Sidney Ainkorn, Peter Mathison, and David Tomporowski

Introduction

General History and Context

Geographic Context

Richfield is a first-ring suburb, located just outside the city of Minneapolis (Map 1). It is bordered to the north by the City of Minneapolis (and MN State Highway 62), to the south by the City of Bloomington (and U.S. Interstate 494), to the east by the Minneapolis-St. Paul International Airport (and MN State Highway 77), and to the west by the City of Edina (Xerxes Avenue). The city is bisected by Interstate 35W.

General History

In 1908, Richfield was officially established. However, residents of Richfield held town meetings dating back to May 11, 1858 – the date on which Congress admitted Minnesota into the Union. Richfield's borders once extended north to Lake Street in Minneapolis, west to Highway 169 in Edina, east to the Mississippi River, and south to Interstate 494. Three annexations by Minneapolis brought Richfield's north border to 62nd Street (now Highway 62). In 1888, Edina formed a separate community, reducing Richfield's land to the west. In 1905, Fort Snelling forced Richfield's border to 34th Avenue (between Minnehaha Park and Lake Nokomis). In 1941, another section of east Richfield went to the municipal airport (now Minneapolis-St. Paul International Airport) and by 1955 all of the Wold-Chamberlain Field was separated from the village (City of Richfield).

Population and Housing Stock Evolution

Richfield gained prominence following WWII, when it experienced a population boom. As a first-ring suburb of Minneapolis, Richfield quickly became a popular home for returning war veterans in the late 1940s and 1950s. Statistics show that from 1940 to 1960, Richfield's population grew from under 10,000 to 42,500. The city's population topped out at nearly 50,000 in 1970. However, airport expansion, highway expansion, and changing borders resulted in Richfield's population leveling off at around 35,000 (City of Richfield).

As of the 2010 Census, Richfield's population is 35,228. Approximately 63% of the population identifies as White (alone), with Hispanic or Latino as the largest minority group at approximately 18%. This represents a dramatic shift over the last few decades; in 1990, for example, 93% of the population identified as White (alone), with Asian (alone) as the largest minority group at less than 3%. As such, the racial and ethnic makeup of Richfield's population

has begun to resemble neighboring Minneapolis more than its fellow suburbs. As with many suburbs, Richfield's population is aging when compared to Minneapolis and St. Paul. Furthermore, average household size in 2010 is 2.35 (compared to 2.25 in 2000), and only 26% of the 2010 households have children. Richfield's population is therefore largely characterized by aging, childless households (Metropolitan Council).

Richfield's housing stock expanded dramatically in the post-WWII years. By 1958, the last farm property within Richfield was replaced by commercial space. By 1990, housing units had grown to approximately 16,000, roughly two-thirds of which were single-family detached residences. As of 2010, the total number of units in the city has shrunk somewhat to approximately 15,000. Of those units, 5,165 are multifamily (5 units or more), and 9,782 are single-family detached. The remaining units are evenly divided between townhomes and duplexes/triplexes (Metropolitan Council).

Housing unit growth has been relatively stagnant for much of the last decade. According to the Metropolitan Council, approximately 240 multi-family units each were constructed in 2000 and 2003. A small number of townhomes were constructed most years in the early 2000s, and single family detached construction was reliably less than five for each year in the 2000s. When new units were constructed in the 2000s, they were generally market rate. Renter-occupied units have consistently comprised roughly 5,000 of the approximately 15,000 total units in Richfield, and this has changed very little over the last two decades. According to the 2010 American Community Survey, median housing value in Richfield is $215,000 (in 2010 dollars), which is slightly lower than home values in both Hennepin County and the Minneapolis-St. Paul MSA. This compares to a median housing value of $84,800 in 1990, which equates to roughly $149,000 in 2010 dollars. This represents a 44% increase in housing values in real terms (Metropolitan Council).

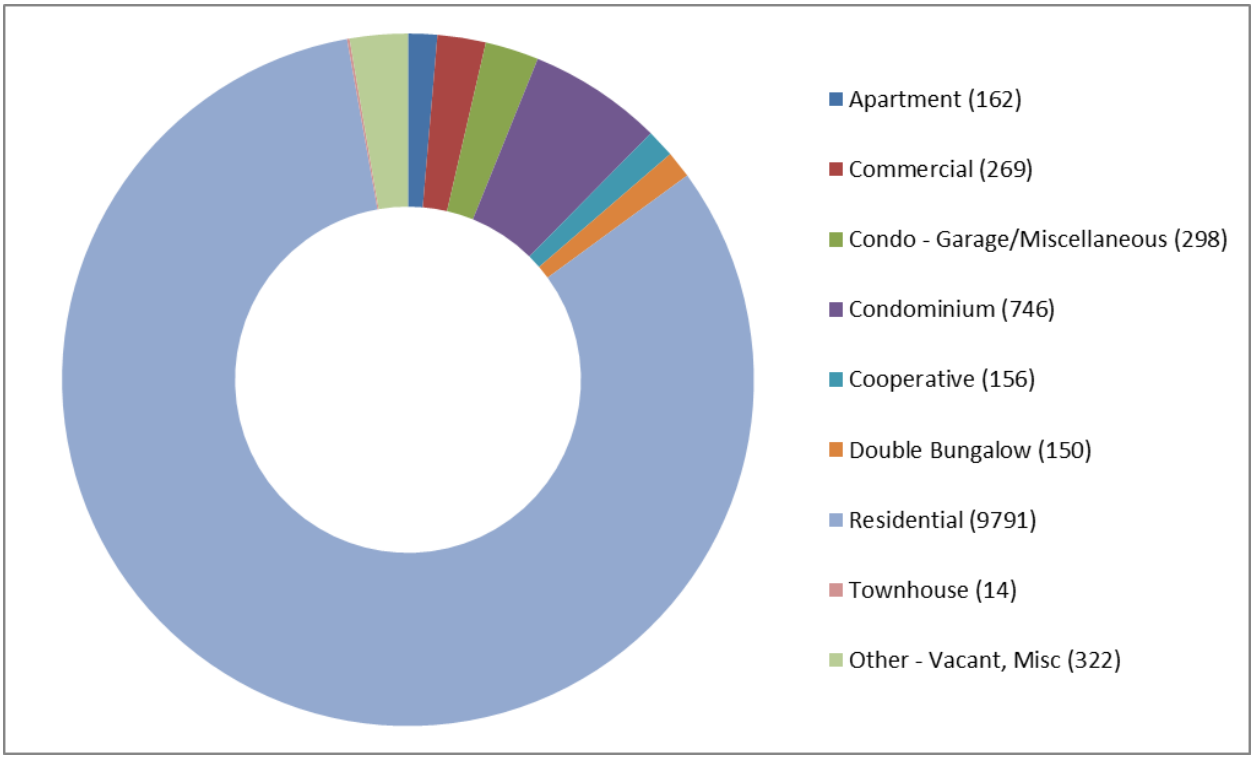
Richfield's Role in the Twin Cities Metro Area

Richfield rose in significance after WWII by providing a home in the Twin Cities Metro area for returning veterans and their families. Today, Richfield is beginning to welcome a more diverse population, more reflective of Minneapolis as a whole than its neighboring suburbs. While Richfield is politically a separate city from Minneapolis and is defined as a first-ring suburb, it is facing many of the same struggles that Minneapolis does in regard to housing. This may set Richfield apart from the newer Twin Cities suburbs that people tend to think of, such as Eden Prairie, Eagan, or Maple Grove.

Determining Study Area: Residential Parcels and HMI Blocks

As expected in a typical post-war suburb, much of Richfield is composed of single-family homes. The challenge lay in excluding those parcels that were not residential, and this comprised the primary challenge of the HMI analysis. To determine those parcels that fell in the category of single-family homes, we used the land use descriptions included in the Hennepin County parcel data. We excluded parcels that obviously did not fit our criteria, such as 'Apartment,' 'Commercial,' and 'Industrial.' Instead, we included uses such as 'Residential,' 'Townhouse,' and 'Condominium.' Additionally, we discovered that the 'Residential' category

was fairly broad and included some parcels that clearly had non-residential uses. To further exclude the parcels that clearly did not fit the scope of the HMI we excluded those that had a second use description that contradicted a residential designation, such as 'Commercial' and 'Mobile Home Park.' Finally, we also eliminated those 'Residential' parcels that were tax exempt, since these did not have an EMV and therefore would not have been factored into the HMI anyway, and mostly consisted of municipal or otherwise exempt property. The final result was a set of parcels that have a very high likelihood of being a single-family home, either a house, townhome, or condo. From these single-family residences however, not every parcel had data for every variable, and therefore not all could be included; however the vast majority comprised the HMI.



Analysis & Discussion

Owner-occupancy

The owner-occupancy data for Richfield come from the 2010 Census, and it is the only variable which is first processed at the block level, requiring no aggregation. In Richfield there are high rates of homeownership, as one would expect from a first-ring suburb with an aging population (Map 2). Of the 573 blocks included for the owner-occupancy variable, just under 30% (170) have 100% homeownership rates, and 86% (494) have 80% or higher homeownership rates. On the map, that refers to the last two categories which show as dark blues.

There seems to be no spatial pattern to blocks with high homeownership. There is a consistently high level of owner-occupied housing throughout Richfield. The only clear areas of low homeownership are around commercial areas in the north between Lyndale Ave. and Hwy 66, and an area of multi-unit buildings in the south. There is also a boundary of low homeownership blocks along the southern half of Hwy 77, where there are many rental properties. However, the overall pattern is one of solid homeownership, which is why this variable received the second lowest weighting in the final HMI.

Vacancy

Overall, this variable shows that Richfield does not have many vacant parcels. Out of the 10,740 parcels we determined to be residential in nature, only 314, or just under 3%, were vacant. Map 3 shows this low number of vacant parcels distributed somewhat evenly throughout the city. Looking at Map 4, with its higher level of aggregation, one can see that most blocks in Richfield fall in the first category of 0% to 1% vacant parcels per block (388 out of 578 blocks, or 67%). Further, 432 out of the 578 blocks (75% of the blocks) had 5% or less vacant parcels in them. Slightly more varied than the owner-occupancy variable, vacancy was weighted second highest (after EMV) when calculating the HMI.

A few notes about this variable: first, in Map 3, there are some larger blocks with a striped color. This indicates that these blocks are made up of large condominium buildings, and there is a mix of both vacant and occupied units within those buildings. Second, we are not sure of the effect of "snowbirds" (residents who live in another part of the country, usually in the southern United States, during the winter) on these data. The USPS considers parcels "vacant" if they have not received mail for 90 days, and we assume snowbirds are gone for longer than three months. Therefore, these data may be counting parcels with full-fledged owners (who we assume adequately maintain their homes) as vacant.

Condition

Building condition data for the City of Richfield come from the Hennepin County Assessor's Office, and use a five-part rating system. For ease of analysis, in order to create a block-wide average, we translated the ratings into numbers: Excellent (5), Good (4), Average (3), Fair (2), and Poor (1). The few parcels that had no rating were excluded. The condition variable received the lowest weight in the Richfield version of the HMI, in part because of the homogeneity of housing condition in the area.

At the parcel level, 95.8% of the 10,803 single family residential parcels have a condition rating of either Average (3) or Good (4) (Map 5). When aggregated to the block level, this overwhelming sameness becomes even more apparent. Looking at Map 6, out of the 578 blocks there are only five blocks with an average condition rating below Average (3) and only four blocks with a rating greater than Good (4). The lack of variation in the condition data mirrors the overall lack of variation in the housing stock of Richfield. The condition variable does not provide much information about block-level health, since so many blocks are nearly identical, and therefore the variable does not have much of an impact in moving a block's HMI

score up or down. However, this variable at least serves as a confirmation of the stable and uniform nature of Richfield's housing stock.

EMV in 2007

Estimated Market Value is the first variable to exhibit a recognizable spatial pattern. Map 8, showing EMV by block for 2007, suggests an East-West division between areas of generally higher EMV (concentrated in West Richfield) and areas of generally lower EMV (concentrated in East Richfield). Estimated Market Value data from Hennepin County were aggregated from the parcel (Map 7) to the block level and then averaged at the block level. The mean average EMV for all Richfield blocks was approximately $203,000, and the minimum and maximum average EMVs were approximately $161,000 and $310,000 respectively. The classification scheme used in all EMV maps was modified natural breaks.

For 2007, we determined there to be 574 blocks in Richfield with five or more parcels meeting the aforementioned residential specifications. Of these blocks, 217 were located in West Richfield (west of Lyndale Avenue), and 357 were located in East Richfield (east of Lyndale Avenue). Table 1 summarizes the division between East and West Richfield in terms of EMV values in 2007 and 2011. Of the 217 blocks in West Richfield, 24% (52 out of 217) fell within the two uppermost EMV classes. In East Richfield, only 6% of blocks (22 out of 357) fell within the two uppermost classes. By contrast, 41% of the blocks in West Richfield (90 out of 217) fell within the two lowermost EMV classes, whereas 61% of blocks in East Richfield (216 out of 357) fell within the two lowermost classes. Finally, 35% of blocks in West Richfield (75 out of 217) fell within the middle EMV class, and 33% blocks in East Richfield (119 out of 357) fell within this class. These data suggest that in 2007, homes with higher estimated market values were more clustered in West Richfield than in East Richfield.

Table 1: EMV in 2007 and 2011	**2007**		**2011**	
	East Richfield	**West Richfield**	**East Richfield**	**West Richfield**
Number of blocks	357	217	353	219
Mean average EMV (by block)	$211,000	$208,000	$192,000	$215,000
Blocks in top 2 classes (average EMV > $222,000)	22	52	11	71
Blocks in middle class ($205,000 < average EMV ≤ $222,000)	119	75	86	89

EMV in 2011

Maps 9 and 10 show that the East-West EMV divide persisted in 2011. In Map 10, one can see that many of the same clusters of high EMV blocks remain from 2007 (e.g., blocks surrounding parks remain of high average value relative to other Richfield blocks, blocks closest to state Highway 77 generally have lower EMVs relative to other Richfield blocks). The mean average EMV for all Richfield blocks was approximately $197,000, which represents a 3% decrease from 2007. The minimum and maximum average EMVs were approximately $143,000 and $365,000 respectively, representing an 11% drop in minimum average EMV and a 17% increase in maximum average EMV. These data suggest that while some blocks grew substantially in average value, others declined in value to a similar extent.

For 2011, we determined there to be 572 blocks in Richfield with five or more parcels meeting the aforementioned residential specifications. Of these blocks, 219 were located in West Richfield, and 353 were located in East Richfield (see Table 1). The mean average EMV for blocks in West Richfield was approximately $215,000 (2% increase from 2007), while the mean average EMV for blocks in East Richfield was approximately $192,000 (7.7% decrease from 2007). Thirty-two percent of blocks in West Richfield (71 of 219) fell within the two uppermost EMV classes. This represents a 37% increase in the number of high EMV blocks in West Richfield since 2007. In East Richfield, only 3% (11 of 353) fell within the two uppermost classes. This represents a 50% decrease in the number of high EMV blocks in East Richfield since 2007.

Twenty-seven percent of blocks in West Richfield (59 of 219) fell within the two lowermost EMV classes, representing a 34% decrease in the number of low EMV blocks in West Richfield since 2007. In East Richfield, 73% of blocks (256 of 353) fell within the two lowermost classes, representing a 16% increase in the number of low EMV blocks in East Richfield since 2007. Finally, 40% of blocks in West Richfield (89 of 219) fell within the middle EMV class, representing a 19% increase in the number of middle EMV blocks since 2007. In East Richfield, 24% of blocks in East Richfield (86 of 353) fell within this class, representing a 27% decrease in the number of middle EMV blocks since 2007. These data suggest that between 2007 and 2011, West Richfield generally gained high and middle EMV blocks and lost low EMV blocks, while simultaneously East Richfield lost high and middle EMV blocks and gained low EMV blocks.

Also of note in Map 10 is the addition of the block on the southwest corner of W 66th St. and Lyndale Ave. in which many condominium units are located. This addition does not represent new construction; rather, the EMV data records simply were not entered in the 2007 parcel layer. Because these units are so numerous and tend to have relatively low EMVs, they have a substantial effect on the 2011 city-wide EMV statistics. However, since they had no EMV data in 2007, they were excluded in our maps depicting EMV change over time.

Change in EMV by parcel

Map 11 portrays the percent change in parcel-level EMV between 2007 and 2011. As suggested by the 2007 and 2011 block-level EMV maps, the majority of parcels in East Richfield experienced decreasing EMVs over the time period. A large pocket of parcels in west-central

Richfield (bounded by W 70th St., Penn Ave., W 66th St., and Xerxes Ave.) also experienced decreasing EMVs, but this effect is largely isolated from other parcels in West Richfield. There are a variety of possible factors that could potentially explain this pattern, however no clear relationship exists between this pattern and any of the other variables we studied. Additionally, the field work we conducted gave no indication of such a pattern. As such, this particular group of parcels merits further study. Relatively few parcels in East Richfield experienced increasing EMVs over the time period, whereas the majority of parcels in West Richfield increased in EMV. Overall, the majority of parcels in Richfield declined in value, and very few underwent an increase in value exceeding 20%. In some instances, it appears that a parcel's close proximity to a park appears to have a positive relationship with EMV change (specifically, most parcels surrounding the Wood Lake Nature Center gained value between 2007 and 2011). However, this is not necessarily true for all parks.

Change in EMV by block

Map 12 portrays average change in EMV at the block level. The trends that appear are highly reminiscent of those seen at the parcel level. In all, 573 blocks were selected according to our threshold of at least five residential units per block. Sixty-seven percent of blocks in West Richfield (145 of 218) increased in EMV between 2007 and 2011, whereas in East Richfield, 8% (29 of 255) increased in EMV. Conversely, 33% of blocks in West Richfield (73 of 218) decreased in EMV**,** and 92% of blocks in East Richfield (326 of 355) decreased in EMV over the same time period. Of the blocks in West Richfield that lost value, only one fell in the lowest percent change class. By contrast, 87 of the blocks that lost value in East Richfield fell in the lowest percent change class. This suggests that average EMV decline was not only more widespread in East Richfield, but also more severe.

Table 2: Average change in EMV, 2007 - 2011

	East Richfield	West Ricfield
Number of blocks	355	218
Number of blocks that increased in EMV	29	145
Number of blocks that decreased in EMV	326	73
Blocks in lowest class of EMV change	87	1

HMI Analysis

The HMI was created by weighting each variable's z-scores and then combining them to create a final single score. For Richfield, the weights were 10 for EMV, 8 for Vacancy, 7 for Owner-occupancy, and 6 for Condition. Because EMV received the highest weighting, and also had the greatest variation of all the variables, its influence is most clear in the final HMI. Looking at the HMI map (Map 13), one can clearly see an east-west divide in Richfield, with blocks in the

southwest quadrant having the highest HMI scores, and blocks along State Highway 77 and the intersection of the Crosstown and I-35 having the lowest HMI scores. In general, Lyndale Avenue, running north-south down the middle of the city serves as a dividing line between middle to higher scores to the west, and middle to lower scores in the east.

Building Age

One possible variable, that does not fall under the purview of the study, but could explain some of the spatial patterns and variation in the HMI, is age of the structure. Mapping the year built (Map 14) shows a concentration of older structures in the center of Richfield, with the outer corners having the newer structures, congruent with the history of Richfield and the earliest development by the lake. Of course, age of structure can be either a positive or negative factor, since historic homes that have been well maintained can be very valuable, while old homes that have not aged well and do not offer modern conveniences will have lower value. In Richfield, age of structure appears to have a selective effect. Some of the strong and weak areas of the HMI have homes from the same period, which indicates that date may have little effect on the housing market in these areas. However it is notable that the oldest homes by the lake also have the highest EMV, and EMV was the strongest factor in the HMI. One especially interesting area is the northeast corner of Richfield, which has both a mixture of HMI values and a similar mixture of age of homes. Given the location of several housing redevelopment programs as well, it would seem that this is an area of transition, and the blocks with above-average HMI scores could be an indication of the future of that area.

Housing Redevelopment

Richfield's housing redevelopment program ("Richfield Rediscovered") as a whole could also offer possible explanations for HMI scores. The program offers financial assistance to homeowners undertaking major renovations or constructing new homes. The locations of these projects, as seen in Map 15, are distributed throughout Richfield. To explore this relationship, we conducted a brief statistical analysis examining the presence of redevelopment projects and the average EMV of the block (see Table 3 for summary statistics). Since EMV was shown to be the variable with the greatest effect on HMI we decided to examine its relationship with the presence of redeveloped properties on any given block. As Table 3 shows, block-level average EMV does not seem to vary in any consistent manner with respect to the presence of redeveloped properties. We conducted statistical hypothesis testing[5] to determine whether these averages were significantly different. Our results indicate that at a 10% level of significance, the EMVs of blocks with at least one redeveloped property did not differ significantly from those without redeveloped properties. This result holds true regardless of the number of redeveloped properties on the block; that is, at a 10% level of significance, EMV does not vary with the number of redeveloped parcels on the block.

It should be noted that we did not distinguish between properties that had been renovated and properties on which entirely new homes had been constructed. Performing separate analyses

[5]Two-sample difference of means and ANOVA tests

for these two sets of properties may yield more conclusive results. Furthermore, performing the analyses at the parcel level could potentially reveal smaller-scale effects on EMV in the vicinity of redeveloped properties.

Table 3: Blocks by number of Richfield Rediscovered Properties

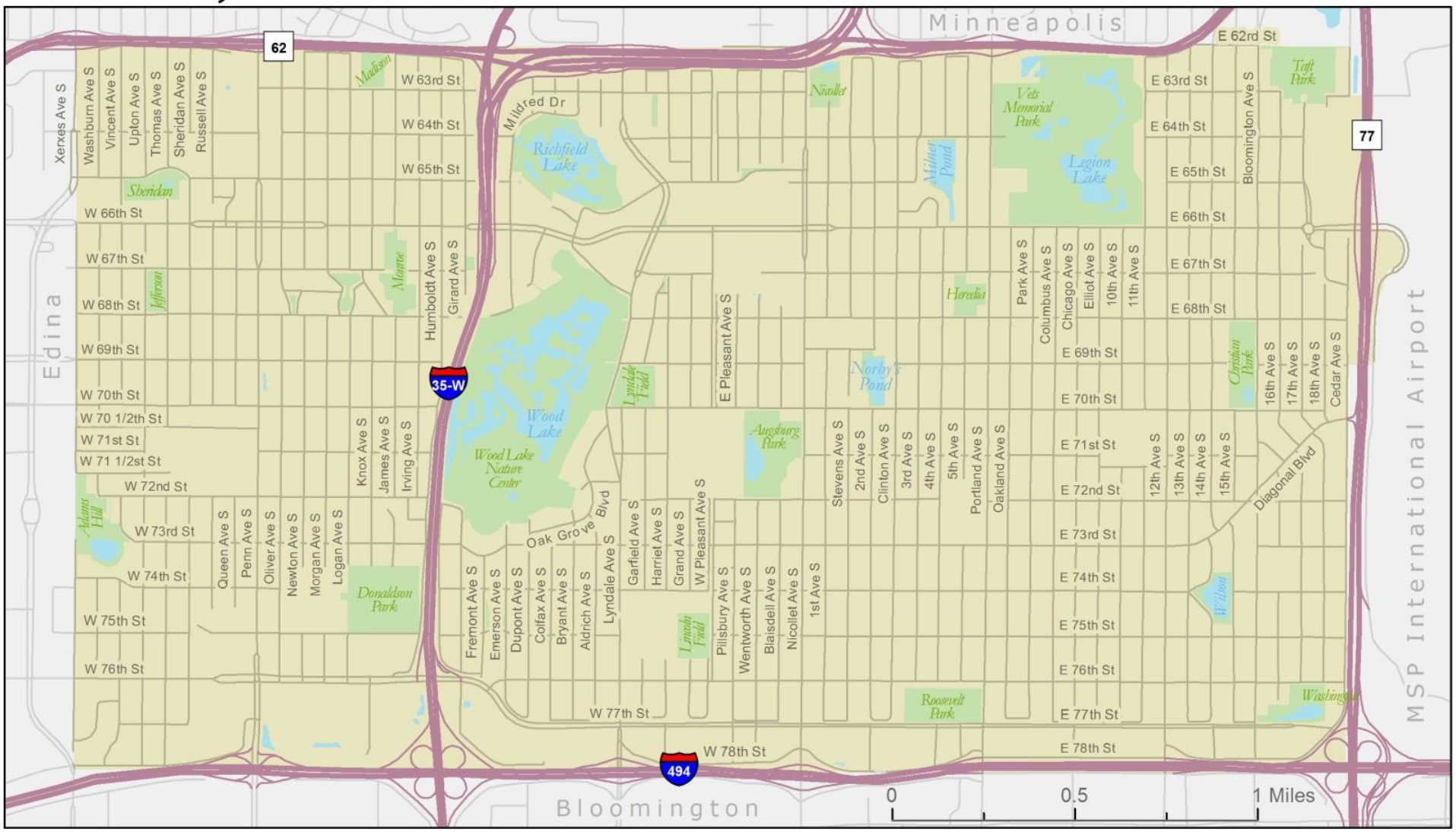
	All Richfield Blocks	0 Richfield Rediscovered Properties	At least 1	At least 2	At least 3
Number of blocks	574	486	87	26	10
Mean Average EMV	$205,696	$206,039	$203,784	$199,509	$199,870
Maximum Average EMV	$310,432	$310,432	$258,647	$250,375	$240,800
Minimum Average EMV	$161,187	$161,187	$165,760	$165,760	$165,760
St. Dev	$18,285	$18,389	$17,670	$18,907	$27,056

Conclusions & Recommendations

While these statistical analyses ultimately proved inconclusive, the location of redevelopment projects, along with age of structure, offer possible avenues for further study. Future research should also include examination of how much residents' beliefs and perceptions may shape housing market preferences and in turn lead to valuing homes' proximity to the more affluent suburb of Edina.

The final HMI values show the pattern of internal variation in Richfield, slight though they may be when compared to the range found in other Twin Cities communities. However, the process of creating the HMI shows that in most respects Richfield has a homogenous and stable housing stock, and displays many elements of a solid housing market.

Richfield, Minnesota



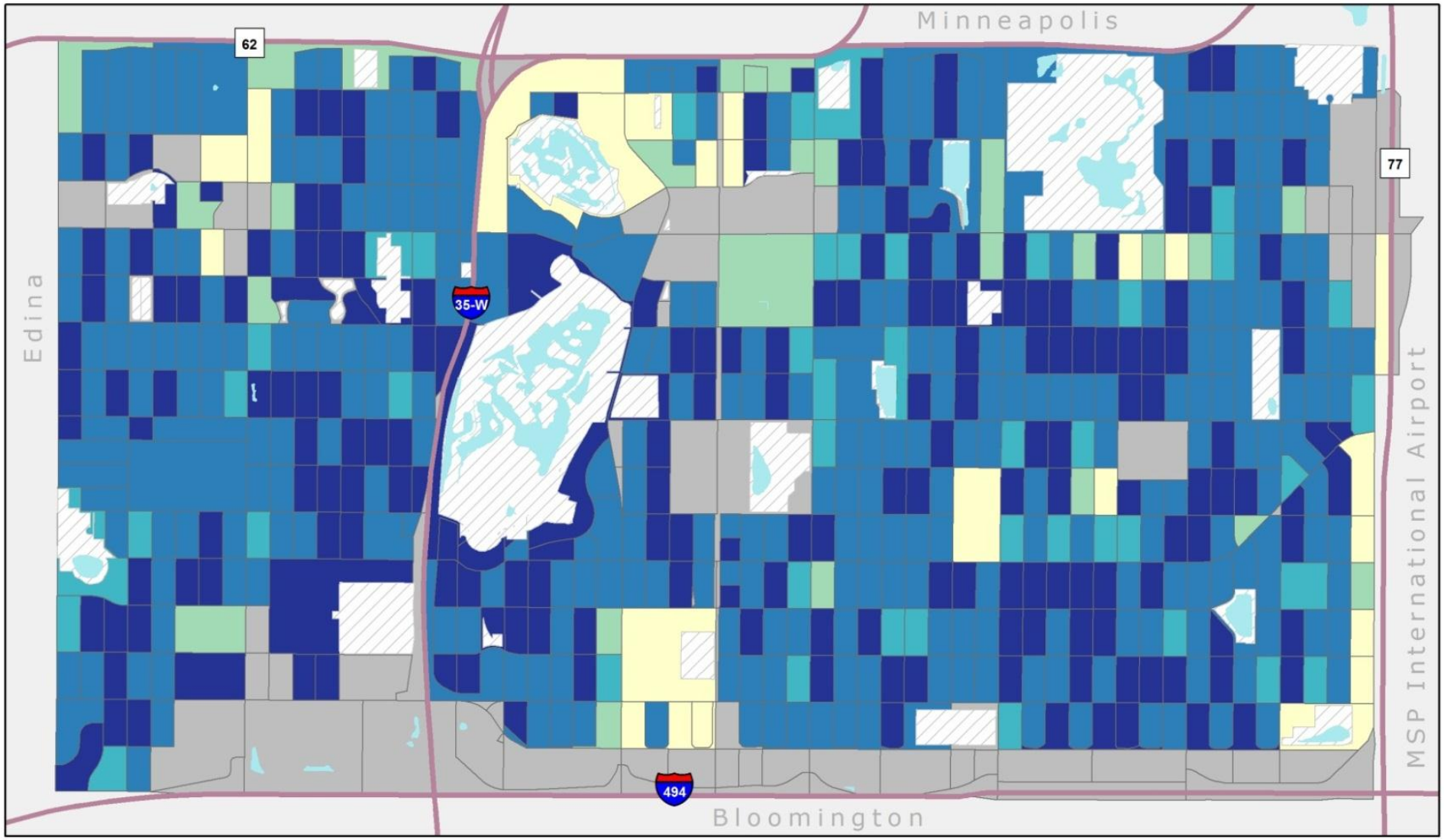
Highways
Roads
Lakes
Parks

Cartographers: Sidney Ainkorn, Peter Mathison, and David Tomporowski
Data Sources: City of Richfield, MnDOT, MetCouncil
Projection: NAD 1983 UTM 15N
Spring 2012

Map 1: Reference Map

Owner Occupancy by Block (2010)

Richfield, Minn.



Percent of parcels that are owner-occupied, by block

- 6.7% to 25.0%
- 25.1% to 60.0%
- 60.1% to 80.0%
- 80.1% to 95.0%
- 95.1% to 100.0%
- Non-residential blocks
- Highways
- Lakes
- Parks

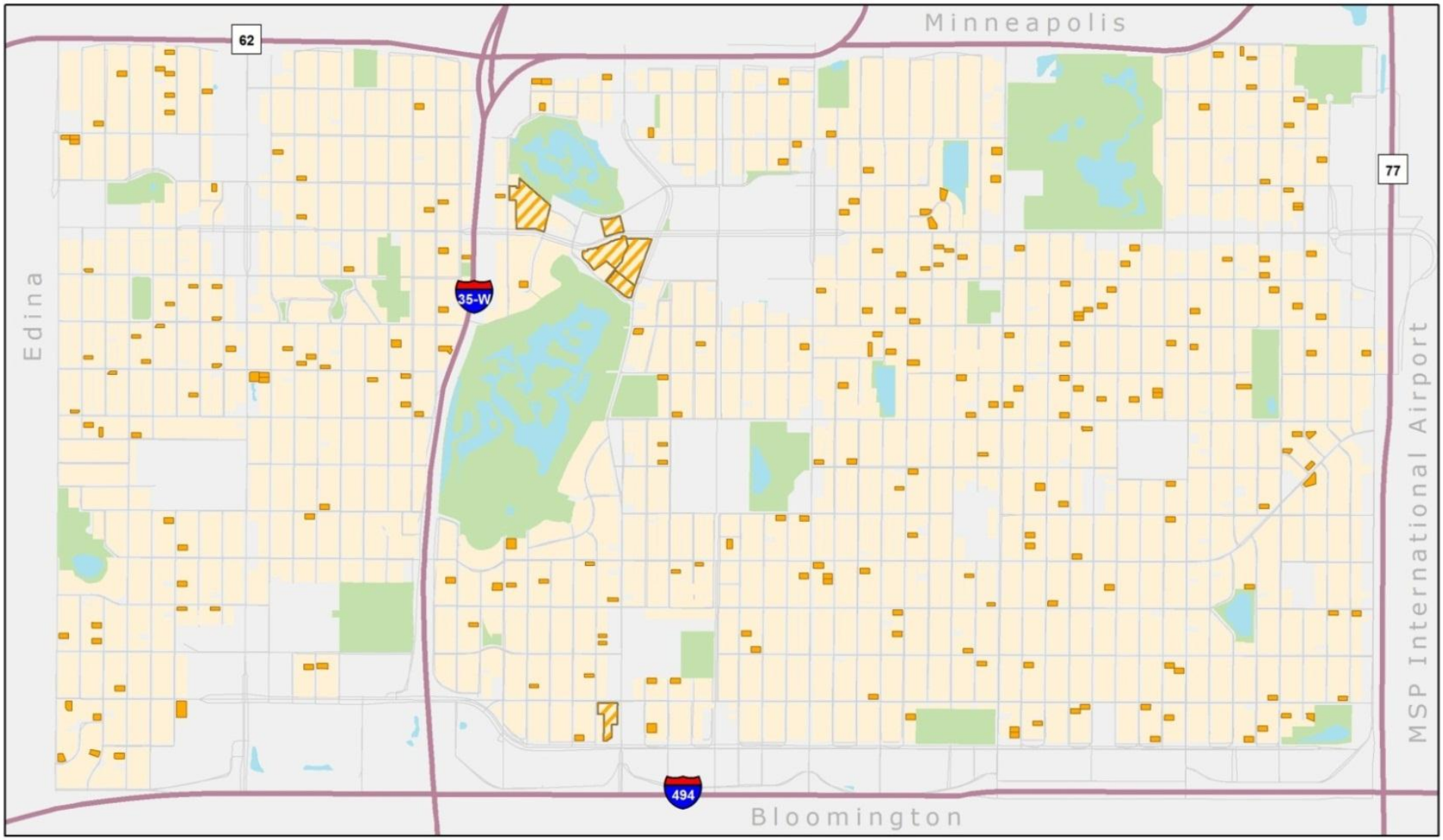
0 0.5 1 Mile

Cartographers: Sidney Ainkorn, Peter Mathison, and David Tomporowski
Data Sources: City of Richfield, MnDOT, MetCouncil, U.S. Census Bureau
Projection: NAD 1983 UTM 15N
Spring 2012

Map 2: Owner-Occupancy by Block

Vacancy by Parcel (January 2012)

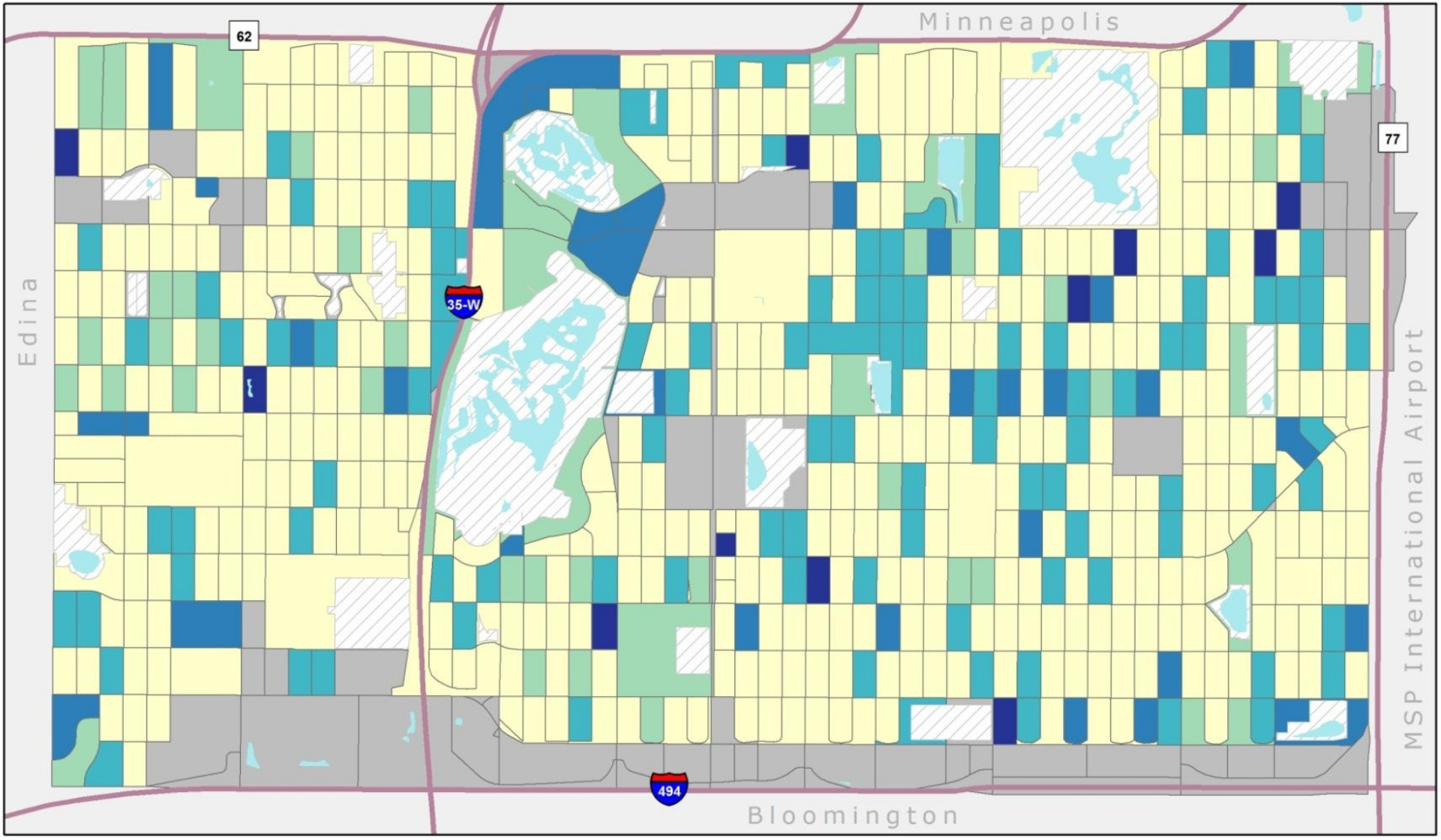
Richfield, Minn.



Map 3: Vacancy by Parcel

Vacancy by Block (January 2012)

Richfield, Minn.



Percent of parcels that are vacant, by block

- 0.0% to 1.0%
- 1.1% to 5.0%
- 5.1% to 10.0%
- 10.1% to 15.0%
- 15.1% to 20.0%
- Non-residential blocks
- Highways
- Lakes
- Parks

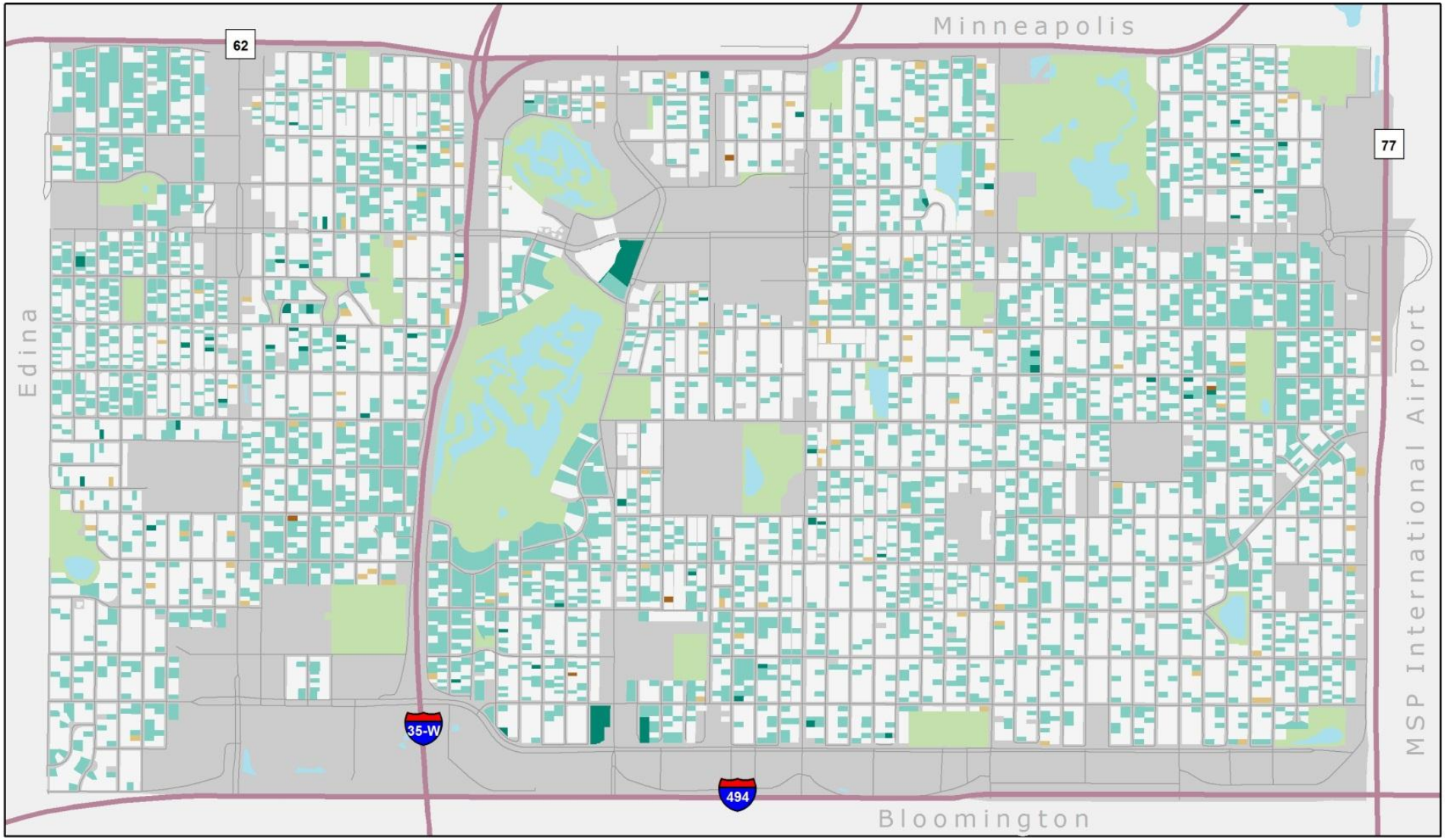
0 0.5 1 Mile

Cartographers: Sidney Ainkorn, Peter Mathison, and David Tomporowski
Data Sources: City of Richfield, MnDOT, MetCouncil, U.S. Census Bureau, USPS
Projection: NAD 1983 UTM 15N

Map 4: Vacancy by Block

Housing Condition by Parcel

Richfield, Minn.



Housing Condition Ratings

Excellent: 5
Good: 4
Average: 3
Fair: 2
Poor: 1
Lakes
Parks
Highways

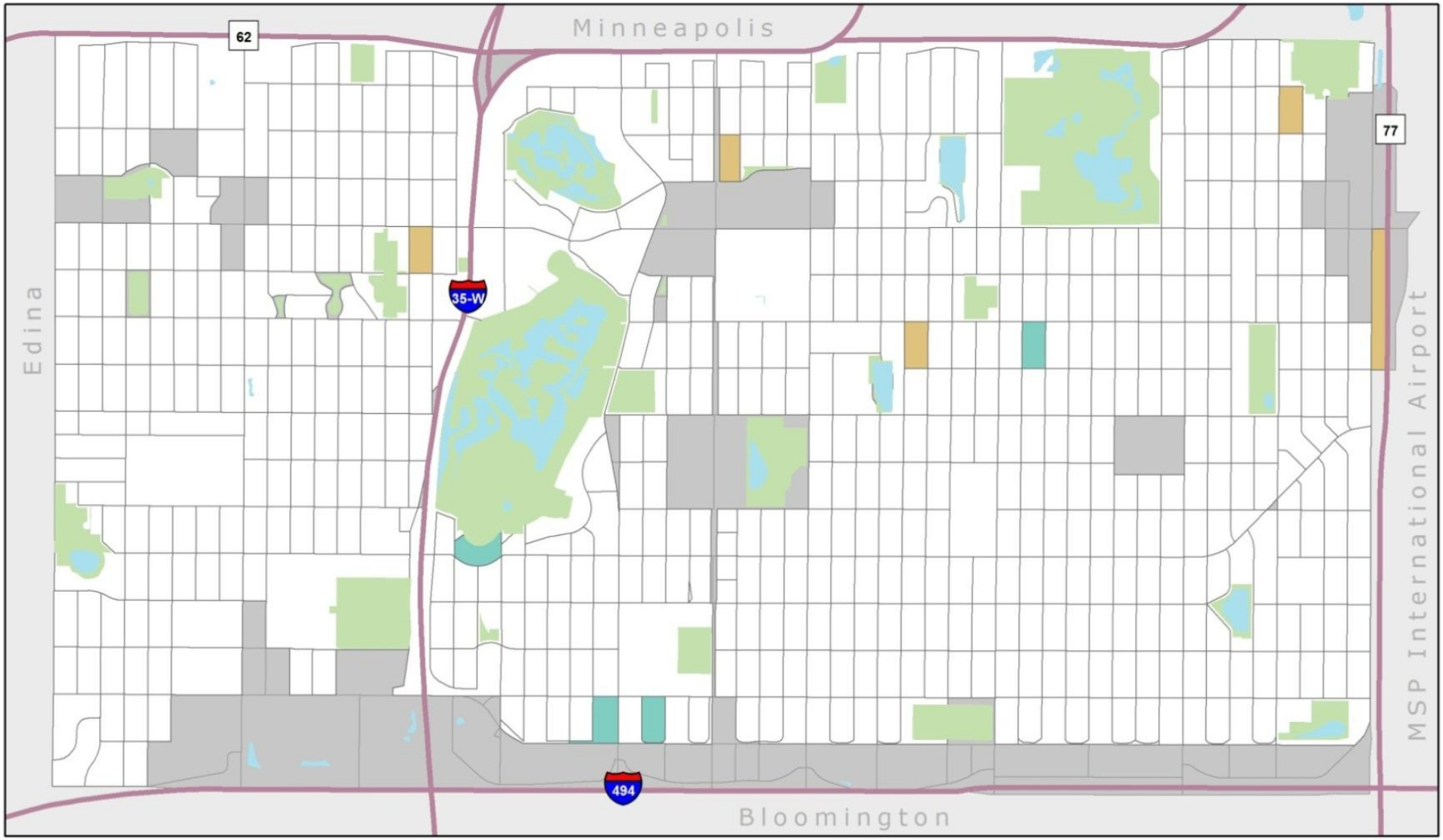
0 0.5 1 Mile

Cartographers: Sidney Ainkorn, Peter Mathison, and David Tomporowski
Data Sources: City of Richfield, MnDOT, MetCouncil,
U.S. Census Bureau, Hennepin County Assessor's Office
Projection: NAD 1983 UTM Zone 15N
Spring 2012

Map 5: Condition by Parcel

Housing Condition by Block

Richfield, Minn.



Average Housing Condition, by block

- Fair: 2.67 - 2.99
- Average: 3.00 - 3.99
- Good: 4.00 - 4.99
- Non-Residential Blocks
- Lakes
- Parks
- Highways

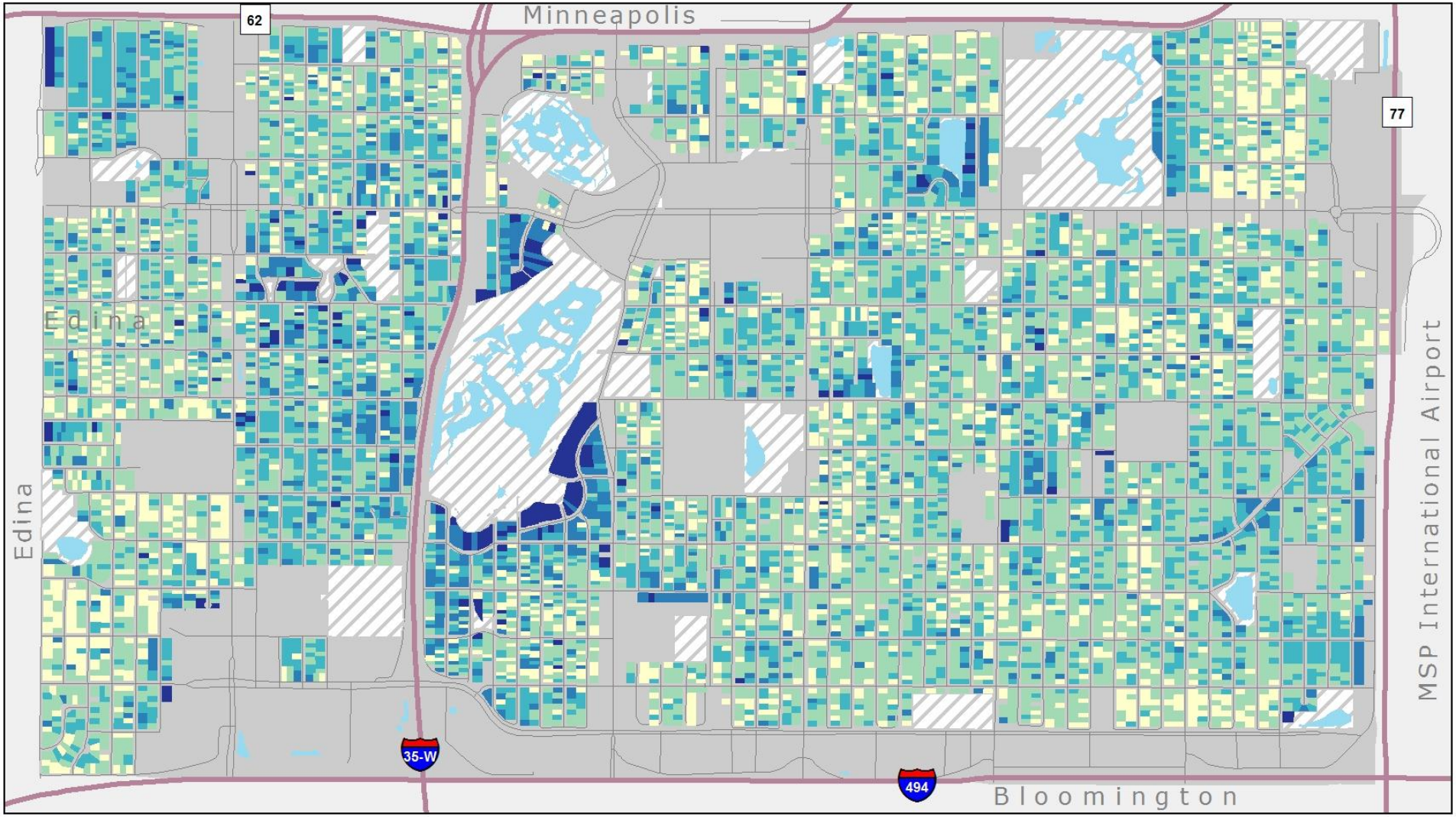
0 0.5 1 Mile

Cartographers: Sidney Ainkorn, Peter Mathison, and David Tomporowski
Data Sources: City of Richfield, MnDOT, MetCouncil,
U.S. Census Bureau, Hennepin County Assessor's Office
Projection: NAD 1983 UTM Zone 15N
Spring 2012

Map 6: Condition by Block

Estimated Market Value by Parcel, 2007

Richfield, Minn.



EMV by Parcel

- $75,000.00 to $180,000.00
- $180,000.01 to $210,000.00
- $210,000.01 to $240,000.00
- $240,000.01 to $305,000.00
- $305,000.01 to $679,000.00
- Non Residential
- Highways
- Lakes
- Parks

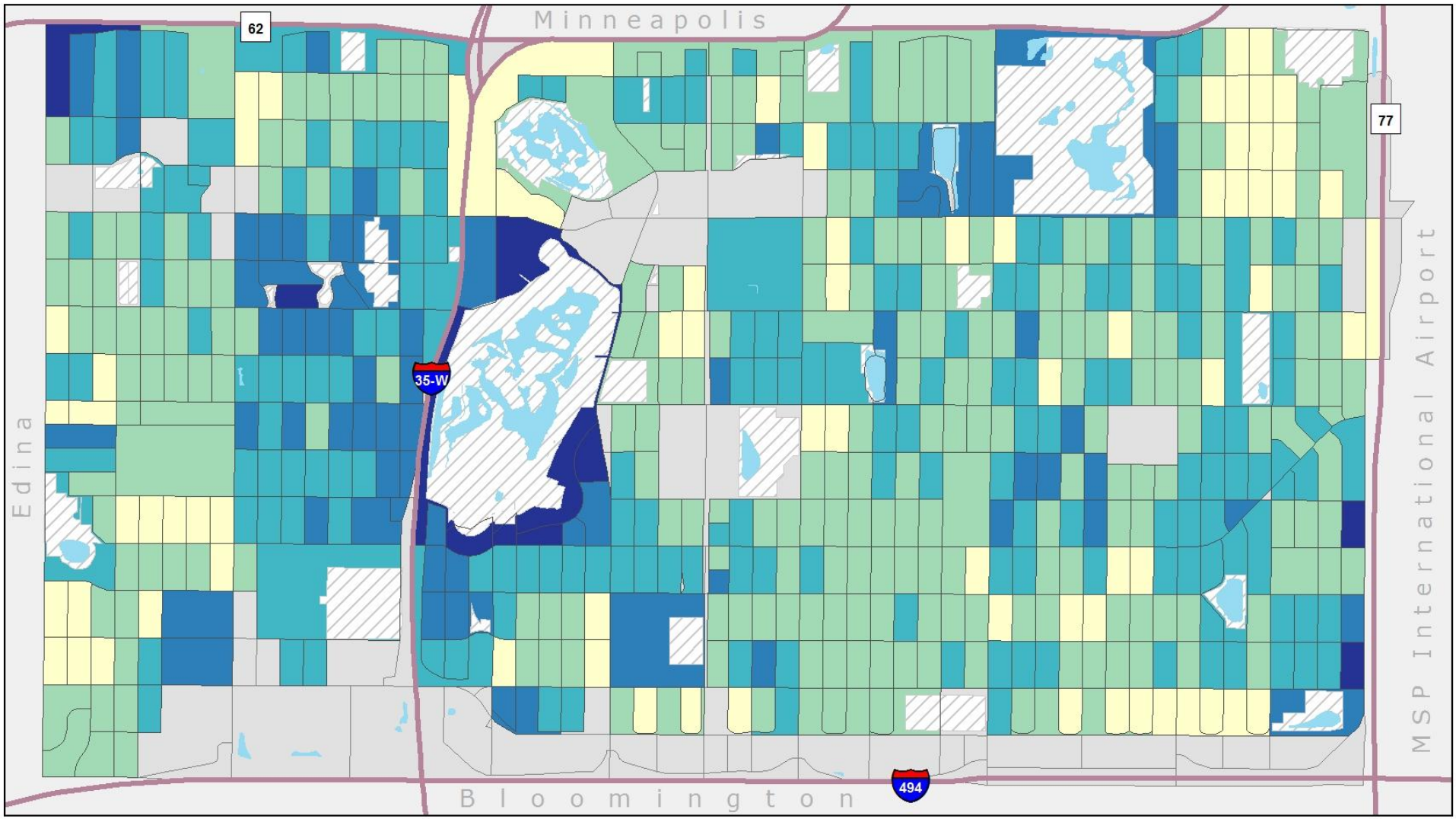
0 0.5 1 Mile

Cartographers: Sidney Ainkorn, Peter Mathison, David Tomporowski
Data Sources: City of Richfield, Hennepin County
MNDOT, MetCouncil, ESRI
Projection: NAD 1983 Zone UTM 15N
Spring 2012

Map 7: Estimated Market Value by Parcel, 2007

Estimated Market Value by Block, 2007

Richfield, Minn.



Average EMV

- $161,187.50 to $190,000.00
- $190,000.01 to $205,000.00
- $205,000.01 to $222,000.00
- $222,000.01 to $260,000.00
- $260,000.01 to $310,432.00
- Non Residential
- Highways
- Lakes
- Parks

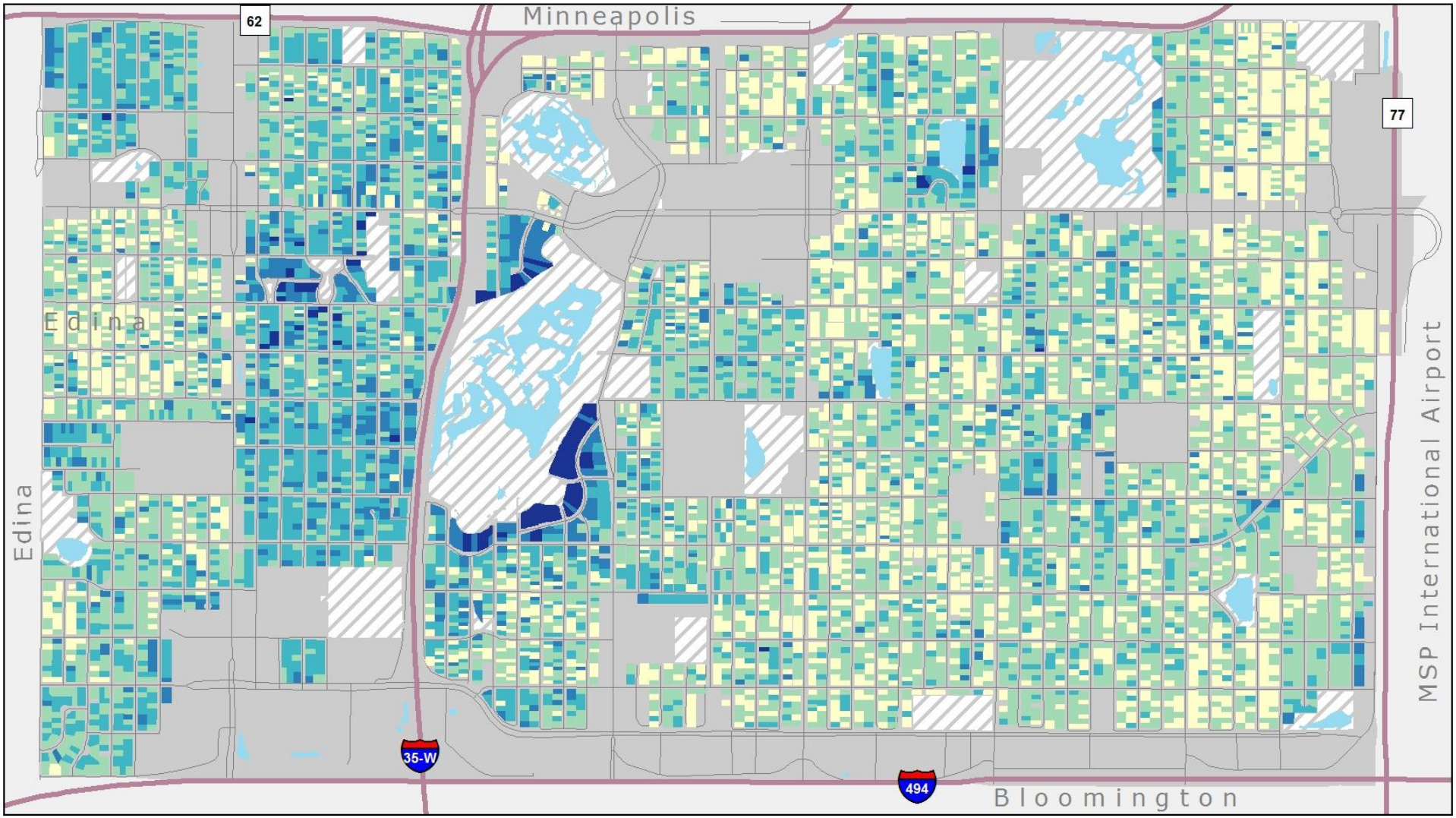
0 0.5 1 Mile

Cartographers: Sidney Ainkorn, Peter Mathison, David Tomporowski
Data Sources: City of Richfield, Hennepin County
MNDOT, MetCouncil
Projection: NAD 1983 UTM Zone 15N
Spring 2012

Map 8: Estimated Market Value by Block, 2007

Estimated Market Value by Parcel, 2011

Richfield, Minn.



EMV by Parcel

- $73,000.00 to $180,000.00
- $180,000.01 to $210,000.00
- $210,000.01 to $253,000.00
- $253,000.01 to $344,000.00
- $344,000.01 to $675,000.00
- Non Residential
- Highways
- Lakes
- Parks

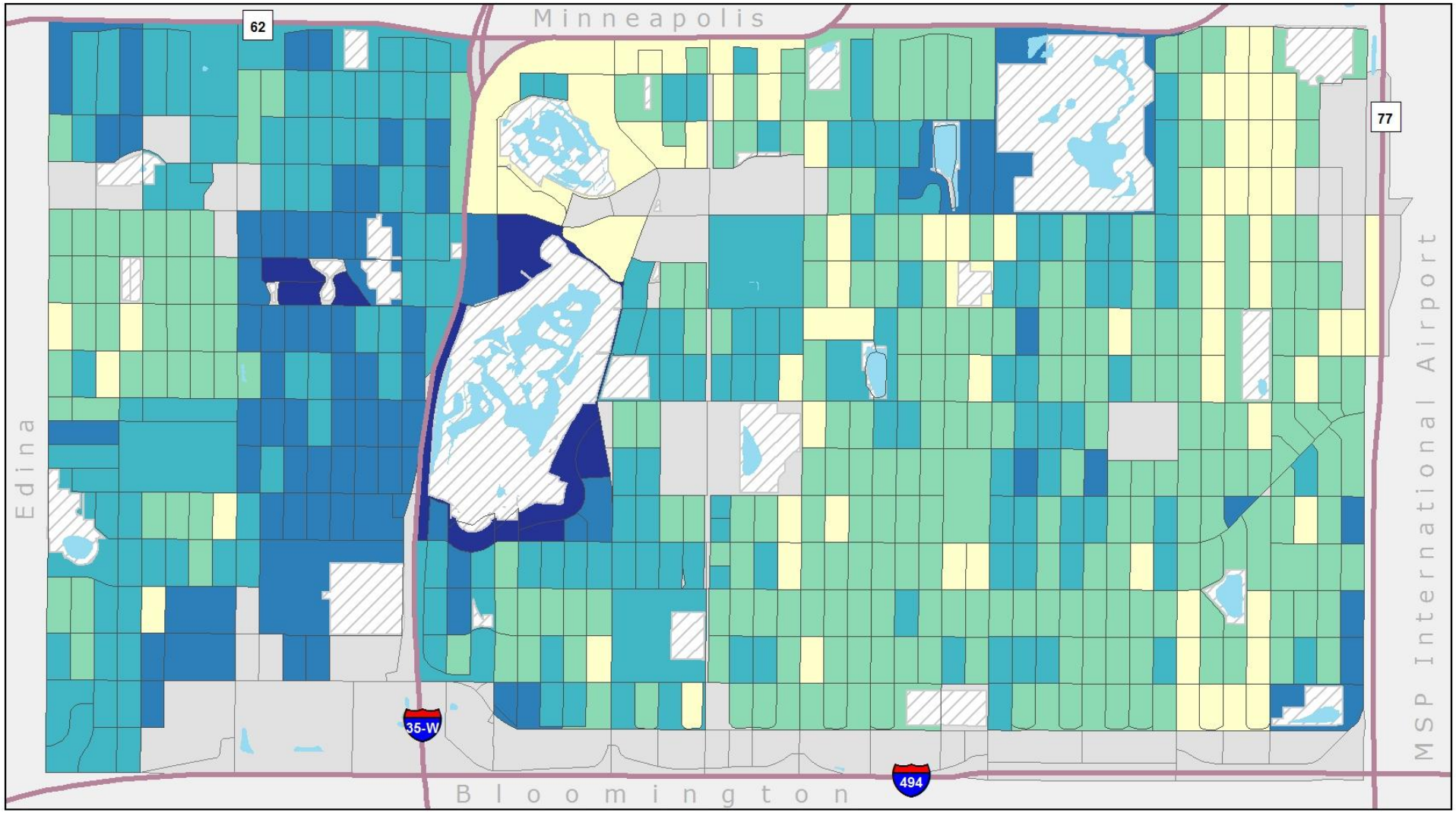
0 0.5 1 Mile

Cartographers: Sidney Ainkorn, Peter Mathison, David Tomporowski
Data Sources: City of Richfield, Hennepin County
MNDOT, MetCouncil, ESRI
Projection: NAD 1983 Zone UTM 15N
Spring 2012

Map 9: Estimated Market Value by Parcel, 2011

Estimated Market Value by Block, 2011

Richfield, Minn.



Average EMV

- $143,085.59 - $180,000.00
- $180,000.01 - $200,000.00
- $200,000.01 - $222,000.00
- $222,000.01 - $270,000.00
- $270,000.01 - $365,545.00
- Non Residential
- Highways
- Lakes
- Parks

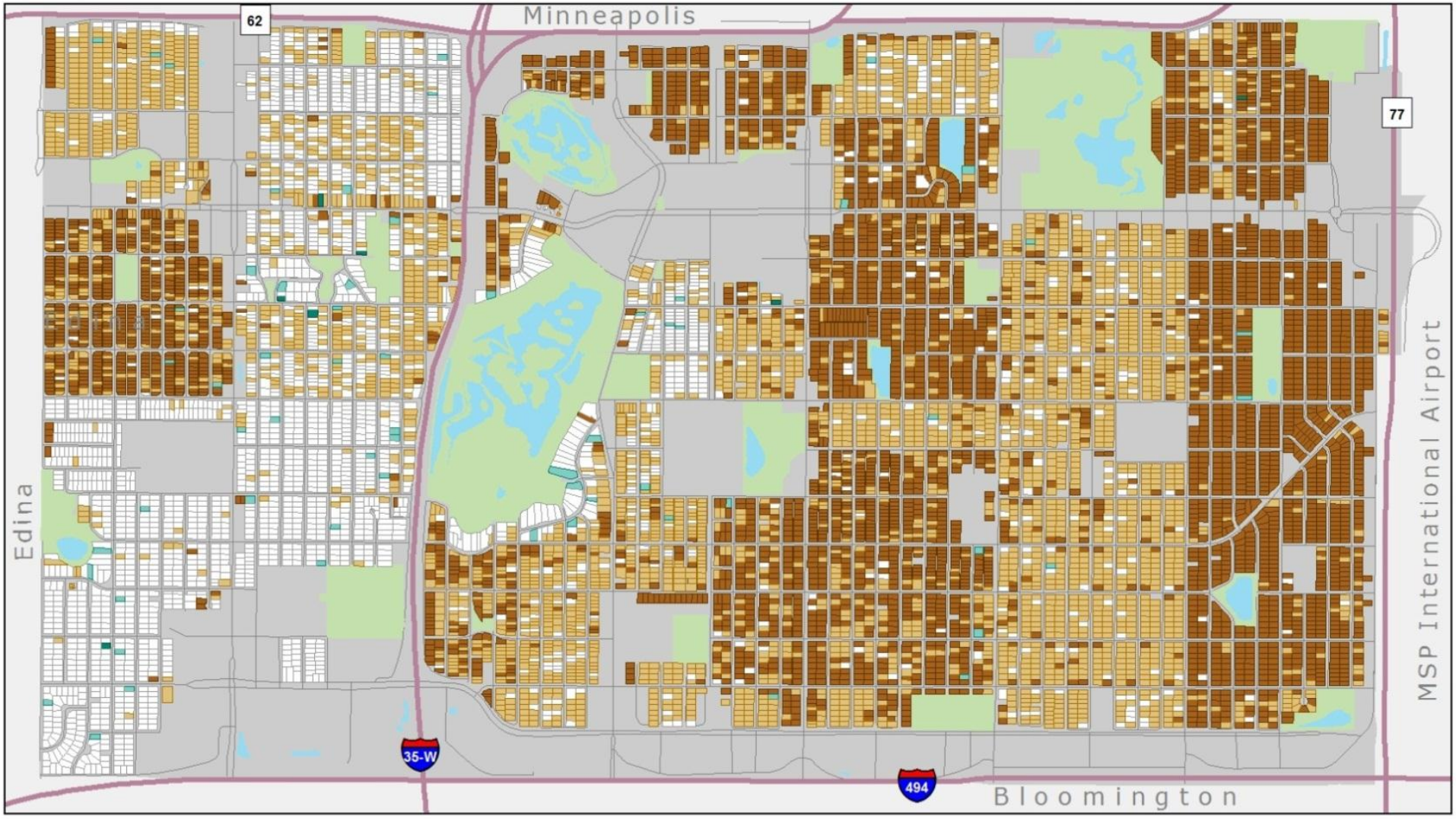
0 0.5 1 Mile

Cartographers: Sidney Ainkorn, Peter Mathison, David Tomporowski
Data Sources: City of Richfield, Hennepin County, MNDOT, MetCouncil
Projection: NAD 1983 UTM Zone 15N
Spring 2012

Map 10: Estimated Market Value by Block, 2011

Change in Estimated Market Value by Parcel, '07-'11

Richfield, Minn.



Percent change in EMV

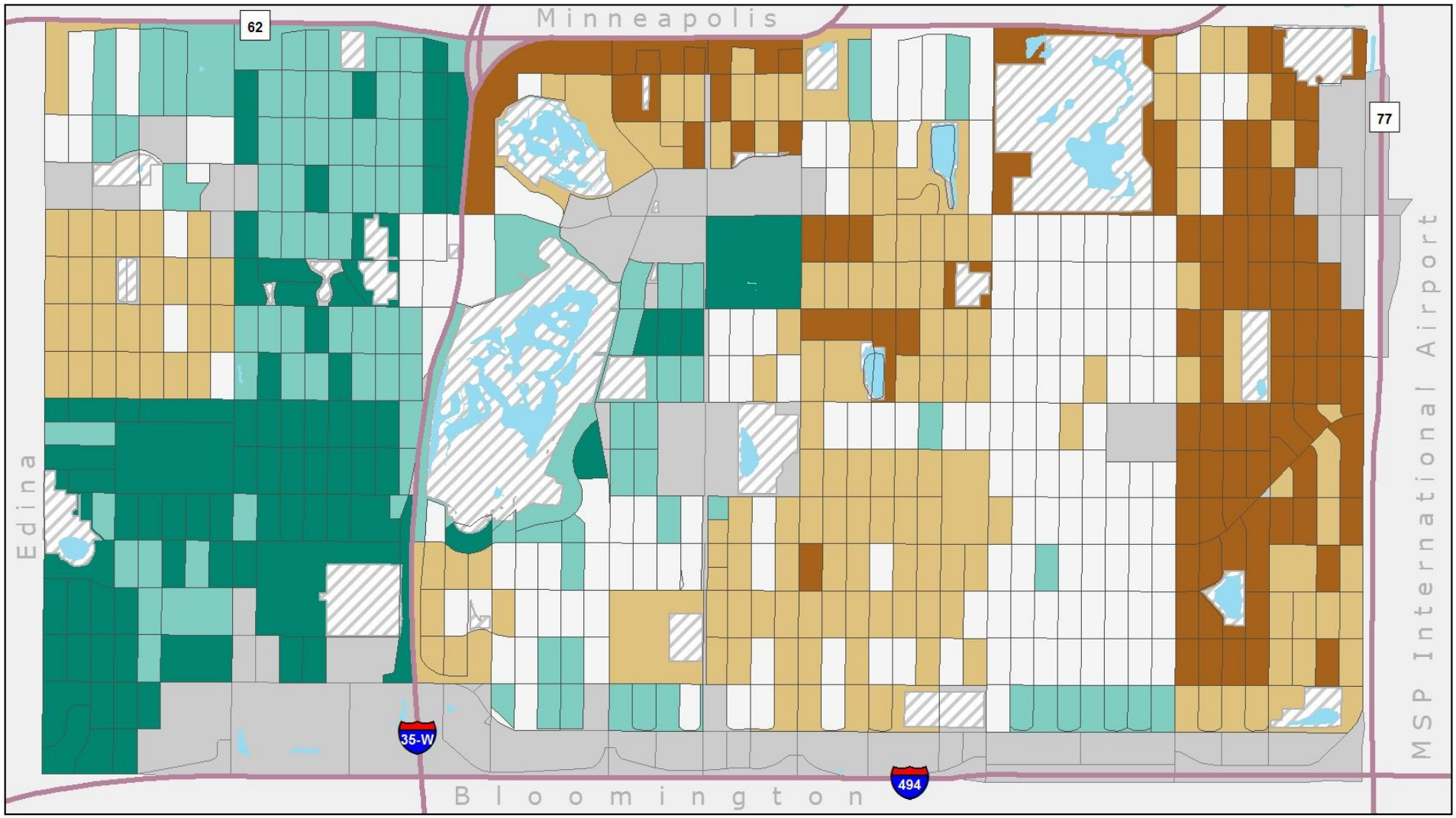
- -54.21% to -5.00%
- -5.01% to 0.00%
- 0.01% to 20.00%
- 20.01% to 75.00%
- 75.01% to 259.72%
- Highways
- Lakes
- Parks

0 0.5 1 Mile

Cartographers: Sidney Ainkorn, Peter Mathison, David Tomporowski
Data Sources: City of Richfield, Hennepin County
MN DOT, MetCouncil, ESRI
Projection: NAD 1983 Zone UTM 15N
Spring 2012

Map 11: Change in Estimated Market Value by Parcel, 2007-2011

Change in Estimated Market Value by Block, '07-'11 *Richfield, Minn.*



Percent change in average EMV by block

- -13.24% to -8.00%
- -8.00% to -4.00%
- -4.00% to 0.00%
- 0.00% to 5.00%
- 5.01% to 21.56%
- Non Residential
- Highways
- Lakes
- Parks

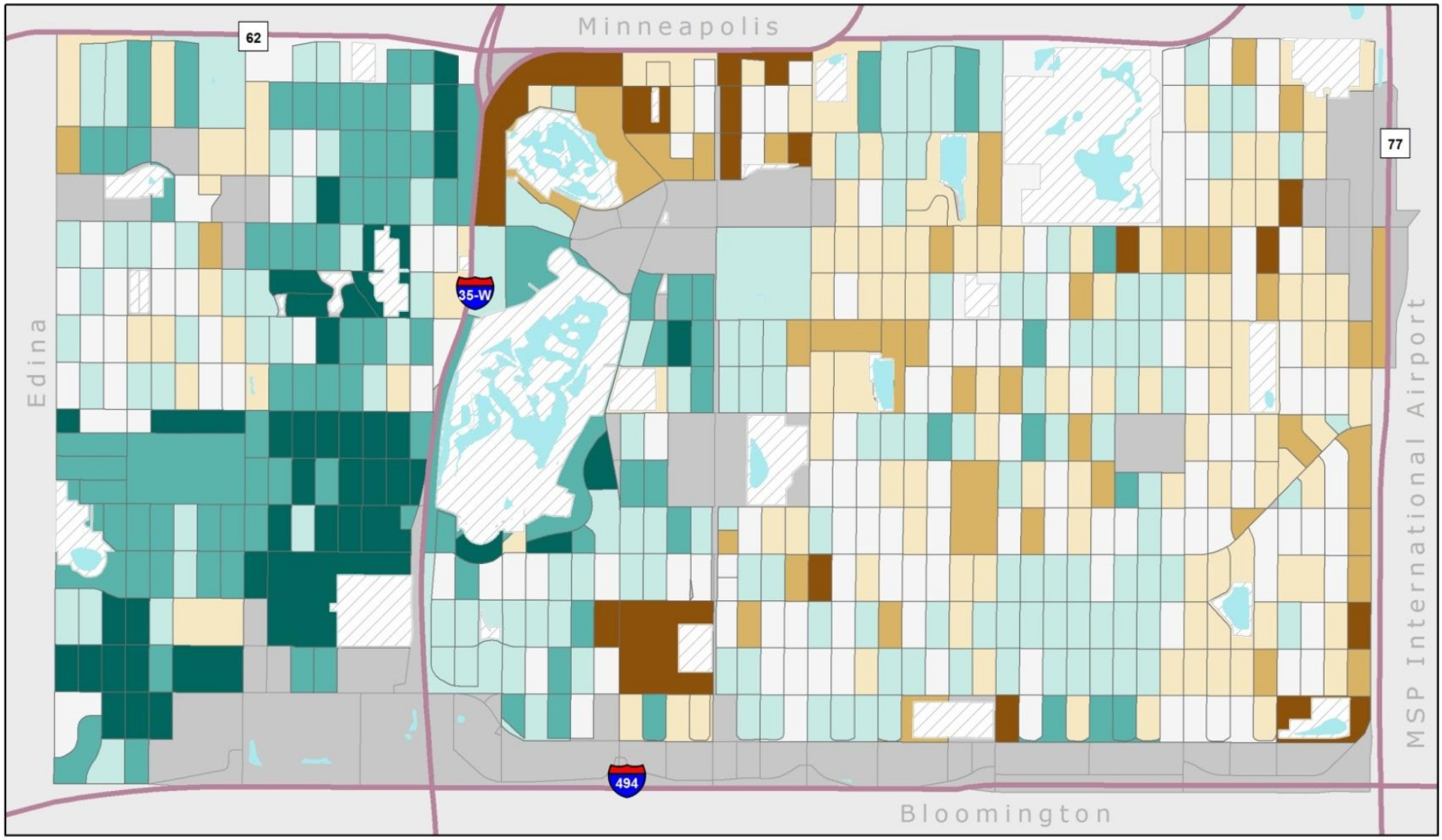
0 0.5 1 Mile

Cartographers: Sidney Ainkorn, Peter Mathison, David Tomprowski
Data Sources: City of Richfield, Hennepin County, MNDOT, MetCouncil
Projection: NAD 1983 UTM Zone 15N
Spring 2012

Map 12: Change in Estimated Market Value by Block, 2007-2011

HMI by Block

Richfield, MN



Housing Market Index Scores

Weak
Average
Strong
Non Residential

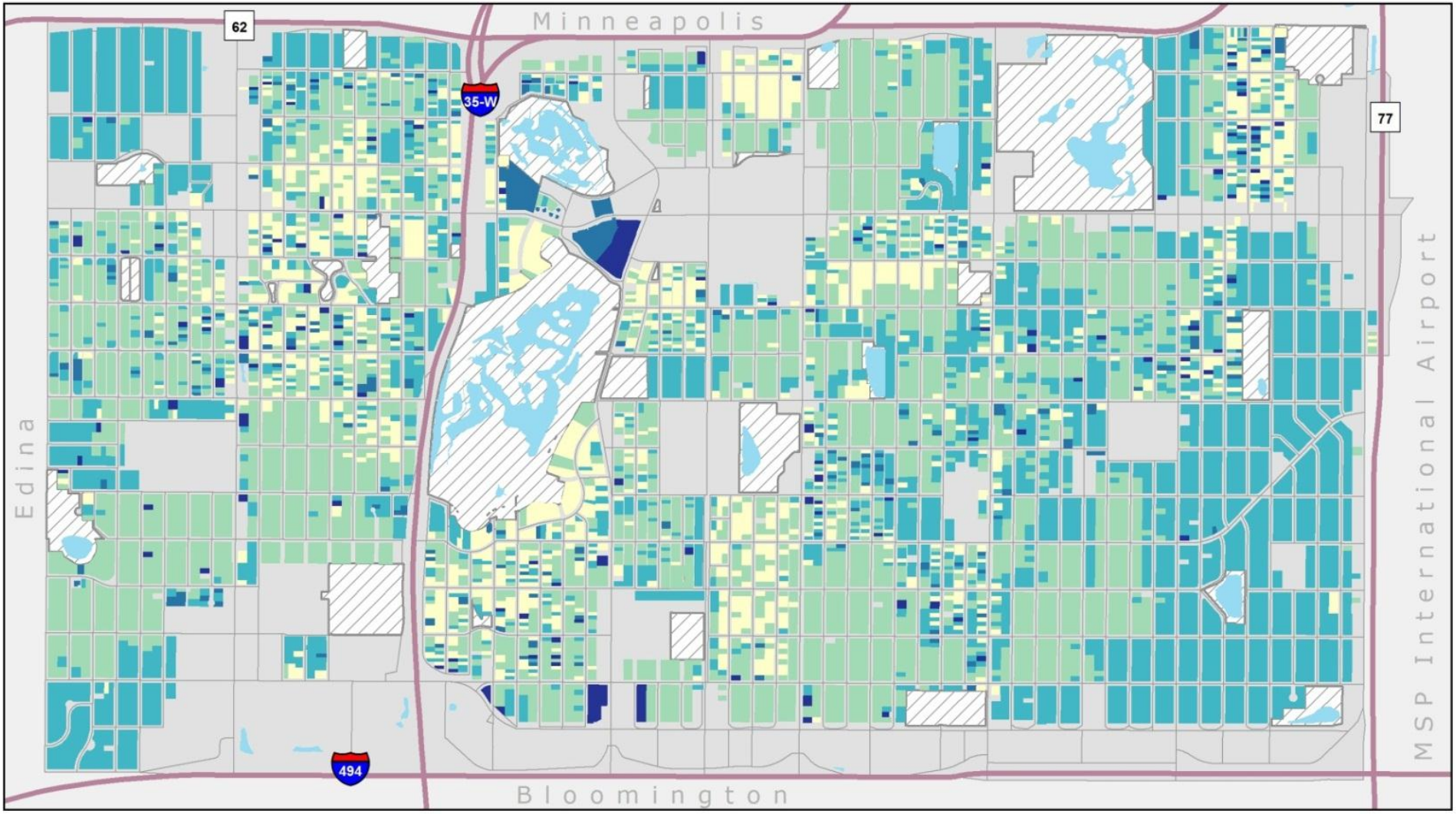
0 0.5 1 Mile

Cartographers: Sidney Ainkorn, Peter Mathison, and David Tomporowski
Data Sources: City of Richfield, MnDOT, MetCouncil,
U.S. Census Bureau, Hennepin County Assessor's Office
Projection: NAD 1983 UTM Zone 15N
Spring 2012

Map 13: Housing Market Index by Block

Year of Construction

Richfield, Minn.



Map 14: Age of Building

Year Structure Constructed

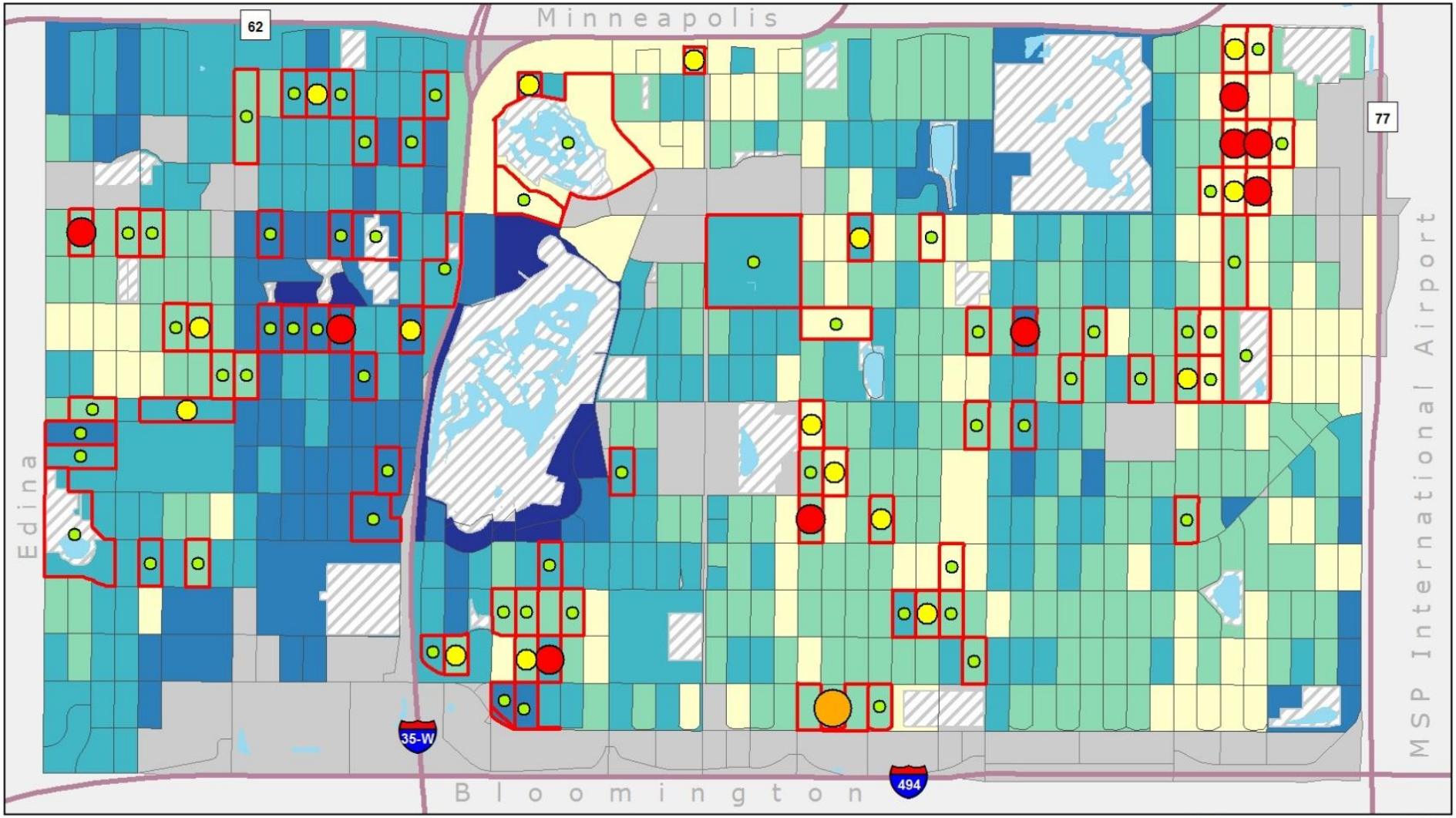
- 1854 - 1943
- 1944 - 1952
- 1953 - 1968
- 1969 - 1991
- 1992 - 2008
- No data
- Highways
- Lakes
- Parks

0 0.5 1 Mile

Cartographers: Sidney Ainkorn, Peter Mathison, David Tomporowski
Data Sources: City of Richfield, Hennepin County, MNDOT, MetCouncil
Projection: UTM 15N

Location of Richfield Rediscovered Properties

Richfield, Minn.



Cartographers: Sidney Ainkorn, Peter Mathison, David Tomporowski. Data sources: City of Richfield, Hennepin County, 2010 US Census, MNDOT, MetCouncil. Projection: NAD 1983 UTM Zone 15N. Spring 2012

Map 15: Housing Redevelopment Map