello's Shannon Senior Historian Lucia Stanton.

GARDENS AND GROUNDS

Join Monticello's Director of Gardens and Grounds Peter Hatch for an in-depth look at the unique horticultural world Jefferson created on his beloved mountaintop.

Welcome *to the* **FORT SNELLING EXPLORER**



EXPLORE



Explore the Objects

See how Fort Snelling and its land changed between 1820 and today with this interactive map of the area.



Navigate the Fort

Navigate a 3-D recreation of Historic Fort Snelling, and discover the objects, people, stories and details of the historic fort.

LEARN

Listen to a Podcast

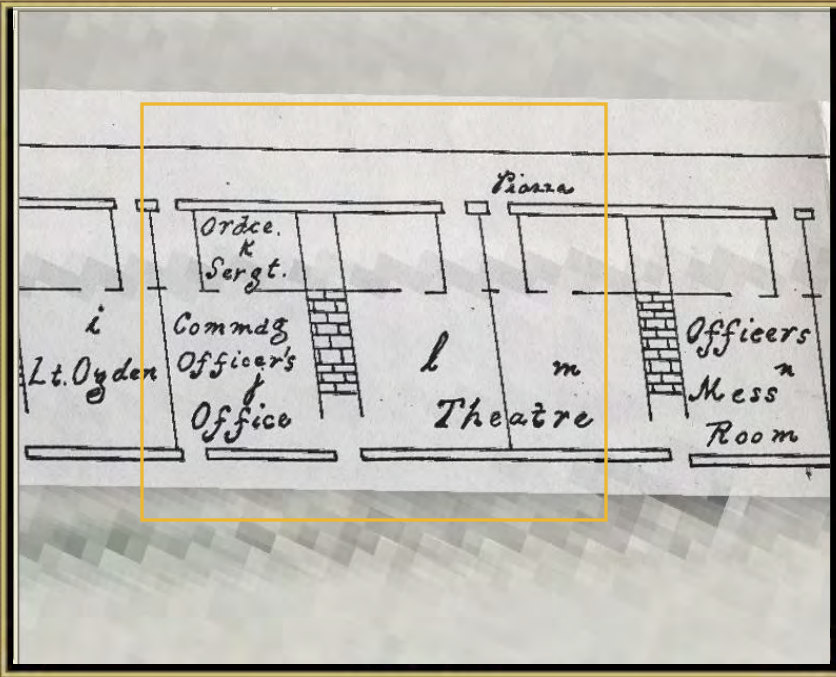
Journey with Curator Brian Szott as he discusses how Seth Eastman paintings help recreate a historic topography for the Fort.

The American Indian Story

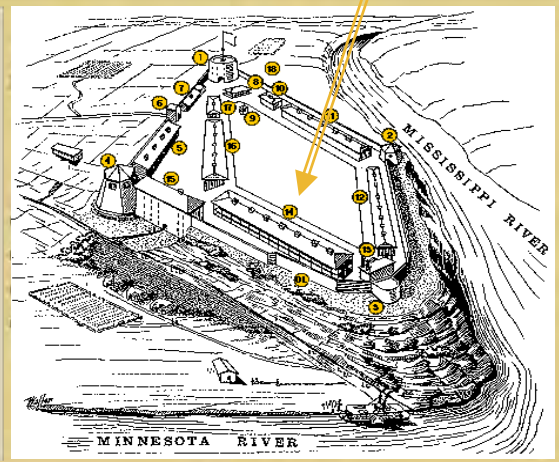
Discover what life was like for Native Americans, whose history is inseparable from the history of the Fort.

Share YOUR Story

How do you feel about Fort Snelling? What is your family's history with this land? Do you have a personal memory or story to share? **Add to our WIKI!**



- Officers Quarters
- Half Moon Battery
- Stone Barracks
- Hospital
- Gun Shed
- Suttler Store
- Commissary



Officers Quarters

History isn't set in stone, a fact proven by the Minnesota Historical Society's recent acquisition of an important 1835 map of the Officer's Quarters. Evidence from the map fills in gaps that frustrated archaeologists and scholars involved in the 1970s reconstruction of the fort, now a living-history site.

This map shows details such as where individual officers slept, and how they spent their leisure time.

TOURS IN THIS LOCATION (2)

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Related Collections Materials

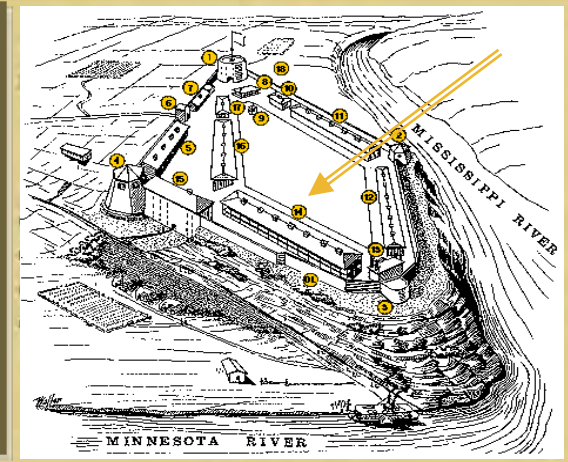


Fort Snelling, Ramsey Co. Minn.
 January 24th 1865

My Dear Sister:

Having plenty of time to day, I have determined to give you a short description of things and life in at Fort Snelling, and although the Boys did the same described it all to us before, yet it is all new to me, and probably is to you, unless you have to their old letters. And yet, a person may read of these things a bit.

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Officers Quarters

Between 1861 and 1865 Minnesota expanded the fort as a training center for thousands of volunteers who joined the Union Army. After the war, the regular Army returned. Fort Snelling became headquarters and supply base for the military Department of Dakota, which extended from the Mississippi River to the Rocky Mountains. Regulars from Fort Snelling served in the Indian campaigns and in the Spanish-American War of 1898. Officers living at Fort Snelling during the Civil war were prolific in their writings home. The Minnesota Historical Society's manuscript collections includes

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