Housing Market Index

A Block-Level Analysis of the Housing Market in North Minneapolis

NOVEMBER
2013

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Thank you to the individuals who provided feedback and technical support in drafting this report and in forming and refining the methodology used in the housing market index. A special debt of gratitude goes to Jeff Matson at the Center for Urban and Regional Affairs for his help in establishing an interactive, public website for releasing the housing market index scores for individual blocks.

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INTRODUCTION

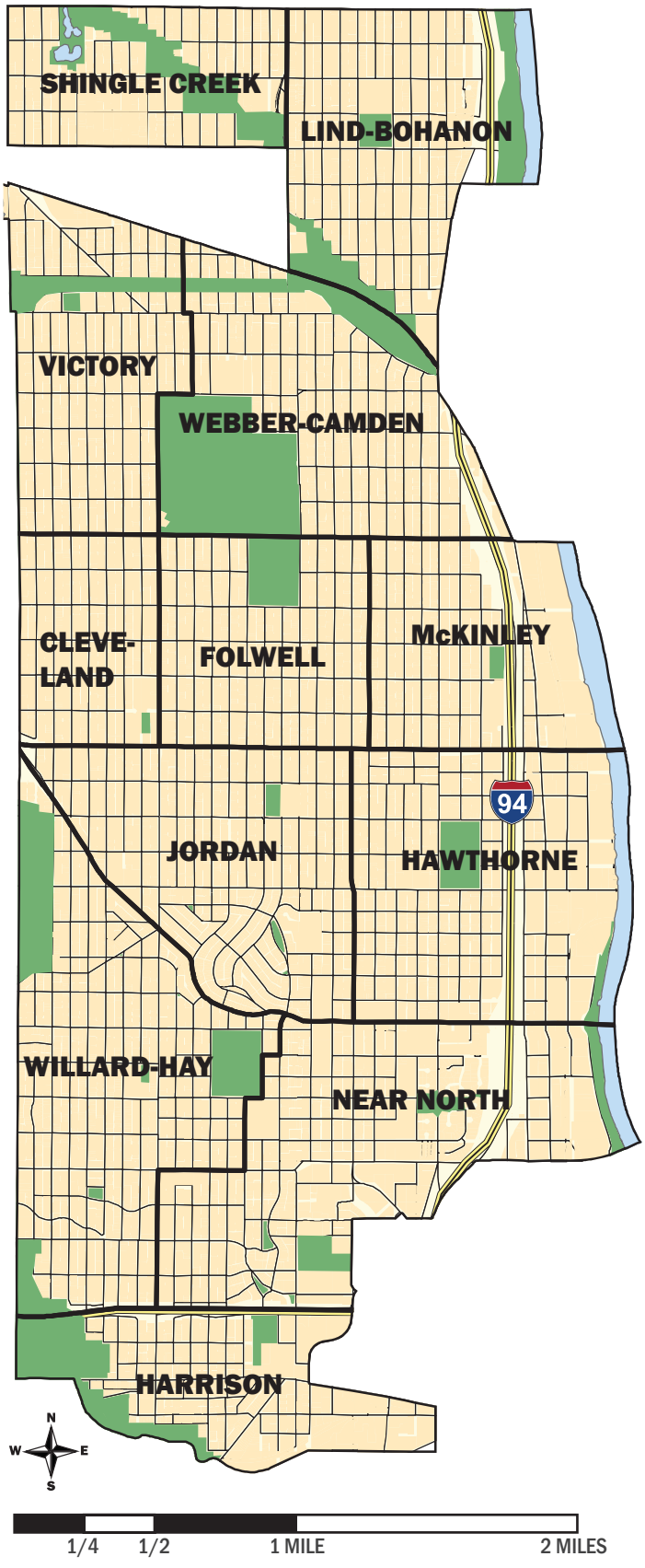
This report contains an analysis of the housing market in Minneapolis, Minnesota—specifically the area referred to as North Minneapolis, the northwestern portion of the city. Called the Housing Market Index (HMI), it evaluates how each residential block in the area's 12 neighborhoods compares to the average of all residential blocks in North Minneapolis. In addition to serving as an analytical tool for monitoring conditions of the area's housing market, the HMI may also serve as a guide for developing policy recommendations and investment strategies for long-term housing stabilization. And unlike many other housing market analyses, the HMI provides a "zoomed-in," block-level picture of the housing market by using locally produced parcel-level data.

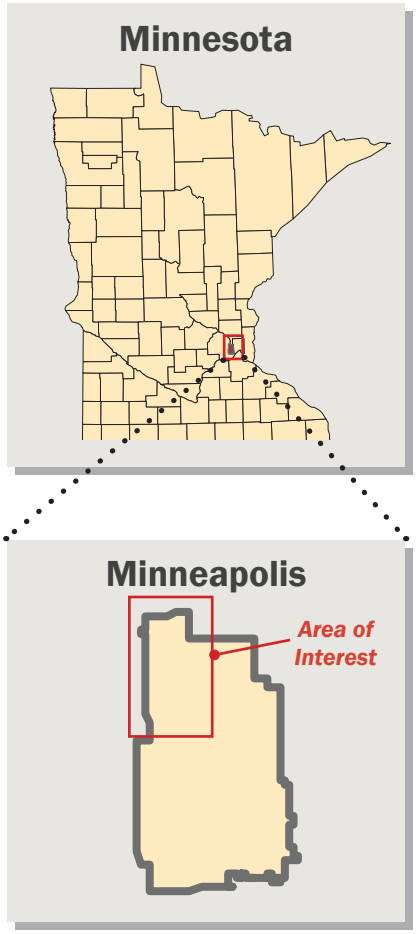
Based on the *2011 North Minneapolis Housing Market Index*, this updated HMI examines the housing market through a combination of four variables: value retention, owner occupancy, physical condition, and long-term vacancy. *Value retention* calculates the change in estimated market value of the homes on a given block from December 31, 2006, through December 31, 2012. *Owner occupancy* looks at the percentage of homes on a block that are currently occupied by owners. *Physical condition* assesses the current structural integrity/quality of the homes on a given block. And *long-term vacancy* determines the percentage of homes on a given block that are vacant for eight months or longer.

This report is organized into four sections: a brief description of North Minneapolis's housing stock and recent property investment history; a summary of the findings for the 12 North Minneapolis neighborhoods, including maps of each neighborhood; a description of the methodology used to construct the index; and an appendix containing maps of North Minneapolis that display each of the four HMI variables. ■

The *2011 North Minneapolis Housing Market Index* was developed by the Folwell Center for Urban Initiatives, the University of Minnesota's Center for Urban and Regional Affairs, and the Carl and Eloise Pohlad Family Foundation.

North Minneapolis





North Minneapolis has 12 neighborhoods, ranging in character from established areas that are predominantly occupied by owner-occupants to more vulnerable neighborhoods with a preponderance of investor/absentee landlords.

North Minneapolis has approximately 17,500 individual residential buildings—more than 80 percent of which are single-family detached houses that were constructed before 1950.

CONTEXT

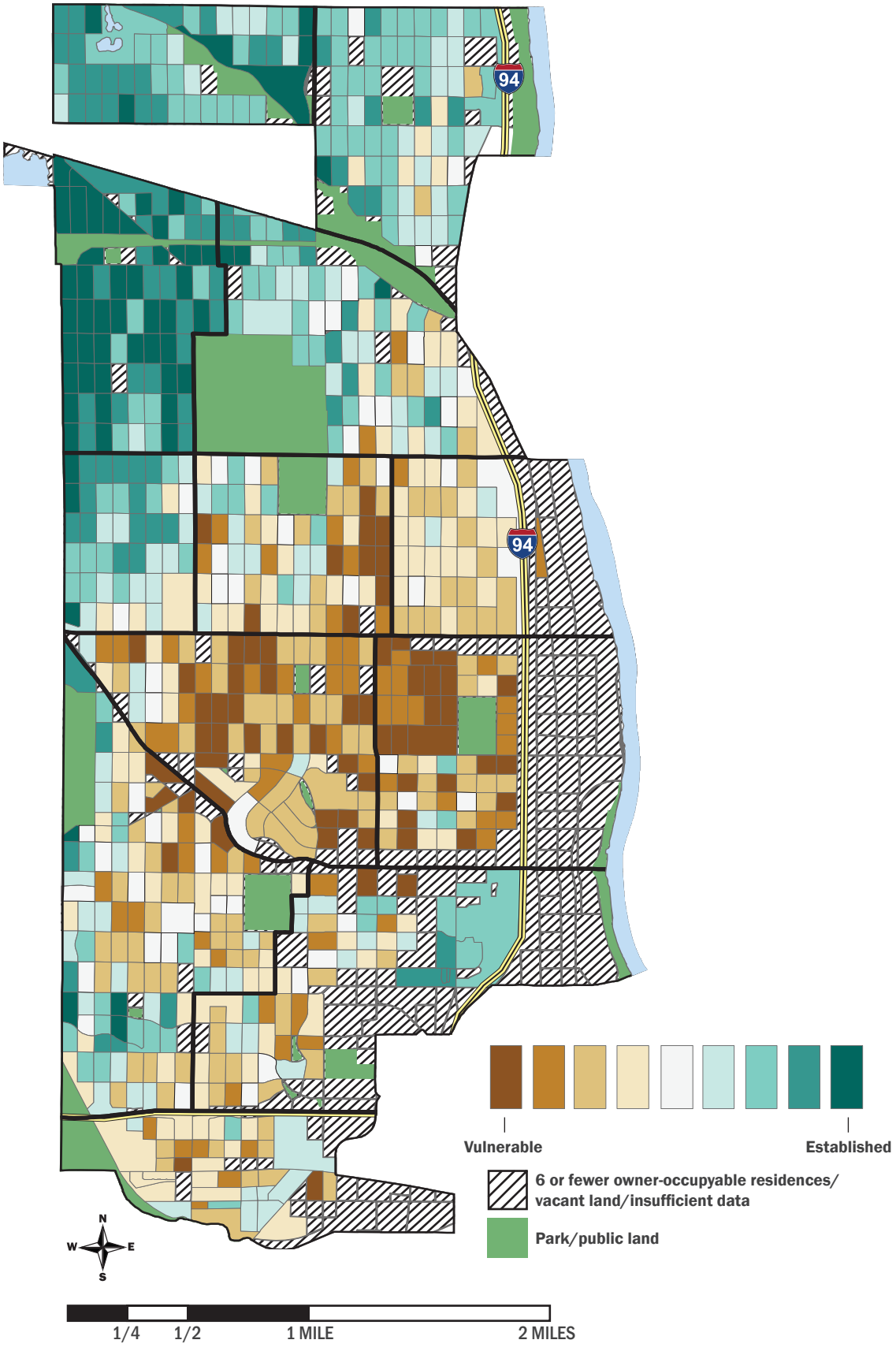
North Minneapolis has approximately 58,000 residents and 17,500 individual residential buildings. Although the area contains nearly 250 apartment buildings (which include, in aggregate, more than 2,000 units), the housing stock is dominated by stand-alone homes. In fact, more than 80 percent of the residential dwellings are single-family detached houses that were constructed before 1950.

Over the past 50 years, the area has experienced alternating waves of disinvestment and investment, from "white flight" and absentee landlordism to new construction and value appreciation. More recently, during the early 2000s, the area's property values rose to historic highs. This enabled existing homeowners to tap into their equity to invest in and improve their homes while creating the financing conditions for a surge in property acquisitions from both future owner-occupants and investors. Unfortunately, the economic crash that roiled the entire country hit North Minneapolis particularly hard, as it became "ground zero" for housing foreclosures in the city. From 2008 through 2010, residents of Minneapolis's north side experienced more than 3,000 foreclosures, more than any other section within the city's boundaries.

The dominant housing type in North Minneapolis is the single-family detached home.

North Minneapolis is organized into 12 neighborhoods. Although the single-family home is the common housing type in each area, the neighborhoods range in character from established areas that are predominantly occupied by owner-occupants to more vulnerable neighborhoods with a preponderance of investor/absentee landlords. (For a more complete history of North Minneapolis and the need for a development tool such as the HMI, see pages 2–5 of the original *2011 North Minneapolis Housing Market Index* report, available at www.cura.umn.edu.) ■

Housing Market Index for North Minneapolis



NEIGHBORHOOD FINDINGS

As seen on the map on the facing page, the housing market in North Minneapolis varies from neighborhood to neighborhood and even from block to block. In general, the housing market in the northwest area of North Minneapolis is more established while the southeast area's is more vulnerable; however, many of the neighborhoods register a diverse "micro" housing market, with blocks falling on the entire HMI spectrum. View the HMI results for each neighborhood on the following pages. ■

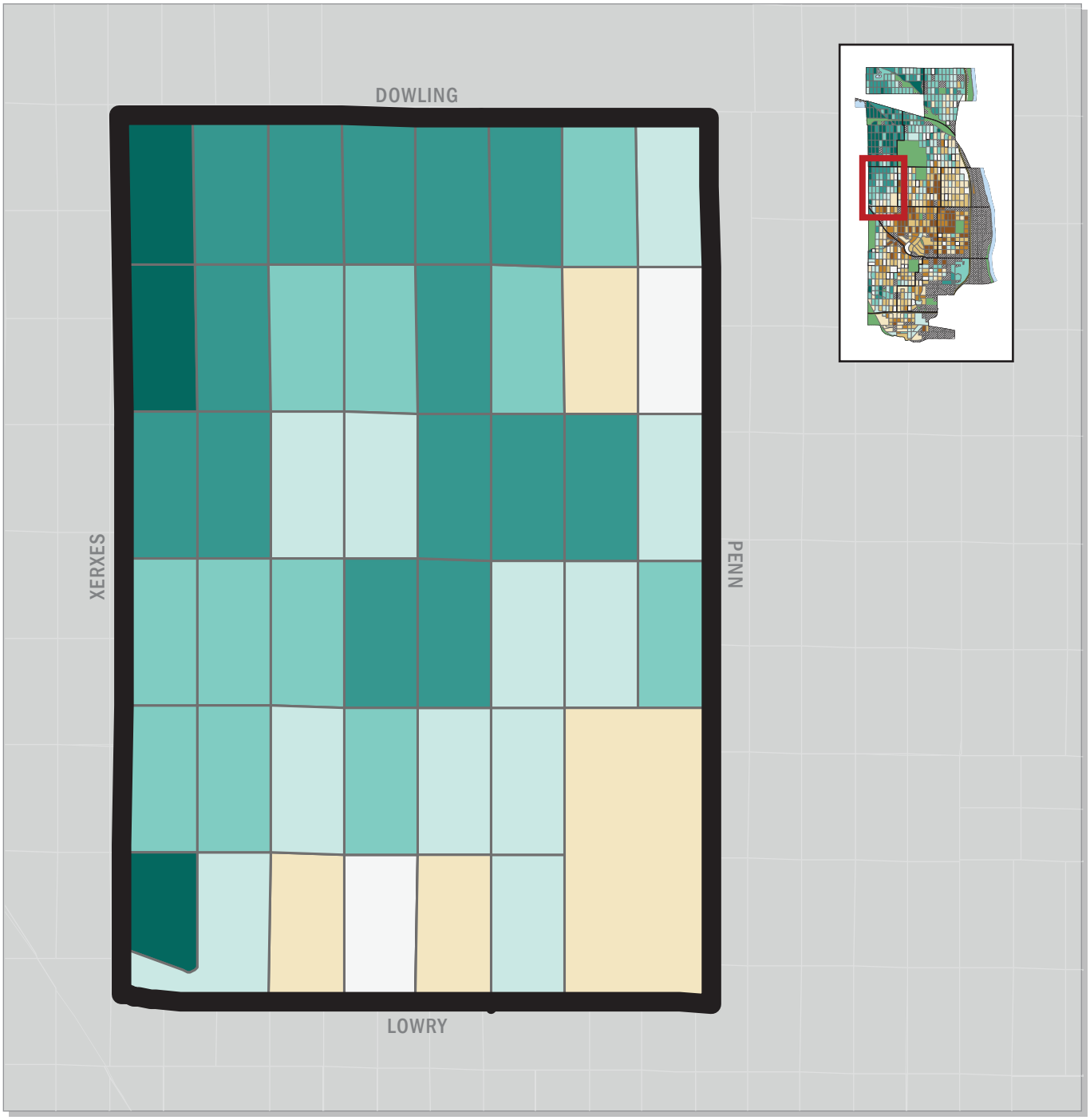
Neighborhood	Number of Blocks	Value Retention between Dec 31, 2006, and Dec 31, 2012	Owner Occupancy as of Dec 31, 2012	Physical Condition as of Feb 2013	Long-Term Vacancy as of Dec 31, 2012
Cleveland	45	-31.4%	76.2%	4.3029	2.8%
Folwell	65	-39.1%	58.9%	4.5419	7.7%
Harrison	40	-42.0%	57.7%	4.6642	2.5%
Hawthorne	61	-47.1%	47.5%	4.7919	5.0%
Jordan	84	-43.2%	47.7%	4.7602	7.8%
Lind-Bohanon	65	-35.3%	72.6%	4.0787	4.8%
McKinley	39	-37.7%	52.3%	4.6689	4.4%
Near North	57	-42.2%	57.9%	4.3620	3.0%
Shingle Creek	46	-33.2%	79.4%	4.0885	1.5%
Victory	74	-26.2%	84.4%	4.0051	1.8%
Webber-Camden	71	-32.3%	64.6%	4.3362	3.9%
Willard-Hay	125	-37.8%	61.1%	4.5005	4.1%
North Minneapolis	**772**	**-37.3%**	**63.0%**	**4.4279**	**4.3%**

Lower condition scores correspond to homes in better condition; the scale ranges from 1 to 7, with scores of 1 indicating homes in "excellent" condition.

Established blocks are those areas where the summed individual variable scores are higher than the average block in North Minneapolis. For example, an established block will have lost less value than the average block in North Minneapolis, will have a higher percentage of owner occupants than the average block in North Minneapolis, will have residences that are in better physical condition than the average block in North Minneapolis, and/or will have fewer long-term vacancies than the average block in North Minneapolis.

Vulnerable blocks are those areas where the summed individual variable scores are lower than the average block in North Minneapolis. An established block will have lost more value than the average block in North Minneapolis, will have a lower percentage of owner occupants than the average block in North Minneapolis, etc.

CLEVELAND



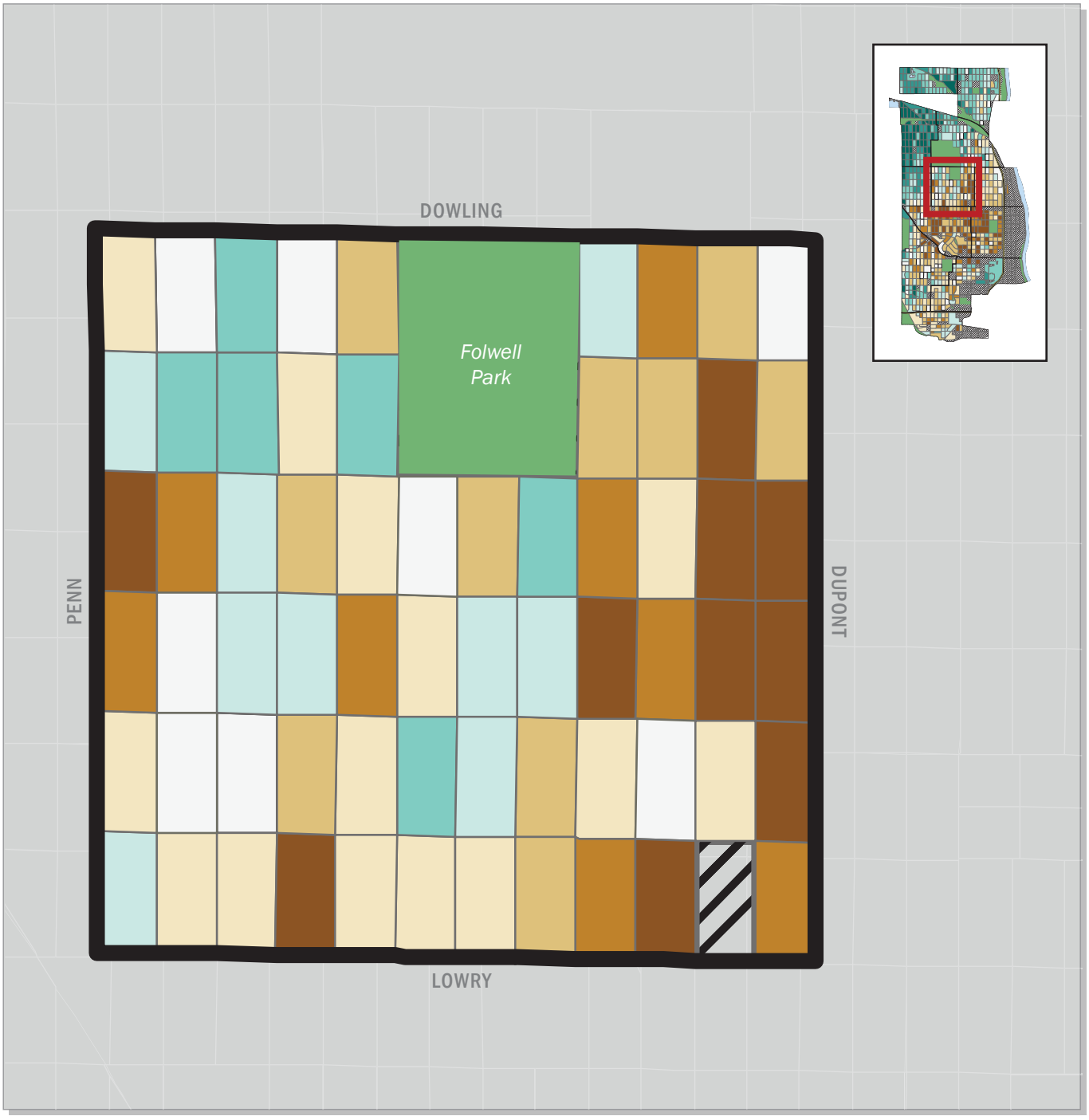
Area	Value Retention	Owner Occupancy	Condition *(on a scale of 1–7; 1 = excellent)*	Long-Term Vacancy
CLEVELAND NEIGHBORHOOD	-31.4%	76.2%	4.3029	2.8%
North Minneapolis	-37.3%	63.0%	4.4279	4.3%

Vulnerable — Established

6 or fewer owner-occupyable residences/ vacant land/insufficient data

Park/public land

FOLWELL



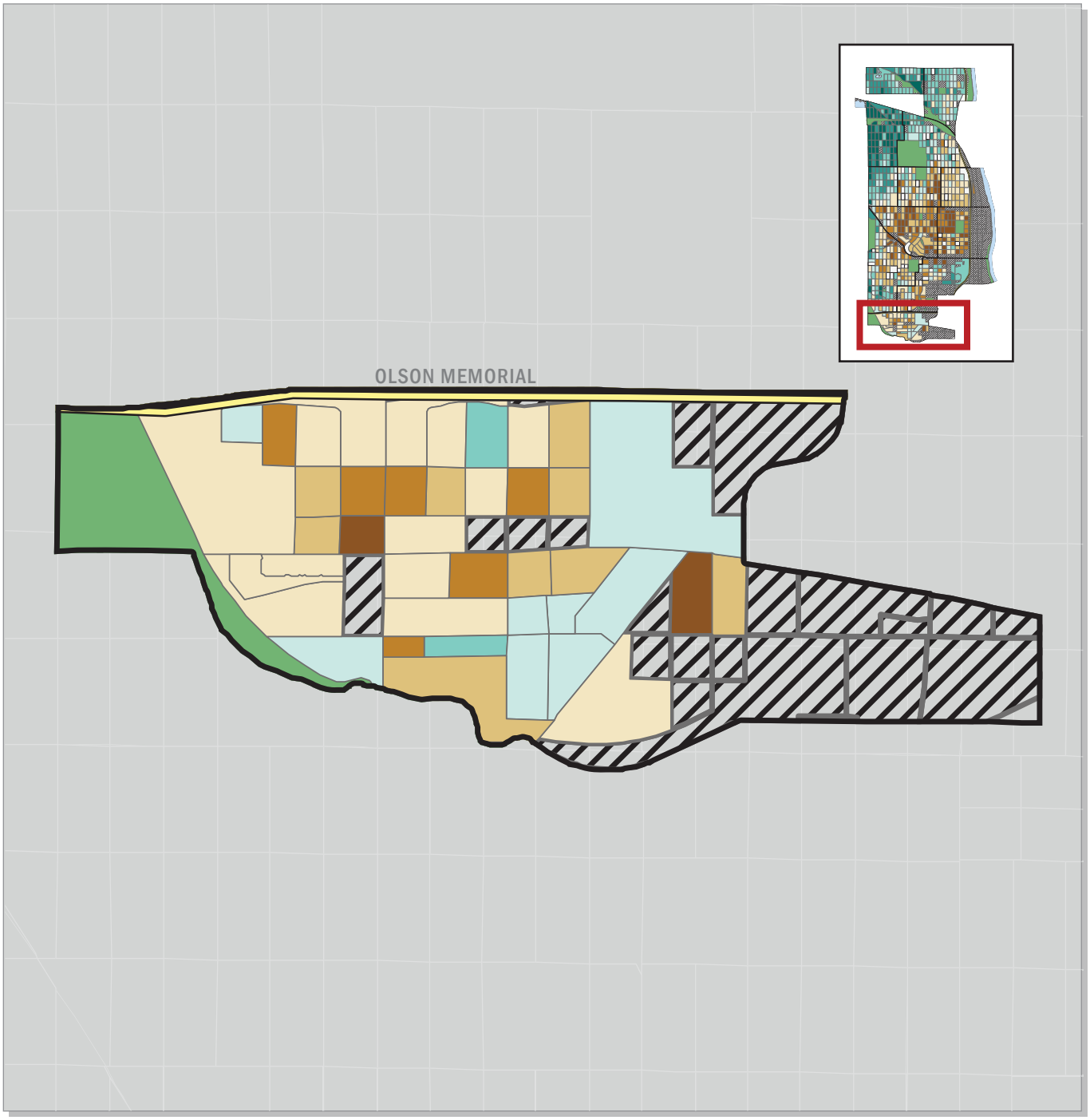
Area	Value Retention	Owner Occupancy	Condition *(on a scale of 1–7; 1 = excellent)*	Long-Term Vacancy
FOLWELL NEIGHBORHOOD	-39.1%	58.9%	4.5419	7.7%
North Minneapolis	-37.3%	63.0%	4.4279	4.3%

Vulnerable — Established

6 or fewer owner-occupyable residences/ vacant land/insufficient data

Park/public land

HARRISON



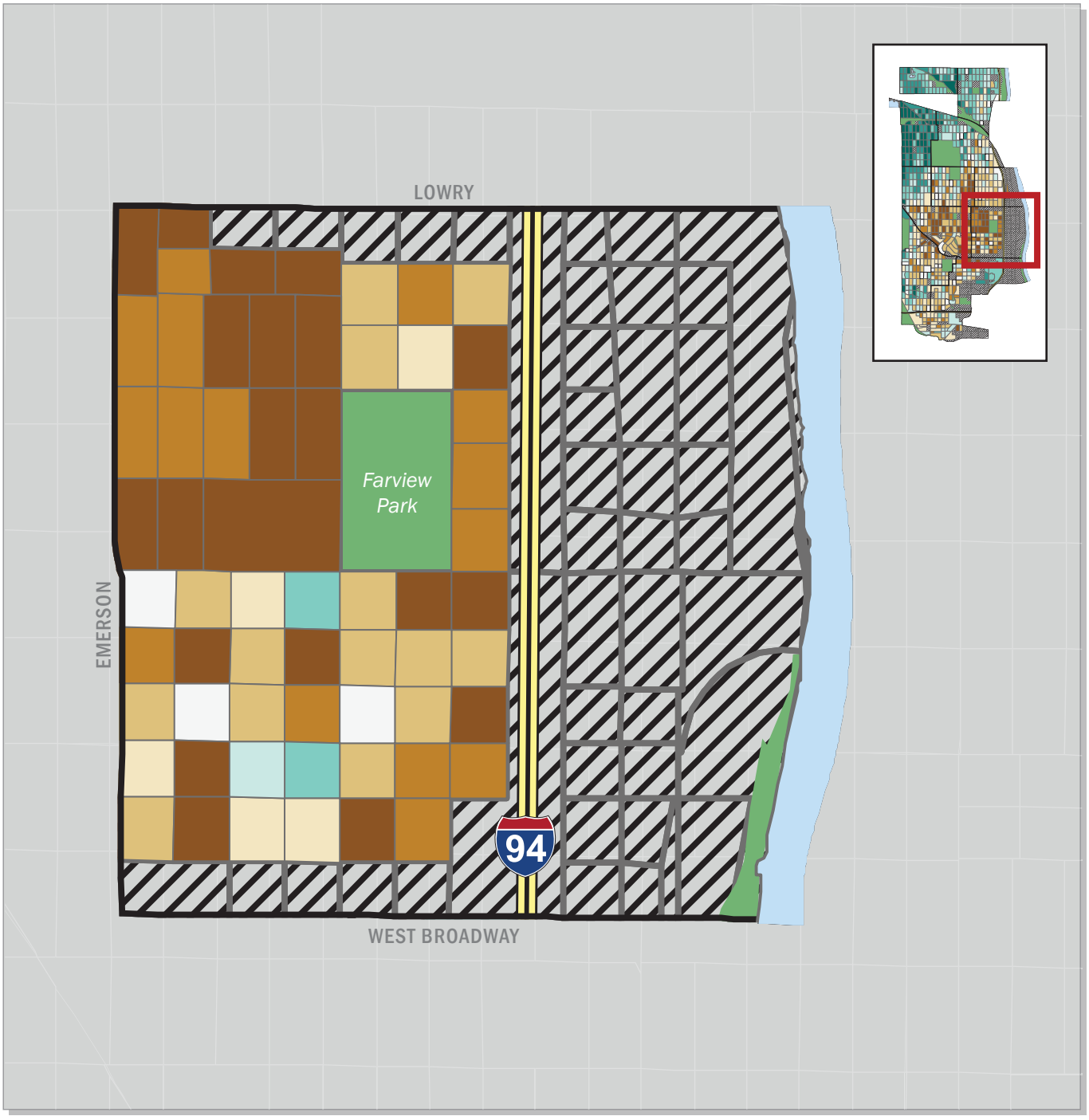
Area	Value Retention	Owner Occupancy	Condition *(on a scale of 1–7; 1 = excellent)*	Long-Term Vacancy
HARRISON NEIGHBORHOOD	-42.0%	57.7%	4.6642	2.5%
North Minneapolis	-37.3%	63.0%	4.4279	4.3%

Vulnerable — Established

6 or fewer owner-occupyable residences/ vacant land/insufficient data

Park/public land

HAWTHORNE



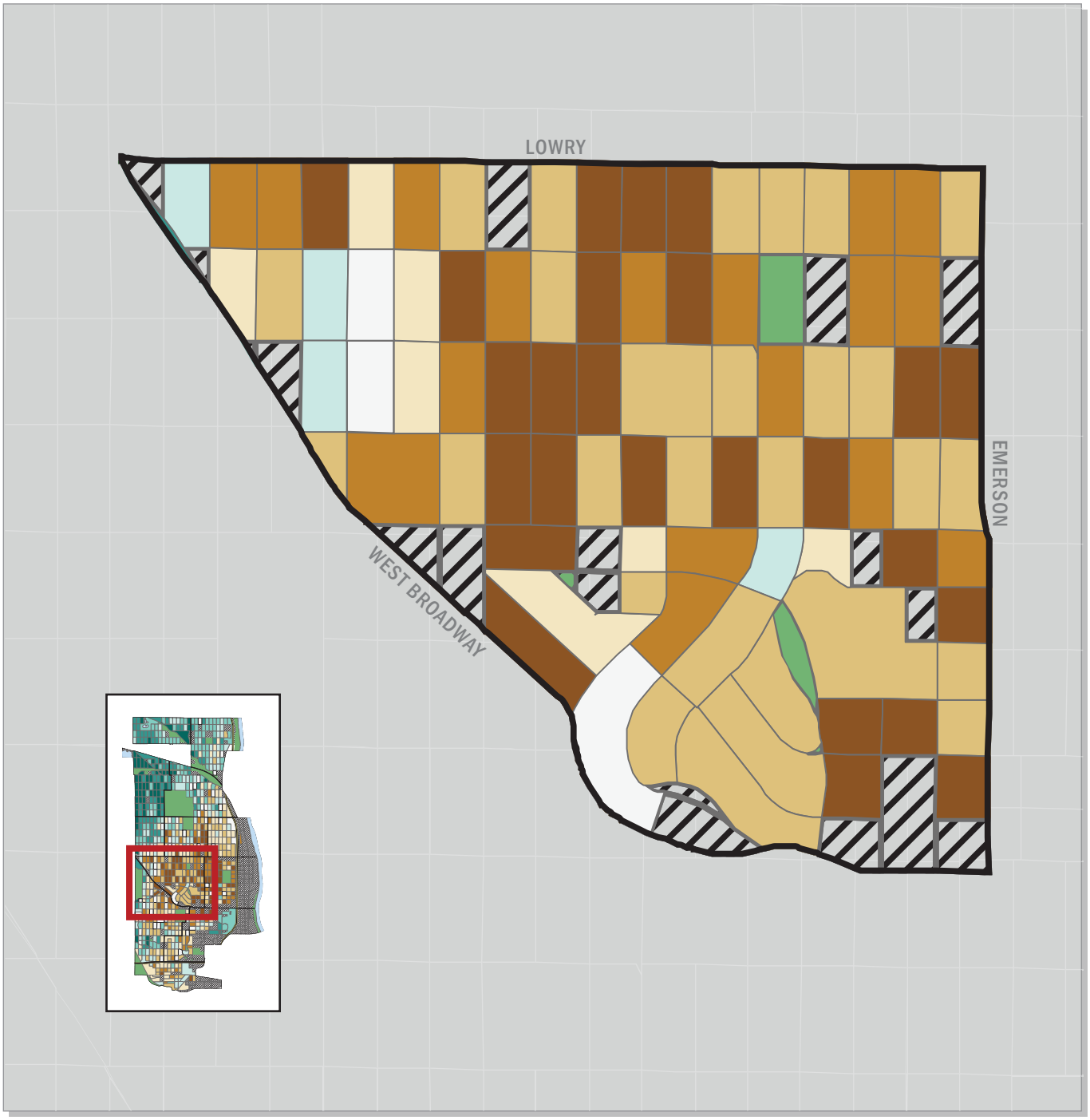
Area	Value Retention	Owner Occupancy	Condition *(on a scale of 1–7; 1 = excellent)*	Long-Term Vacancy
HAWTHORNE NEIGHBORHOOD	-47.1%	47.5%	4.7919	5.0%
North Minneapolis	-37.3%	63.0%	4.4279	4.3%

Vulnerable — Established

6 or fewer owner-occupyable residences/ vacant land/insufficient data

Park/public land

JORDAN



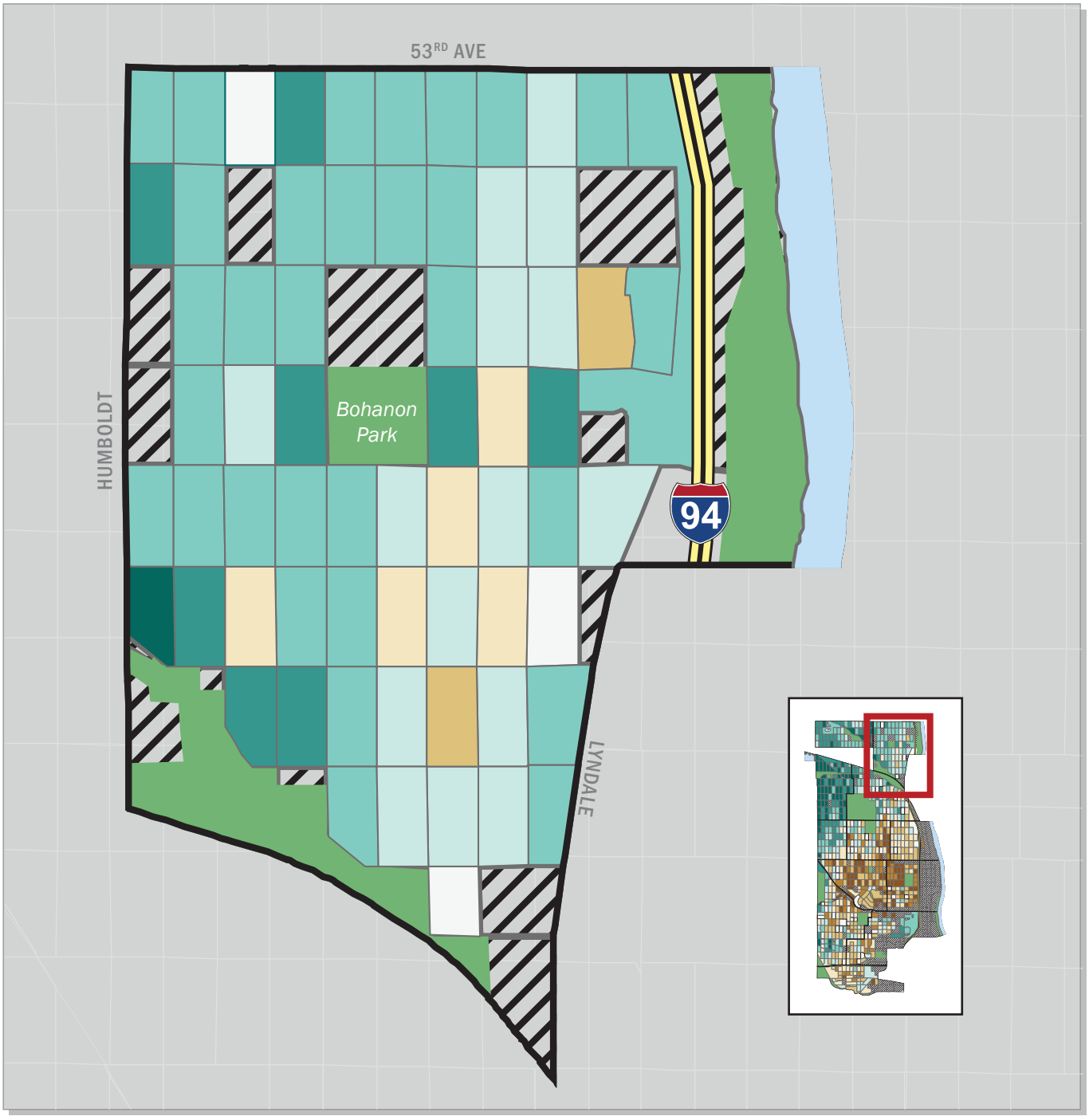
Area	Value Retention	Owner Occupancy	Condition *(on a scale of 1–7; 1 = excellent)*	Long-Term Vacancy
JORDAN NEIGHBORHOOD	-43.2%	47.7%	4.7602	7.8%
North Minneapolis	-37.3%	63.0%	4.4279	4.3%

Vulnerable — Established

6 or fewer owner-occupyable residences/ vacant land/insufficient data

Park/public land

LIND-BOHANON



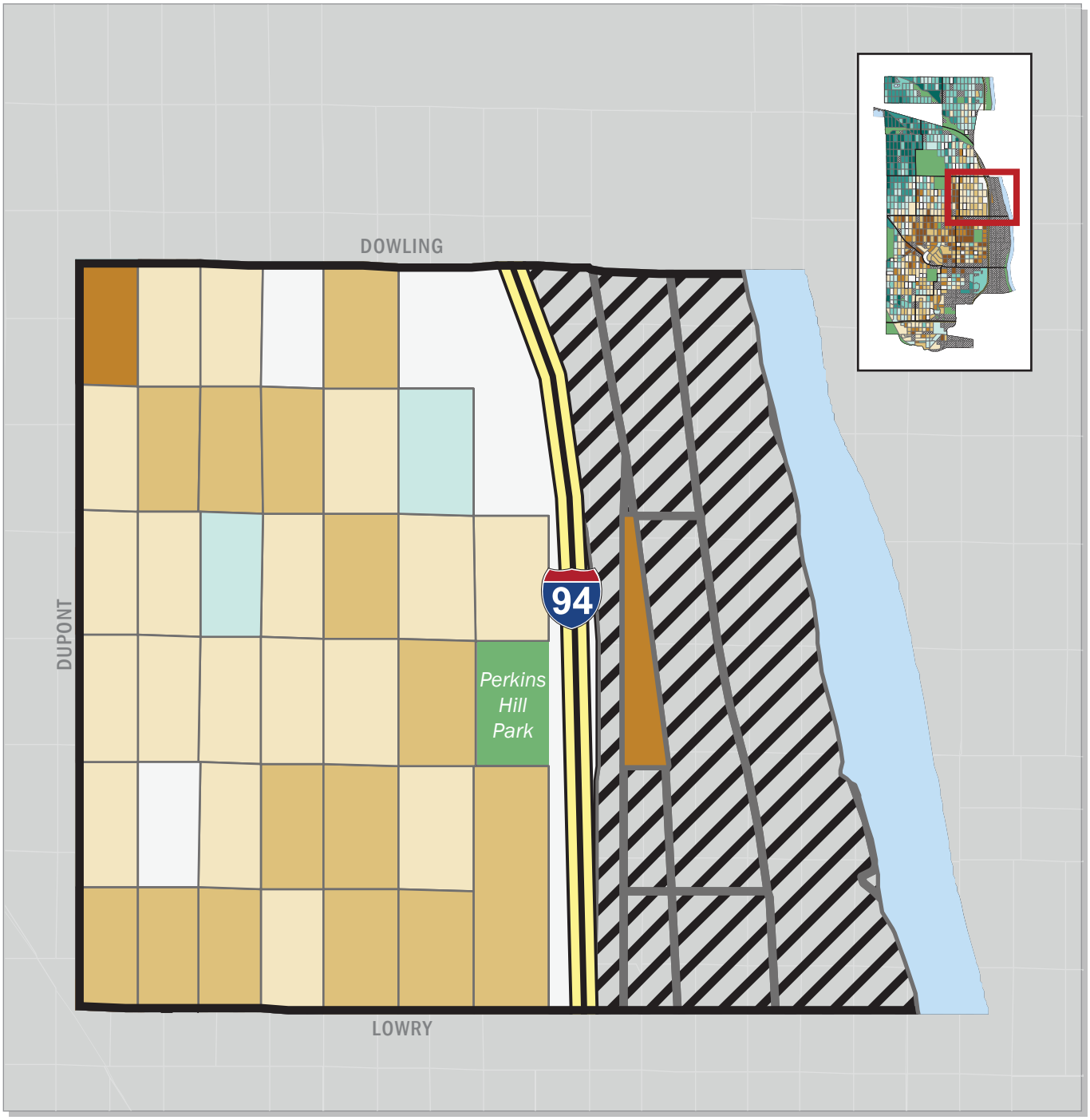
Area	Value Retention	Owner Occupancy	Condition *(on a scale of 1–7; 1 = excellent)*	Long-Term Vacancy
LIND-BOHANON NEIGHBORHOOD	-35.3%	72.6%	4.0787	4.8%
North Minneapolis	-37.3%	63.0%	4.4279	4.3%

Vulnerable — Established

6 or fewer owner-occupyable residences/ vacant land/insufficient data

Park/public land

McKINLEY



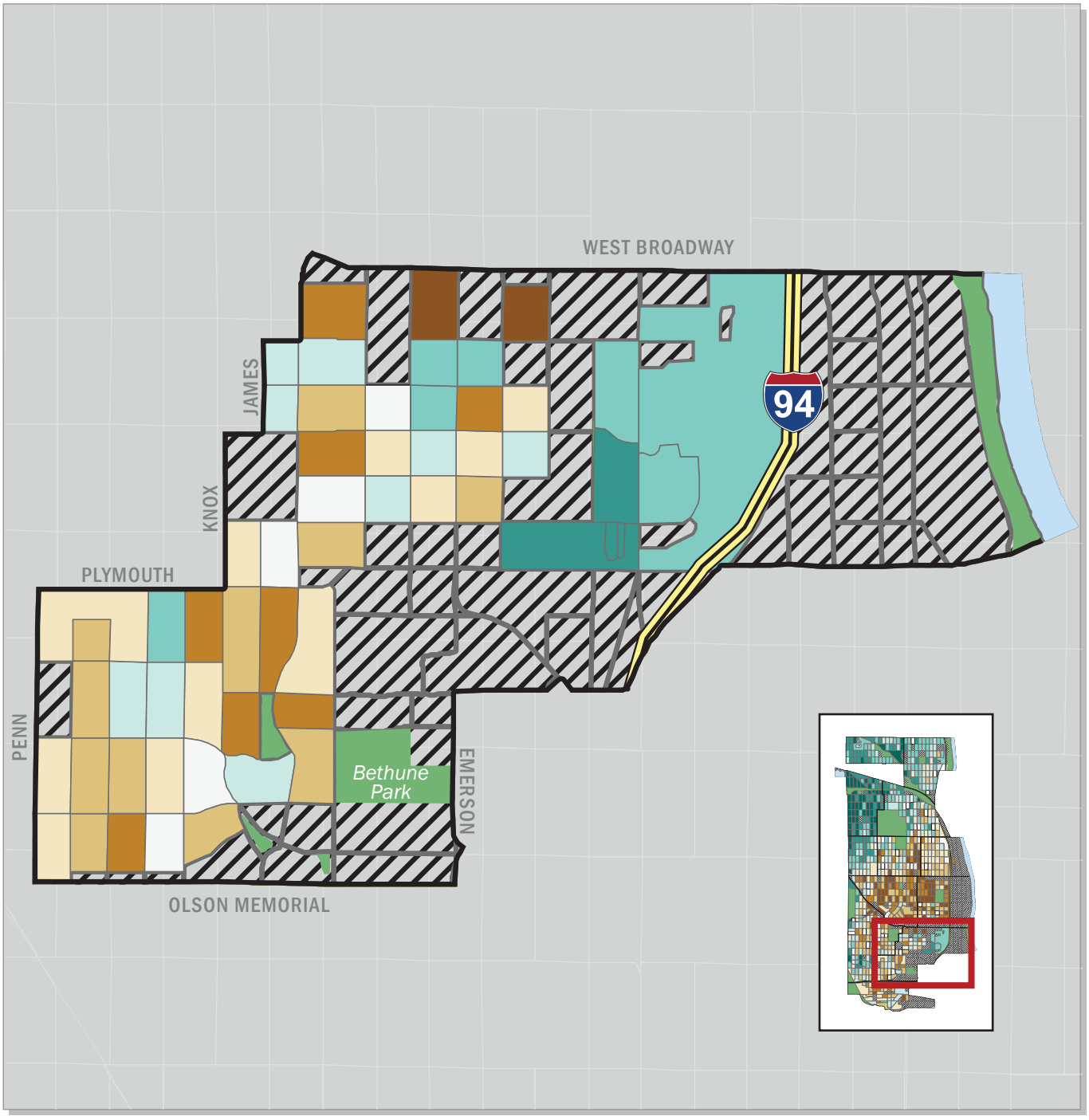
Area	Value Retention	Owner Occupancy	Condition *(on a scale of 1–7; 1 = excellent)*	Long-Term Vacancy
McKINLEY NEIGHBORHOOD	-37.7%	52.3%	4.6689	4.4%
North Minneapolis	-37.3%	63.0%	4.4279	4.3%

Vulnerable — Established

6 or fewer owner-occupyable residences/ vacant land/insufficient data

Park/public land

NEAR NORTH



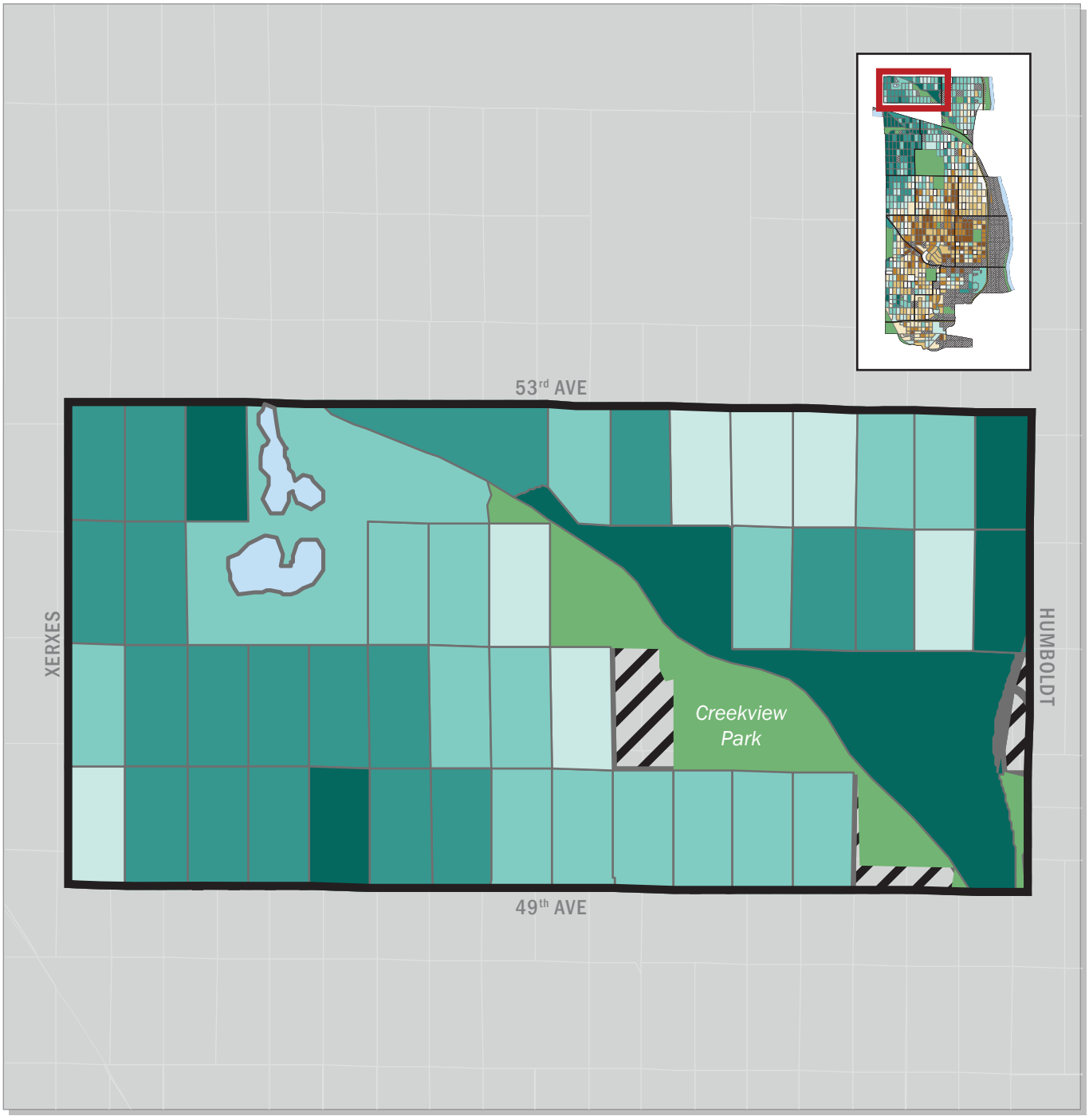
Area	Value Retention	Owner Occupancy	Condition *(on a scale of 1–7; 1 = excellent)*	Long-Term Vacancy
NEAR NORTH NEIGHBORHOOD	-42.2%	57.9%	4.3620	3.0%
North Minneapolis	-37.3%	63.0%	4.4279	4.3%

Vulnerable — Established

6 or fewer owner-occupyable residences/ vacant land/insufficient data

Park/public land

SHINGLE CREEK



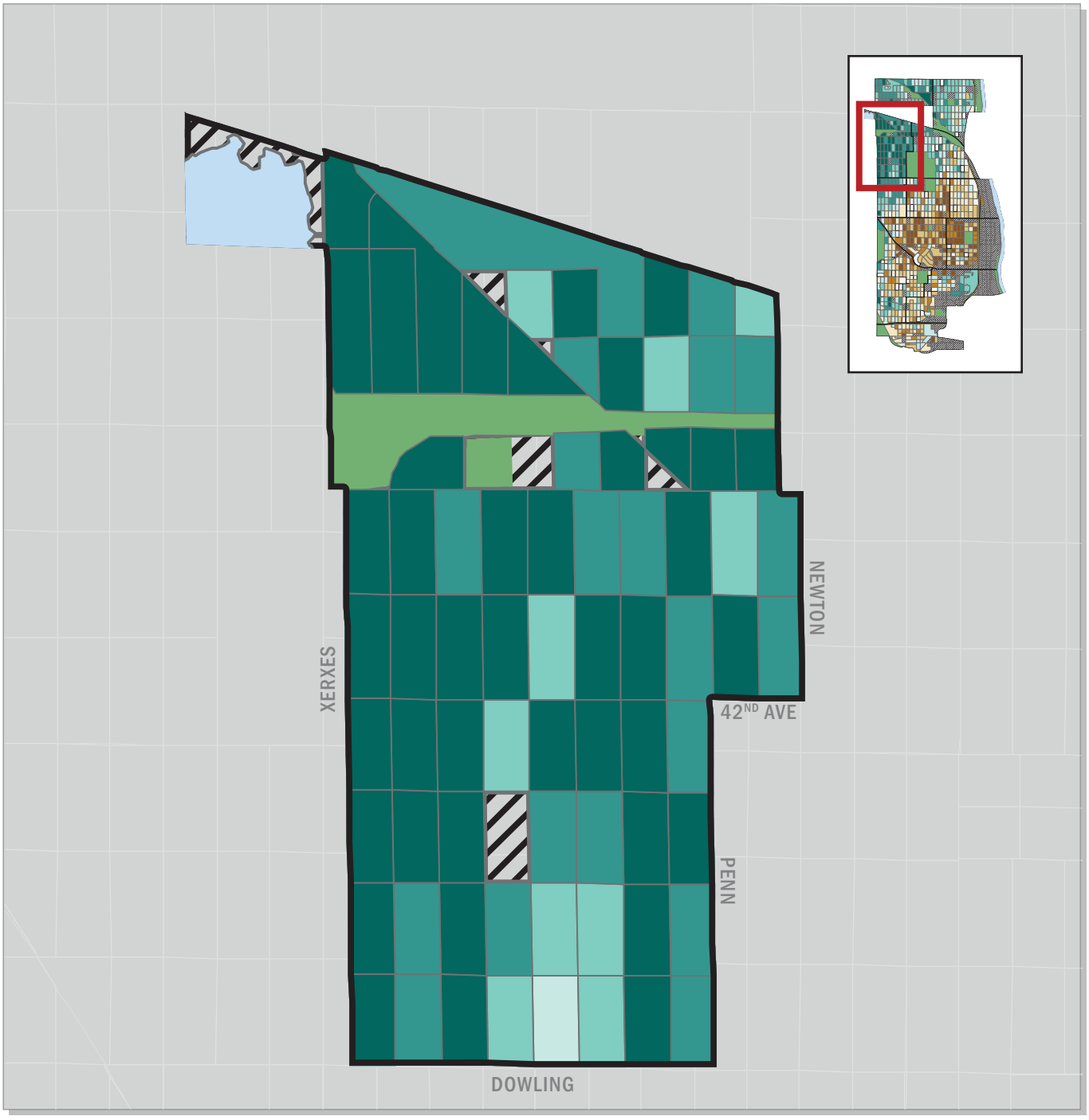
Area	Value Retention	Owner Occupancy	Condition *(on a scale of 1–7; 1 = excellent)*	Long-Term Vacancy
SHINGLE CREEK NEIGHBORHOOD	-33.2%	79.4%	4.0885	1.5%
North Minneapolis	-37.3%	63.0%	4.4279	4.3%

Vulnerable — Established

6 or fewer owner-occupyable residences/ vacant land/insufficient data

Park/public land

VICTORY



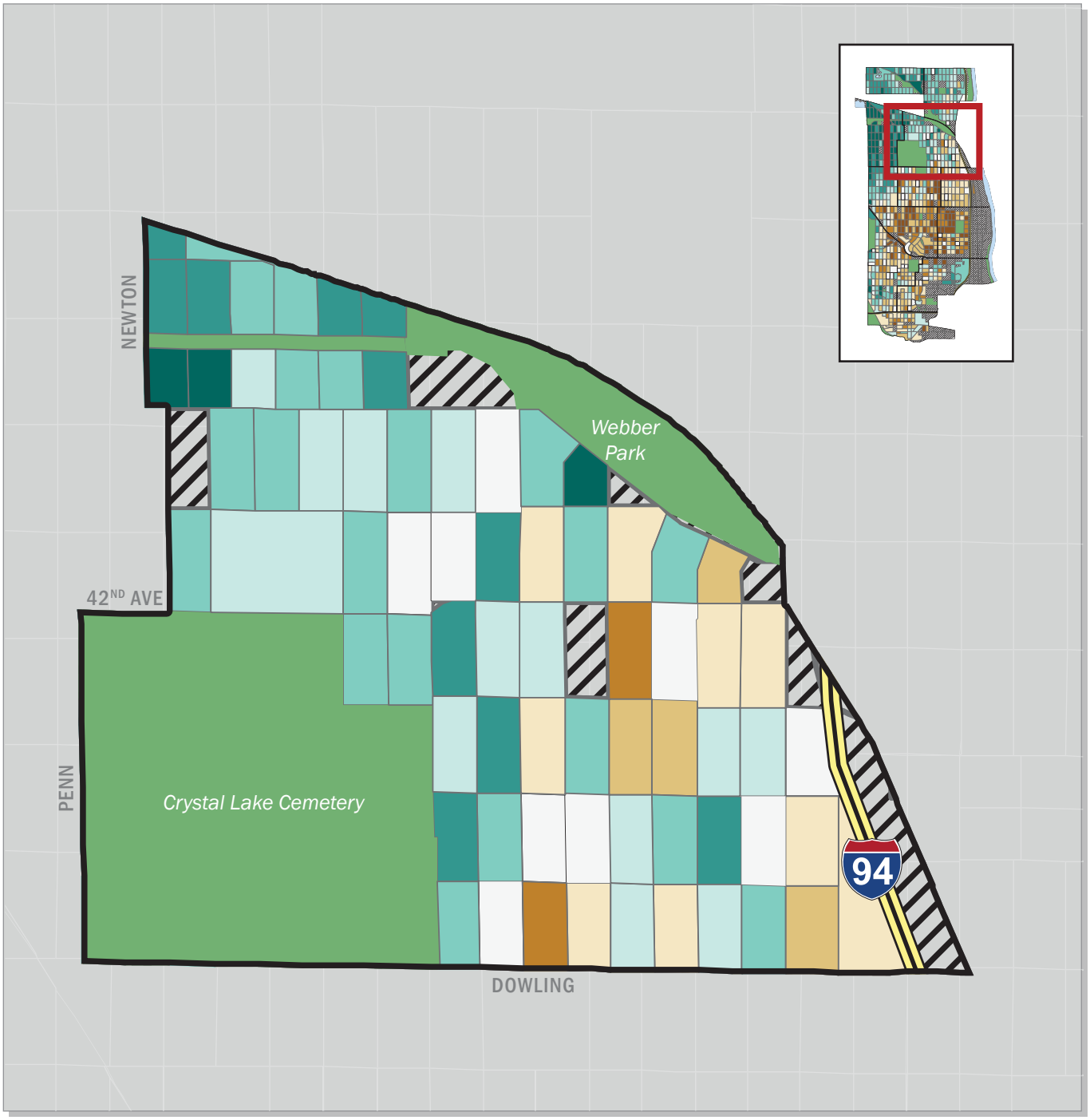
Area	Value Retention	Owner Occupancy	Condition *(on a scale of 1–7; 1 = excellent)*	Long-Term Vacancy
VICTORY NEIGHBORHOOD	-26.2%	84.4%	4.0051	1.8%
North Minneapolis	-37.3%	63.0%	4.4279	4.3%

Vulnerable — Established

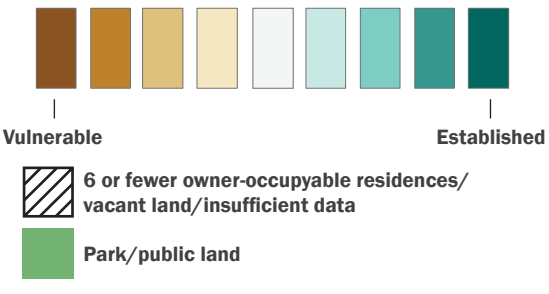
6 or fewer owner-occupyable residences/ vacant land/insufficient data

Park/public land

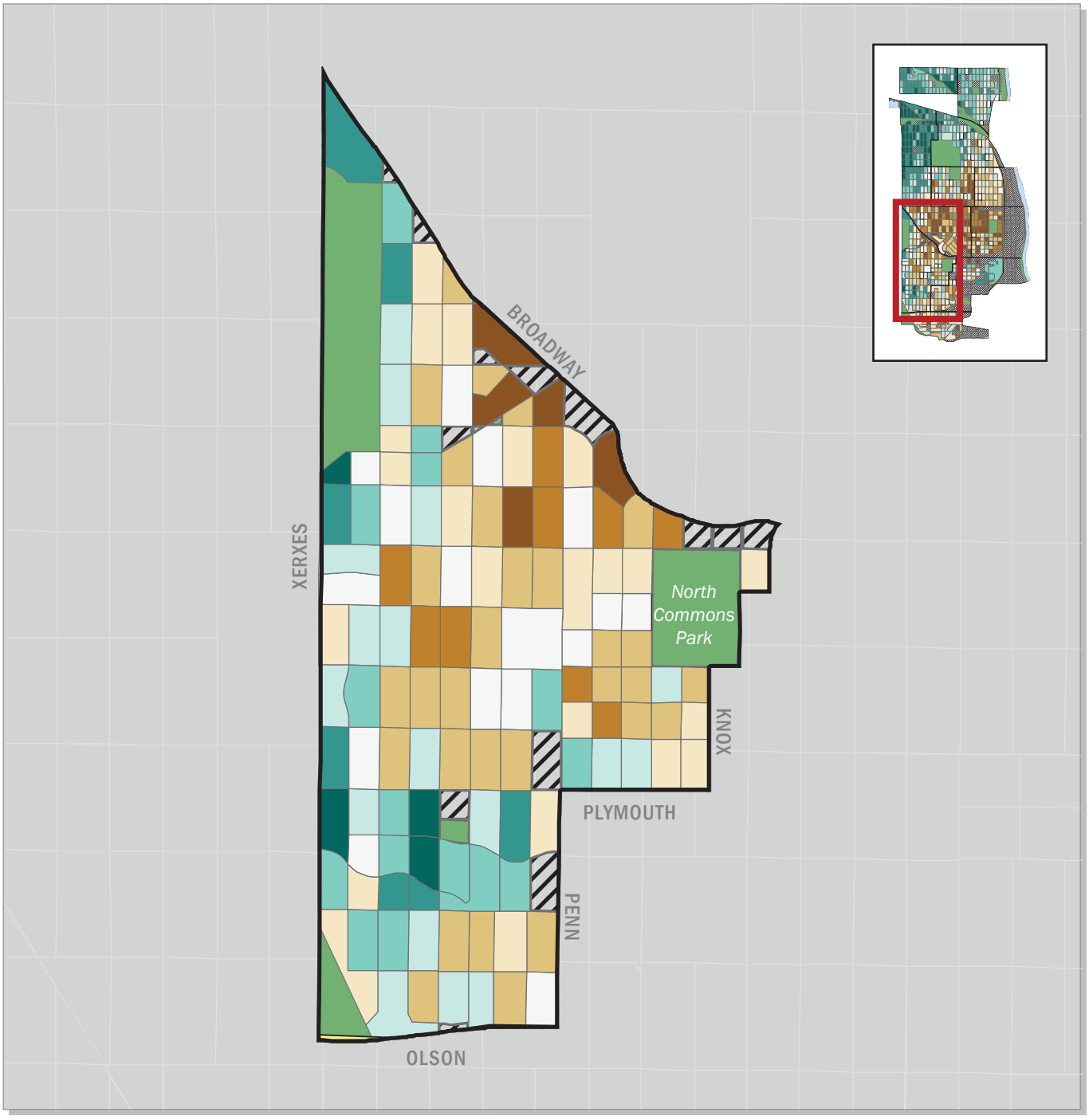
WEBBER-CAMDEN



Area	Value Retention	Owner Occupancy	Condition *(on a scale of 1–7; 1 = excellent)*	Long-Term Vacancy
WEBBER-CAMDEN NEIGHBORHOOD	-32.3%	64.6%	4.3362	3.9%
North Minneapolis	-37.3%	63.0%	4.4279	4.3%



WILLARD-HAY



Area	Value Retention	Owner Occupancy	Condition *(on a scale of 1–7; 1 = excellent)*	Long-Term Vacancy
WILLARD-HAY NEIGHBORHOOD	-37.8%	61.1%	4.5005	4.1%
North Minneapolis	-37.3%	63.0%	4.4279	4.3%

Vulnerable — Established

6 or fewer owner-occupyable residences/ vacant land/insufficient data

Park/public land

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METHODOLOGY

The following section describes each of the four variables incorporated into the HMI, including the local data sources and the assumptions made about each of them. It also explains how the HMI block scores are determined from the variables and how they are standardized.

Explanation of Variables

Physical Condition

This variable reflects the average of the physical condition scores attributed to each owner-occupyable residence on a block. Updated every four years, the scores are assigned by assessors from the City of Minneapolis Assessor's Office based on the physical condition of a building's exterior. (See Condition Rating box at right for scoring system.)

Formula for determining Physical Condition:

$$\frac{\text{Sum of Numerical Scores for Owner-Occupyable Parcels}}{\text{Number of Owner-Occupyable Parcels}}$$

Condition Rating
1 – Excellent
2 – Good
3 – Average Plus
4 – Average
5 – Average Minus
6 – Fair
7 – Poor

Assumption

A block full of houses that are structurally sound and well-maintained indicates investment on the block and in the immediate neighborhood. If the housing stock on a block maintains a relatively high-quality rating, then the structures—and the entire block—will be more attractive to potential residents and individual owners will expect relatively high returns on their own home improvements.

Data Source: City of Minneapolis Assessor's Office, February 2013.

Value Retention

This variable reflects the ability of residences to retain their market value (as determined by the Minneapolis Assessor's Office) since the onset of the national housing market collapse. To determine this, the variable measures the block average of the change in estimated market value (EMV) between December 31, 2006, and December 31, 2012, for each owner-occupyable parcel that existed at the beginning of the timeframe (December 31, 2006) and at the end (December 31, 2012). (*See Defining "Owner-Occupyable" homes for description of "Owner-Occupyable" homes.*) Homes that were newly constructed during the intervening years, or homes that were demolished, are not factored into the block average.

Formula for determining Value Retention:

Part 1

(Calculate the percentage change in EMV for each parcel that exists on both December 31, 2006, and December 31, 2012)

$$\frac{\text{Dec 2012 EMV} - \text{Dec 2006 EMV}}{\text{Dec 2006 EMV}}$$

Part 2

(Calculate the average of the EMV percentage change for each block)

$$\frac{\text{Sum of each parcel's EMV percentage change}}{\text{Number of parcels}}$$

Assumptions

- Housing values reached their peak sometime between late-2006 and 2007.
- This variable captures intangible and often undefined drivers of housing market strength, such as access to greenspace and public transportation, proximity to schools, perception of safety and crime, etc.

Data Source: December 2006 and December 2012 Hennepin County Parcel Dataset available from MetroGIS.

Defining "Owner-Occupyable" Homes

The HMI analyzed only those properties that are private, "owner-occupyable" residences, as indicated by their Hennepin County land use designation. "Owner-occupyable" residences do not include apartment buildings or government-subsidized residential units, nor do they include commercial, governmental, industrial, and other building types not residential in nature. A total of 16,975 residential units fit this definition and are included in this analysis, with the following land use classifications:

- Apartment Condominium (6)
- Blind (17)
- Blind Joint Tenancy (4)
- Condominium (91)
- Cooperative (5)
- Disabled (60)
- Disabled Joint Tenancy (6)
- Double Bungalow (1,561)
- Residential (15,056)
- Residential-Misc & Bed & Breakfast (0)
- Residential-Zero Lot Line-DB (0)
- Townhouse (96)
- Triplex (73)

Long-Term Vacancy

This variable reflects the percentage of owner-occupyable residential parcels on a block that have been vacant for eight months or longer. The time period measured for this variable was April 2012 and December 2012.

Formula for determining Long-Term Vacancy:

$$\frac{\text{Number of Owner-Occupyable Parcels That Are Vacant for 8 Months or Longer}}{\text{Total Number of Owner-Occupyable Parcels on the Block}}$$

Assumption

Although the presence of a couple of long-term vacant homes on a block is not necessarily detrimental to the block's livability, too many vacant homes may attract crime (fewer eyes on the street) as well as increase the incidence of structural and landscaping neglect. This may depress the value and appeal of houses on the block that are actively for sale.

Data Source: United States Postal Service parcel data, April 2012 and December 2012.

Owner Occupancy

This variable reflects the percentage of households on a block with owner occupants. It determines this percentage only among owner-occupyable units (meaning it excludes apartments and other government-subsidized housing units).

Defining Homestead Status

In Minnesota, people who own a home and reside in it as their primary residence may apply for a "homestead" classification that will enable them to reduce their property taxes. The HMI uses the homestead status of an owner-occupyable home as a proxy for owner-occupancy.

Formula for determining Owner Occupancy:

$$\frac{\text{Owner-Occupyable Parcels with Homestead Status}}{\text{All Owner-Occupyable Parcels}}$$

Assumption

While all residents seek to live in vibrant, healthy areas, owner-occupants are more likely to invest in the livability and long-term health of their neighborhood because of the significant financial investment they have in their homes, which are typically their largest investments. They therefore have the most to gain or lose from the improvement or deterioration of the local housing market.

Data Source: December 2012 Hennepin County Parcel Dataset available from MetroGIS.

Determining and Standardizing Variable Scores

The HMI calculates a block-level score for each of the four variables using the previously defined formulas and datasets. To avoid outliers and skewed results, the HMI calculates scores only for blocks with 7 or more owner-occupyable units; the median number of owner-occupyable units on a block in North Minneapolis is 23.

The four component variables of the HMI are measured on different scales. To combine them into an overall index, each variable's block-level averages go through a z-score transformation. In this process, each block-level variable is given a new score based on the mean and standard deviation of the same variable for all of North Minneapolis. This puts all four variables on a common scale that reflects, for each variable, the level of disparity between each block and the North Minneapolis average—specifically, the number of standard deviations that each block is above or below the area average. (A value equal to the average is *0*.)

This is what the variable scores look like on a sample block before and after the z-score transformation:

Block ID	Value Retention	Owner-Occupancy	Physical Condition	Vacancy
270530001021012	-34%	90%	3.55	5.0%
270530001021012	0.480859276	1.513681334	–2.402294241	0.130154122
North Minneapolis Avg	-37%	63%	4.4279	4.3%

z-scores

The owner-occupyable residences on this block lost, on average, 34% of their estimated market value between December 31, 2006, and December 31, 2012, which is 0.4808 standard deviations better than the average for North Minneapolis (which lost 37%).

The higher the Physical Condition score, the worse the condition. The residences on this block have, on average, a 3.55 condition score, which registers 2.4 standard deviations below the average for North Minneapolis (which scored 4.42).

Using the following formula, each of the variable z-scores is then combined to create the final HMI score:

Formula for determining final HMI score:

Value Retention + Owner Occupancy – Physical Condition – Long-Term Vacancy

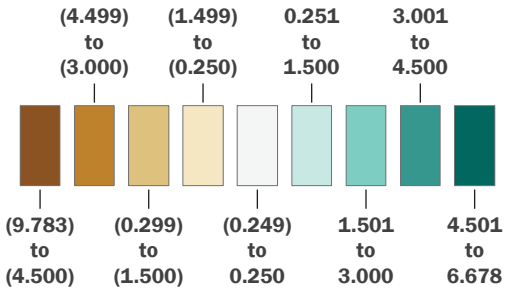
Physical Condition is subtracted because, reflecting the scoring system of the Minneapolis Assessor's Office, the lower the score, the better. (See Condition Rating box for scoring system.) Long-Term Vacancy is subtracted because of its perceived negative value on the stability of a block.

Using the z-scores from the above example, block **270530001021012** has the following composite z-score:

0.480859276 + 1.513681334 – (–2.402294241) – 0.130154122 = 4.26668073

final z-score

The block in the above example falls on the "established" side of the HMI spectrum. The HMI spectrum below reflects how the composite z-scores are organized into break points. ■



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APPENDIX

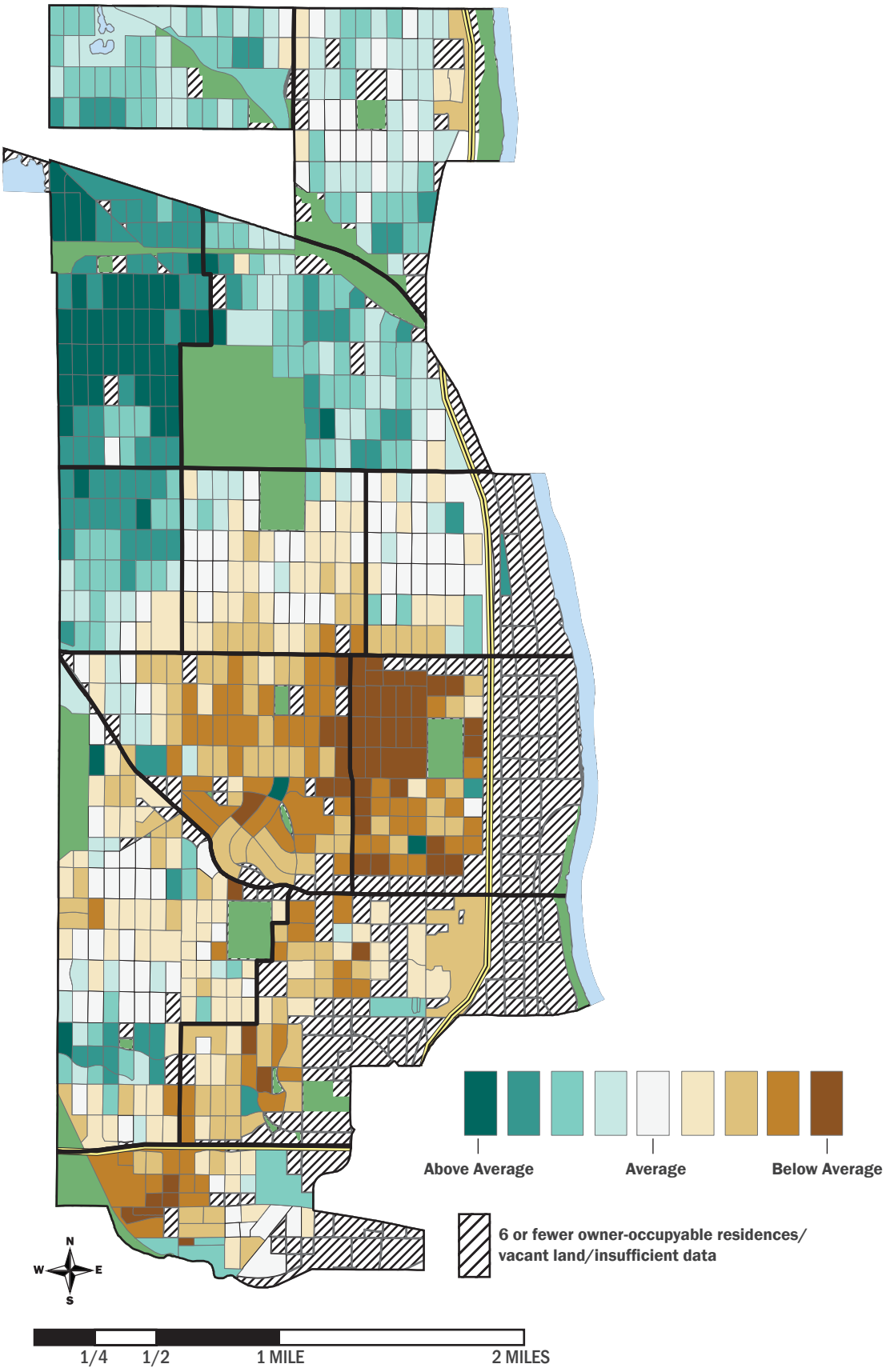
This section contains maps of the individual variables for the entirety of North Minneapolis. As explained in the Methodology section, the variables are standardized and combined to create the composite HMI map. The four variable maps are:

- Value Retention
- Owner Occupancy
- Physical Condition
- Long-Term Vacancy

Note that the legend reflects how each block average compares to the average of all residential blocks in North Minneapolis. ■

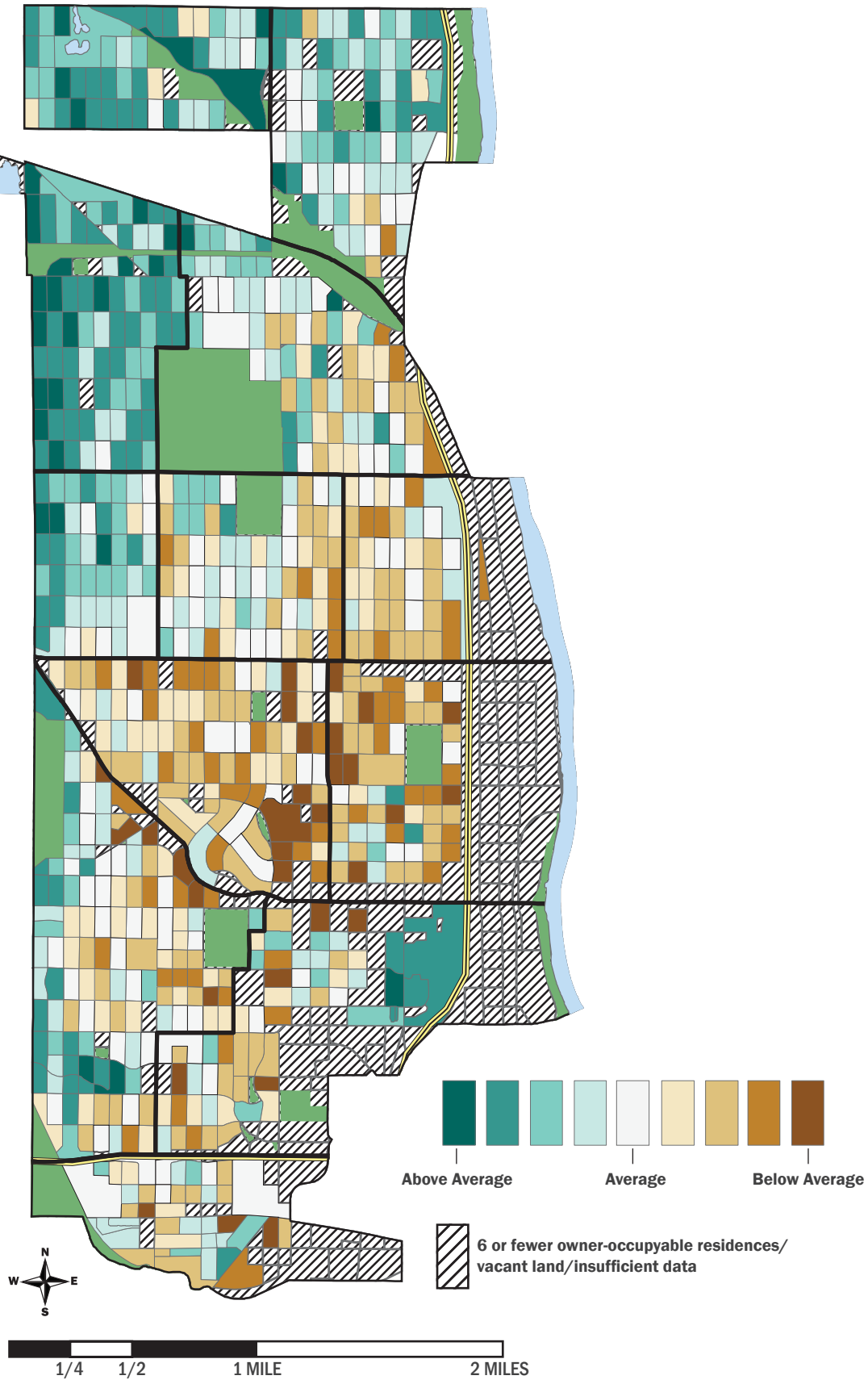
Value Retention

The owner-occupyable homes on the average block in North Minneapolis lost 37.3% of their estimated market value between December 31, 2006 and December 31, 2013.



Owner Occupancy

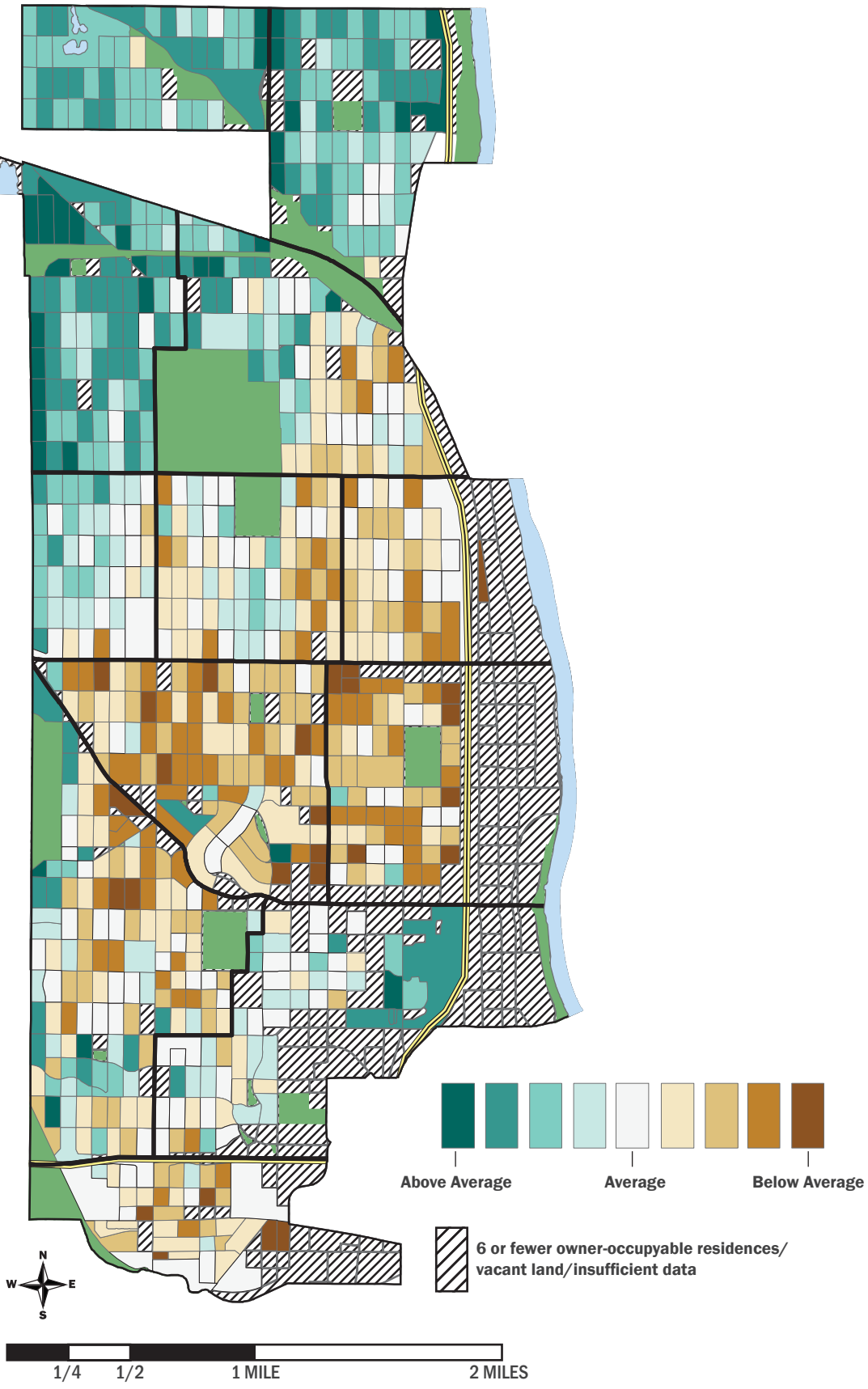
The average block in North Minneapolis had 63% owner occupancy.



Physical Condition

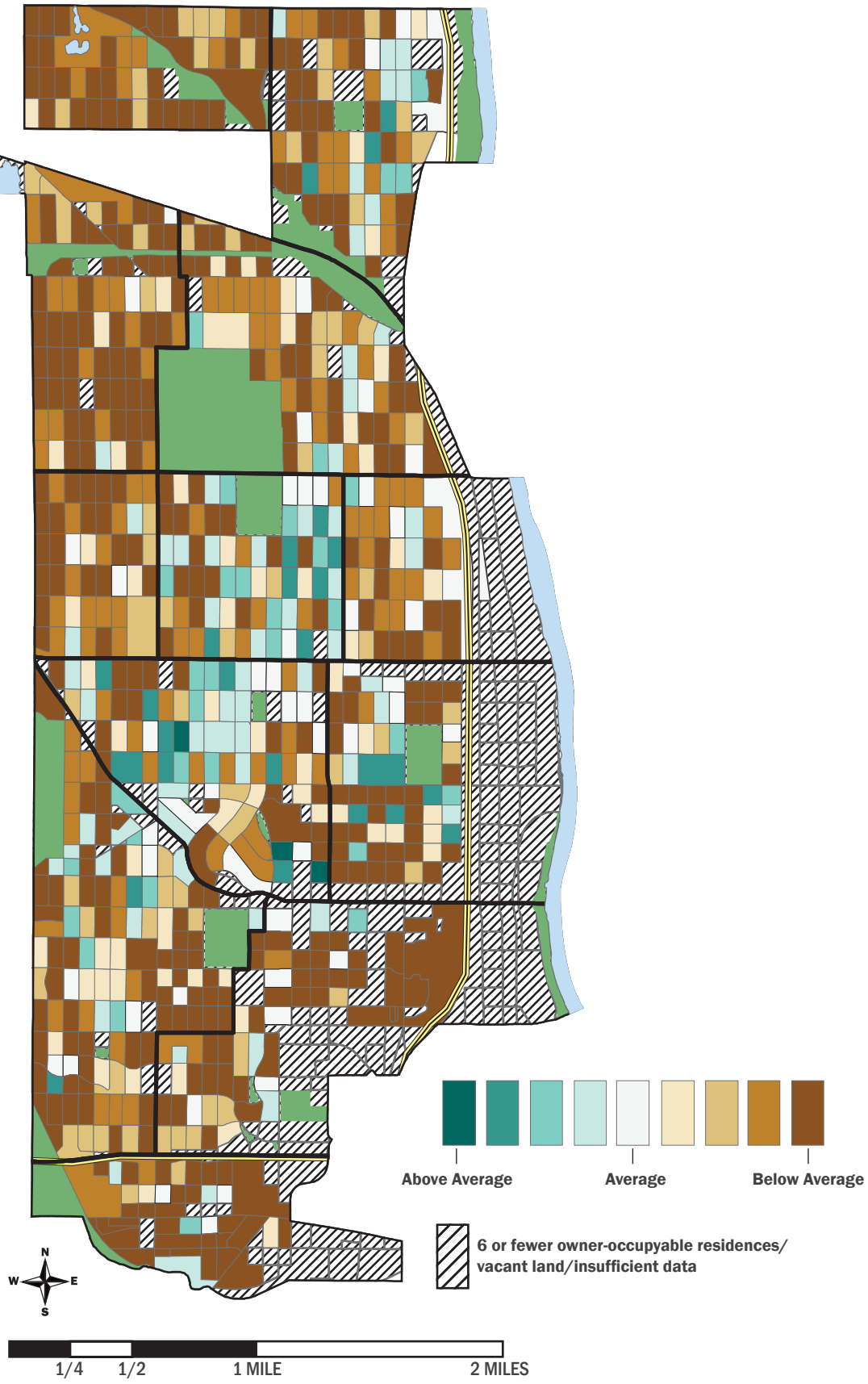
The owner-occupyable residences on the average block in North Minneapolis registered a 4.4279 condition score, falling between an "average" and "average minus" condition.

Note that this map has been adjusted to reflect the inverse nature of the condition scale, where scores falling below the North Minneapolis average are actually in better condition.



Long-Term Vacancy

The average block in North Minneapolis has 4.3% of its owner-occupyable homes vacant for 8 months or longer. Blocks falling below the North Minneapolis average have fewer vacant owner-occupyable homes.



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For more information or inquiries, please contact Community Development Project Manager Jacob Wascalus at 612-204-6475 or jacob.wascalus@mpls.frb.org.

To access the HMI scores for individual blocks, visit www.cura.umn.edu.

Federal Reserve Bank of Minneapolis

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