

MILWAUKEE'S HOUSING FRACTURE:
STUDYING HOUSING SUBMARKET DISINVESTMENT WITH CITY INFORMATION
MODELING (CIM) IN MILWAUKEE'S INNER CORE HOUSING SUBMARKETS, 1910-1970

by

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ABSTRACT

MILWAUKEE'S HOUSING FRACTURE: STUDYING HOUSING SUBMARKET DISINVESTMENT WITH CITY INFORMATION MODELING (CIM) IN MILWAUKEE'S INNER CORE HOUSING SUBMARKETS, 1910-1970

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Under the Supervision of Professor Brian Schermer

This research conducts historic patterns analysis of the city of Milwaukee's inner core housing submarkets from 1910-1970. The study time period captures Milwaukee in its most highly densified and industrialized state prior to suburbanization. To effectively assess the demographic, economic, spatial, and public policy implications of events in the housing submarkets, this research adopts a multi-disciplinary approach to provide a cohesive historical perspective in the city. Theoretically, this research relies on the literature about investment-disinvestment cycles, invasion-succession cycles, and the typo-morphology of the built environment. Methodologically, this research utilizes city information modeling (CIM) and digital twins to re-create conditions in Milwaukee's housing submarkets. This approach produces an evidence-based assessment of housing geographies in the city's inner core neighborhoods.

This research demonstrates that Milwaukee's inner core informal housing submarkets developed as a result of deliberate action. Through a coordinated containment strategy over multiple decades, these geographies produced cumulative effects that negatively impacted the affected

neighborhoods. On the part of City leadership, the decision making was a mix of ignorance, incompetence, and malice; but, the result was the same. Over a 60-year period, a “second-class city” was created in Milwaukee’s inner core neighborhoods based on class, ethnicity, and race. This research identifies three key periods between 1910-1970 that thematically demonstrate inflection points in the city’s inner core housing submarkets: the densification and industrialization of 1910-1930, the distributed spatial economy and stagnation of 1930-1950, and the disruption of expressway development and urban renewal from 1950-1970.

By 1910-1930, Milwaukee reached a new era in its city structure, daily activity, and economic productivity. The city had never previously been as dense or industrialized as it became by the 1910s. While this became a point of pride for City leadership, it also revealed challenging concerns that had not previously been encountered: unsanitary neighborhood conditions, overcrowding in housing units, and deterioration in the central business district. Simultaneous to this uncomfortable epiphany, the emergence of a new era of American urban intellectualism began with Garden Cities, decentralization, and Progressive Reformers. This convergence of ideas and challenges produced Milwaukee’s response: the designations of select wards as slum districts in 1916, the City’s first zoning code in 1920, the City’s first platting regulations in 1924, and the development of the Garden Homes public housing project. While these reforms were highly regarded and lauded for their Progressivism, they simultaneously produced a “second class” city in the inner core neighborhoods. Through a strategy of containment and defensible space, Milwaukee’s reforms confined lower-income and working-class neighborhoods of multiple ethnicities and races to an early version of the Iron Ring. This juxtaposition created a paradoxical

environment of seemingly well-intentioned public policy that contained implicit and explicit segregationist motivations and consequences that developed the spatial genesis for what would become Milwaukee's informal, inner core housing submarkets.

The Great Depression and World War II cast controlling shadows over the 1930s and 1940s. What can appropriately be called the "Lost Years" or the "Stagnant Years," Milwaukee could not keep pace with infrastructure investments and the city's housing submarkets were largely inactive until the mid-1940s. This period was a study in contrasts. The Federal government adopted an interventionist approach in housing markets through a series of Housing Acts in the 1930s that produced the nation's first public housing developments, national standards for home credit underwriting, and a financial system to backstop the home mortgage market. This was all predicated on a new period of urban intellectualism that saw a strong focus on city structure, neighborhood compatibility, and comprehensive planning. Conversely, the Milwaukee Common Council – though it was aware of the severity of conditions – refused to substantively act and engaged in almost 15 years of obstructionism preventing any meaningful reform. This intransigence and neglect on the part of City leadership produced an acuteness of deterioration in the inner core housing submarkets whereby numerous ethnic and racial communities were contained in stagnant conditions. Simultaneously, Milwaukee continued to decentralize and depopulate the city's economy and residents to its rural periphery. This began producing a disparate spatial economy that juxtaposed the mixed-use, interconnected inner core neighborhoods with suburban fringe development. Because Black residents were contained to Milwaukee's Negro District, only White residents were able to access the fringe housing. This –

in conjunction with the Second Great Migration – catalyzed the racialization of the city’s housing submarkets and clearly demarcated the inner core informal submarkets from the formal submarkets on the periphery.

The post-World War II era represented an expansive new beginning for the United States. After enduring the economic collapse of the Great Depression and material restrictions for war production, all levels of American government and average citizens alike were eager to embrace prosperity. The Housing Act of 1949 heralded a new urban paradigm in American cities as it codified the urban renewal program into law. The economic hypotheses for urban renewal and expressway development expressed an idealism in the potential for the rehabilitation and redevelopment of deteriorated neighborhoods. However, when that high-mindedness collided with the complex reality of the socio-cultural, economic, and spatial characters of individual neighborhoods, the consequences were devastating. Milwaukee’s urban renewal project areas and expressway routes were especially damaging to the inner core neighborhoods, which all shared the distinction as lower-income and working-class communities of various ethnicities and races. The displacement of households resulting from neighborhood clearance operations resulted in distortions to housing submarkets. White households benefited from a higher degree of housing mobility to leave inner core submarkets, which further exacerbated the depopulation of Milwaukee’s central area. In contrast, Black households were contained in and around the Negro District with a limited, lower quality housing supply. Ironically, while urban renewal and expressway development were meant to revitalize inner core neighborhoods, they did the opposite. While Milwaukee’s historical segregative geographies were an evolving mix of socio-

cultural behaviors and market controls, urban renewal and expressway development gave them permanence.

Much of contemporary Milwaukee's most challenging conditions in the inner core neighborhoods can be traced to the pivotal decades of 1910-1970. Importantly, these conditions cannot be viewed as solely the product or problem of the modern era, however. They are historical remnants of decision making and the inheritance of previous City leadership that remade Milwaukee's inner core housing submarkets. To properly address neighborhood conditions, contemporary decision makers must heed the warnings of Milwaukee's historic housing patterns. This research serves this purpose by recreating the historic structure and evolutionary process of the city's inner core housing submarkets, thereby creating a guidebook of observations and lessons learned for decision makers.

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Writing a dissertation is pretty much like *The Odyssey*: an intellectually Sisyphean task that seems to have no end. Though the adversity of the challenge is confined to the climate-controlled whims of an academic office, it is a labor of love and a mind-numbingly frustrating task. My dissertation proved to be a mix of learning experiences: the endurance of building a multi-disciplinary analysis framework across three academic fields, the perpetual need to maintain advanced skills on evolving technologies, the continuous process of discovery and serendipitous research in archival libraries, and the preservation of an impartial and unbiased perspective during historic materials analysis - even when those materials reveal shocking and disgusting things. On one hand, I'm relieved that the research has been mercifully completed; and on the other, I'm proud of what I accomplished.

When I finally settled on the research topic of analyzing Milwaukee's historic housing patterns, there was an unstated need to find the "smoking gun" of discrimination. Some piece of evidence buried in the historical record that would ideally prove my thesis to be accurate. After finishing the proposal hearing, Larry Witzling commented, "Just remember, Kristian, in our profession, we write everything down in reports - even the bad stuff. Now, you just have to go out and find it."

The evidence itself was buried in primary source archival materials scattered across libraries around the United States. Because of the outstanding work of librarians and archivists, the vast majority of this material was available to me either digitally or in-person. I will be forever indebted to these library staffs for their attentiveness to my requests, the welcoming atmosphere at the libraries, and their continued patience with my arcane interests in seemingly long-forgotten materials. The staff at UW-Milwaukee's various library departments are phenomenal: Interlibrary Loan, Archives Department, Special Collections, and American Geographical Society Library. The City of Milwaukee's Municipal Reference Library and Historic Preservation Office graciously fulfilled my lengthy request for materials and hosted me at their offices. The Milwaukee County Historical Society and Wisconsin State Historical Society fulfilled incessant requests for digital materials, including numerous historic maps. Harvard University, the University of Chicago, and the University of Pennsylvania always provided prompt assistance when I requested scans of historic reports and high-resolution digital downloads of historic maps. The materials from these libraries served as the basis for the city information modeling I conducted in my research. Without their availability, the accuracy and integrity of my work would have been seriously diminished.

Though dissertations are supposed to be pieces of original research - and mine largely is, the reality is that my research rests on the shoulders of decades of work of historians working in Milwaukee. It would not have been possible to build the secondary-source narrative about general conditions within the city without their scholarship: Peter Borg, Thomas Buchanan, David Cady, Kathleen Conzen, Alexander Elkins, Karl Flaming, Eric Fure-Slocum, Lloyd Gartner, Michael Grover, John Gurda, Patricia House, Maurine Foster Huang, Thomas Hubka, Judith Kenny, Thomas Imse, Ruth Kriehn, George La Piana, Judith Leavitt, Vivian Lenard, Daniel McCarthy, John McCarthy, Clay McShane, Albert Meloni, Theodore Miller, Karen Moore, Charles O'Reilly, Lorne Platt, Lois Quinn, Craig Reisser, Harold Rose, Keith Schmitz, Roger Simon, Ronald Snyder, Louis Swichkow, Leo Talsky, Joe William Trotter, Jr., James Vernor, William Vick, William Vollmar, Anthony Zignego, Leo Zonn, and Suzanne Zukowski. These researchers pursued their work under a variety of academic disciplines, which - when integrated into a cohesive narrative - reveal the intersectionality of Milwaukee's historic housing patterns. Because of their meticulous collection of primary source materials, I was able to effectively recreate historic conditions in Milwaukee's inner core neighborhoods. Without their work, mine would not have been possible.

My PhD program started with a strict five-year timeline (six years if something went wrong). I had every intention of working as a practicing professional while I completed my studies at night and on the weekend. My committee members were well aware – and a bit skeptical – of my idealism. After far longer than five years of work, each of them has stuck with me anyway. Their mentorship and support has so positively impacted my life personally and professionally. Thank you to Brian Schermer, Sam White, Larry Witzling, Kirk Harris, and Carolyn Esswein.

Getting great parents is like winning the lottery. You have no control over it. It just happens one day, and there they are. My parents, Kris and Cheryl Vaughn, are like winning the billion-dollar Powerball ticket. To say that I'm appreciative of their continued support is a gross understatement. Throughout all of my wanderings in life, they have always been steadfast in their support and tough love. For that, I will be eternally grateful.

Finally, any errors, omissions, or oversights in this work are solely my responsibility. After benefiting from so many years of support from a multitude of people and institutions, any failings in this work are my own.

EPIGRAPH

Slum and blighted areas in our American cities have grown to such proportions as to cause grave economic liabilities, social evils and delinquencies which can no longer be ignored. For at least three decades much was said about slums, blighted areas and worthless housing, but with few exceptions no definite remedy for their removal was found. It required an economic catastrophe to at first provoke us, then to make us analyze and now to stimulate our interest in the grave problem of properly housing our people.

We in America, after decades of research and study of the problems of slum clearance and housing, have become enmeshed in multitudes of surveys, controversies, conferences and the publication of innumerable reports, bulletins, etc., until we are dazed with all of these documents, while in Europe they just build homes.

Leon M. Gurda, City of Milwaukee Inspector of Buildings
“Housing and Homeownership, Report to the Common Council Committee on Buildings-Grounds-Bridges” (9 May 1938)

What causes it? The implicit assumption of the gentrification concept is that the chief threat to housing for the poor is the improvement of neighborhoods. The problem is the opposite. The chief threat is the deterioration of neighborhoods. The poor are not being hurt by middle-class investment. They are being hurt by disinvestment – by landlords and owners who let buildings go to rot, who walk away from them, who torch them. More units have been lost through abandonment in the Bronx alone than have been provided by brownstone rehabilitation in all of New York City.

William H. Whyte
City: Re-discovering the Center, “The Case for Gentrification” (1988)

FOREWORD

This work is meant to be a test case in addressing the increasing complexity of the urbanist professions; and, by urbanist professions, I mean urban planning, urban design, architecture, real estate, and municipal finance. America is experiencing substantial shifts in our political, economic, and social power structures. Notably, our population in many cases across the country is metropolitanizing – or moving to metropolitan areas for access to greater educational and economic opportunity. Because of this increasing concentration of our population, we need to begin asking different questions about our challenges and confronting the situation with a clear-eyed realism.

The overarching purpose of this research is to address the deterioration and capital abandonment of inner-city housing submarkets. From a macro perspective, that approach would seem to imply an emphasis on economic considerations. However, decades of research shows that these deterioration processes are multi-faceted and exhibit intricate relationships between economic, demographic, and spatial patterns. At a refined level, this means that my research is addressing numerous, more nuanced issues, including historical discrimination and prejudice, redlining, urban renewal, neighborhood succession, and gentrification. As many of these are receiving large amounts of attention in American public discourse, my research makes a specific methodological contribution at the nexus of these issues as they intersect around neighborhood residents, the local built environment, and property markets.

Inherent in addressing these nuanced issues is ideological lenses and popularized narratives about contemporary events and historical processes. My research makes clear distinctions between ideology, methodology, and popularized narratives to specifically delineate the differences between the morality of confronting urban challenges with the methodologies to analyze them and propose solutions. In using Milwaukee as my case study environment, I am able to fulfill a broader purpose of confronting the complexities of historical and modern American urbanism through realistic lenses with a strict adherence to reliable and transferable methodologies. To address our most pressing challenges, we need to begin deconstructing the intersectional nature of how they function in society and what interventions are appropriate to control their various components.

A theme within the various issues addressed in my research is the fairness of capitalism and free markets in America's cities. Throughout the history of Milwaukee, research shows that there has been a push and pull between the morality of fairness and justice with the freedom to operate in a capitalist society. Some have sought to control these processes to realize an equitable distribution of economic opportunity, while others have seen these processes as inevitable with the negative consequences to certain populations deemed an acceptable loss for the greater good. While my research proposes specific questions for analysis, this broader theme frames the backdrop for my work and begs its own questions to be asked. How do we define and quantify justified damage in urban environments? Is it even possible to deem this damage "justifiable?" Can we limit the collateral damage of capitalist processes in cities to blunt the harm to certain at-risk groups? If we can, how do we intervene in preventing this damage without causing inefficiencies in the supply and demand equilibrium of the free market?

DISCLAIMER

This research utilizes primary source documents, secondary historical research articles and books, and tabular data that accurately portrays conditions in Milwaukee's history. These sources include terminology, phrases, and language that are offensive and derogatory. Though the language is inappropriate, it is reproduced in this research for the purposes of historical accuracy with accompanying footnotes and sources to provide the reader with needed context.

1. INTRODUCTION

A. Research Scope

A.i. Problem Statement

Like many Rust Belt Cities in the American Midwest, Milwaukee continues to suffer inner city disinvestment that has produced a set of acute, intersectional problems that require solutions. At the nexus of these challenges is the capital abandonment of Milwaukee's inner city housing inventory. Within the city's neighborhoods, these housing units face serious deterioration and obsolescence, landlord ownership by private equity interests, a lack of capital access due to low tax assessments and appraisals, and a lack of new deliveries due to the regulatory constraints of increased land use controls, rising interest rates for permanent debt financing, and investors' underwriting criteria. These challenges require a re-examination of strategies to revitalize neighborhoods through housing reinvestment, thereby increasing affordable housing deliveries.

Of these shared challenges with peer cities, Milwaukee is distinct in other respects, however; namely, Milwaukee faces severe revenue constraints due to Wisconsin's revenue sharing policies.¹ The magnitude of this pressing need frames my research from an economic perspective, yet the morality of access to affordable housing is ever present. The total value of residential real estate in Milwaukee is approximately \$16.09 billion, or 54.59% of the city's total taxable assessed value; of the city's 160,463 parcels, 140,863 are residential.² Thus, it is arguable that the health and prosperity of Milwaukee's residential neighborhoods are the primary determinant of the city's economic trajectory, principally because of the municipal finance implications of economic deterioration.

¹ See Reports from the Wisconsin Policy Forum: "City of Milwaukee's Fiscal Condition: Making Ends Meet" (2016), and "On the Money? The City of Milwaukee's Uncommon Revenue Structure and How It Compares to Peer Cities" (2017).

² "Comprehensive Annual Financial Report, City of Milwaukee, Wisconsin," Milwaukee Office of the Comptroller, 31 Dec. 2020. Milwaukee Master Property File, 2020.

Over the last decade, the conversation in Milwaukee around housing has been refined by policymakers, neighborhood advocates, and investors. Competing interests and opposing viewpoints have contributed to a dialogue on the variety of intersectional issues. The common thread in the conversation is the deteriorated economics of the city's neighborhood housing submarkets and the condition of the housing inventory. Additionally, the related themes of public health, neighborhood safety, economic development, and family wealth building through homeownership emerge – demonstrating that these issues are myriad yet interconnected. These conversation topics include:

- Increased interest from landlords and private equity investors that are purchasing large amounts of housing units to expand their portfolios of rental properties, thus reducing homeownership;³
- Renewed focus by policy makers and housing advocates on the potential for accessory dwelling units (ADU) as a form of affordable housing that can be delivered more efficiently;⁴
- Prevalence and severity of electrical fires in Milwaukee's neighborhoods with the oldest housing stock;⁵
- Community frustration at the amount of public funds invested in the downtown renaissance and the lack of proportionate funding for neighborhood revitalization⁶; and,
- Strengthening interest in establishing neighborhood-based community land trusts.⁷

³ Cary Spivak, "Out-of-state corporate landlords are gobbling up Milwaukee homes to rent out, and it's changing the fabric of some neighborhoods," *Milwaukee Journal Sentinel*, 27 Apr. 2021.

⁴ Joe Krivichi, et al., "Accessory Dwelling Units: Current Trends and Proposed Policy Solutions for the City of Milwaukee," *University of Wisconsin-Milwaukee and City of Milwaukee Department of City Development*, May 2020.

⁵ Raquel Rutledge, "Electrical fires hit Milwaukee's Black renters hardest. Nobody is held accountable," *Milwaukee Journal Sentinel*, 7 Jan. 2022.

⁶ Yui Hashimoto, "The Tale of Two Milwaukees" (Op-Ed), *Urban Milwaukee*, 12 Jul. 2020. Talis Shelbourne, "Black residents built Halyard Park. Now they fear being taxed out their homes as downtown development moves northward," *Milwaukee Journal Sentinel*, 2 Dec. 2020.

⁷ "Fond du Lac and North Area Plan," *City of Milwaukee Department of City Development*, 2 Nov. 2021. See also Milwaukee Community Land Trust, a non-profit working to establish a community land trust in Milwaukee.

These conditions are not static, however, and did not develop spontaneously. An understanding of the history of Milwaukee's housing submarkets is a fundamental component in properly addressing contemporary issues. Without a historical assessment, future housing initiatives will be built on a myopic basis that negates the powerful forces of the cumulative effects of historical patterns of decision making, investment, and population migrations. To properly study disinvestment and capital abandonment in Milwaukee, a longitudinal perspective over multiple decades is needed to identify and track trends in the city's housing submarkets. Due to the volume of data necessary to pursue this approach, emerging technology needs to be leveraged to build a city information model (CIM) and digital twin to study the city. This thus requires a multi-disciplinary perspective to consider the demographic, economic, and spatial attributes of Milwaukee's historic housing conditions.

A.ii. Research Questions

From these issues and themes, an initial question is evident: how can reinvestment be catalyzed in Milwaukee's neighborhood housing submarkets to improve their condition? Asked differently: how can the capital abandonment of Milwaukee's inner city housing submarkets be reversed? These questions are central to addressing Milwaukee's housing challenges; however, they pre-suppose that we understand the disinvestment and capital abandonment processes in the city. As a result, my research focuses on the critical research gap in that supposition. To address this, my research question is as follows: In order to find solutions to reverse disinvestment, how can city information modeling (CIM) be utilized to back test historical conditions in Milwaukee's housing submarkets to understand the capital abandonment process?

Because my research argues that strategies for capital reinvestment in Milwaukee's inner city housing submarkets cannot be properly informed and fully developed without understanding how the historical process of capital abandonment occurred, this work will develop a historical profile or template of the

capital abandonment to understand its economic, demographic, and spatial attributes. These three categories thus form the basis for my subset of research questions:

- **Economic:** What periods of deterioration are definable across the analysis timeframe? What economic, demographic, and spatial attributes define these periods? Are certain periods more economically important or impactful than others? What economically defined the most consequential periods?
- **Demographic:** Who lived in each of the housing submarkets during the study timeframe? How did those populations change and migrate over time? Are there identifiable patterns in the migrations of residents that are related to economic and spatial characteristics?
- **Spatial:** What spatial attributes of a submarket's housing unit inventory are discernible for each defined period of deterioration? How are these spatial attributes related to economic or demographic trends and characteristics?

These three categories of research questions provide the framework for analyzing historical changes in Milwaukee's inner city housing submarkets. The purpose in using these categories is twofold: 1) develop an integrated portrait of neighborhoods through time, and 2) employ an alternative analysis methodology using the case study approach to address the issue. My research will thus reverse engineer the capital abandonment and back test the historical conditions of the housing submarkets to understand them at various points in time.

For the purposes of my research questions, I propose the following definitions for inner city disinvestment and capital abandonment.

Inner City Disinvestment: The broader urban process of neighborhood deterioration and entropy that encompasses multiple, simultaneous components: demographic stagnation and/or

out-migration from a neighborhood, decline in real estate values and economic activity, and the physical deterioration of the built environment.

Capital Abandonment: An economic trend within the disinvestment process that is substantially similar to the capital depreciation cycle presented by Smith (1979). Capital abandonment is a process whereby investors and property owners determine that a neighborhood's rent gap is unprofitable, decline to invest in new properties and/or re-invest in their existing properties, and instead invest elsewhere, thereby creating a neighborhood property market with a lack of capital access.

A.iii. Research Contribution

Across the multiple academic disciplines used in my research, numerous opportunities exist to make substantive contributions and expand the body of thought on these topics. My research will develop and implement a new approach to analyzing housing submarkets, which will lead to the following research contributions:

- A. Milwaukee is representative of Midwestern Rust Belt Cities. It has a strong heritage as an industrial city⁸ that relied on manufacturing as its economic driver, developed a highly dense built environment, and increasingly became more diverse by the end of the 20th century. East and West Coast cities typically garner far more research attention and thus the conclusions are appropriate within the spatial and socio-economic contexts of those cities. My research will seek to expand the American school of thought on Midwestern industrial cities and develop

⁸ In the professional vernacular, we typically define a "Rust Belt City" as one of numerous communities extending from the East Coast to the Midwest with a historical emphasis on manufacturing as the city's economic driver. Note that this terminology typically applies to the economic and demographic characteristics of the cities. In urban morphology, "Rust Belt City" has been re-framed as the "industrial city" with the intent of studying the spatial characteristics of these communities. See Koter, "The Morphological Evolution of a Nineteenth-Century City Centre: Lodz, Poland, 1825-1973" (1990), 109-141, and Conzen, M.P., "Town-plan Analysis in an American Setting: Cadastral Processes in Boston and Omaha, 1630-1930" (1990), 142-170.

conclusions and research methodologies that are transferable to other researchers in those locales.⁹

- B. The majority of academic studies addressing housing, neighborhood succession, and urban morphology exist in thought silos that segregate research findings and inhibit the sharing of ideas. My research intentionally adopts a multi-disciplinary methodology across these disciplines to eliminate the silos and provide new perspectives on the spatial patterns of housing, the historical recreation of demographic profiles and migratory patterns of residents, and the historical recreation of housing market behaviors to understand capital flows.
- C. The broader purpose of my research is to analyze the Milwaukee housing submarkets that were deemed hazardous and a) identified as slum wards in 1916, b) rezoned from mixed-use neighborhoods to commercial and industrial districts in 1920, and/or c) graded poorly as “D” districts in the 1938 Homeowners’ Loan Corporation (HOLC) maps. These case study geographies are meant to develop an alternative research approach that fills a void in the current literature by building economic, demographic, and spatial profiles of the housing submarkets across an extended timeframe.
- D. The software that enables city information modeling and digital twins is an emerging technology. While multiple platforms are available to build the digital tools, it is still a nascent technology where best practices and professional standards are actively in development. An intent of my research is to produce a proof of concept with these technologies to build and deploy a working CIM and digital twin for public use. Using spreadsheet and mapping data, these digital tools will incorporate multiple data sources to build data dashboards, interactive 2D maps, and dynamically rendered 3D models. By developing these functional digital tools for

⁹ Urban historians focusing on Milwaukee have noted the need for this form of a more detailed examination of the city’s neighborhoods. They argue that a multi-disciplinary research agenda is needed to properly address the historic development of the city’s neighborhoods. See Kenny and Hubka (2009), 223-229.

Milwaukee, my research will catalogue the construction process, ongoing operations, lessons learned, and limitations of the technology.

- E. The extended time horizon of my research builds perspective over multiple decades to conduct patterns analysis in the city and understand trends and inflection points in Milwaukee's housing submarkets. This approach allows for the consideration of a variety of factors and the analysis of their intersectionality. Whereas other research typically is limited to datasets over 10-20 years, my research will utilize a variety of data sources to build a more comprehensive perspective of the city's housing submarkets over a 50-year period.

B. Author's Agency

As much as any dissertation should be impartial, every author carries implicit bias from their personal circumstances and professional experience. As a fallible human being, I hold my own prejudices and skepticisms. Despite my efforts to produce an unbiased piece of scholarship, my agency will be found within these pages. My intent is to produce a technical research document that emphasizes methodology over ideology; however, due to the variety of issues that are at play in inner city disinvestment, my work will also need to be adaptable to the complexities of the subject matter. My efforts will focus on the research questions presented in this chapter, though I know that I may need to pursue other tangents to fully explore related subject areas. This understanding of my deficiencies leads me to establish my social and professional locations at the outset of my research efforts.¹⁰

Though I recognize the value of optimism and idealism, I am more strongly a skeptical pragmatist. I frequently question societal norms and accepted doctrine in search of facts. That said, I also believe

¹⁰ In *Gentrifier* (2017), John Joe Schlichtman, Jason Patch, and Marc Lamont Hill introduce their work within the context of each of the author's agencies and social locations. In part, they introduced the reader to their pasts, motivations, financial positions, and belief systems. Their intent was to acknowledge their predispositions and any preconceptions they may hold. Schlichtman, John Joe, et al., *Gentrifier* (2017), 14-16.

that “where there’s smoke, there’s fire.” In our current American economy, it is abundantly clear that there is an overwhelming amount of “smoke” surrounding economic disparities. Economic disenfranchisement and the widening wealth gap are rapidly becoming worrisome trends in America. While these issues are being confronted in a contemporary context, there are also historical processes that have contributed to the current circumstances. Thus, my personal disposition is to question these circumstances and critique the existing research addressing these issues. My intent is to use a focused skepticism with a mixed methods approach to address the intersectional nature of the demographics, economics, and spatial characteristics of these events.

Professionally, my work has predominantly focused on technical analyses, process documents, and financial deal structuring that address pressing or complex issues and projects in urban and suburban environments. My work as a consultant varied from the daily work of municipal process management and zoning administration to the more difficult issues of loan loss reserves in revolving loan funds, market segmentation related to housing affordability, and strictly regulated uses like gun stores and sexually oriented businesses. In economic development finance, my deal flow included tax advantaged transactions using income-reducing tax credits and State and Federal historic tax credits, as well as larger deal structuring including equity, grants, loans, and tax credits. Thus, my professional perspective is varied; and, I have consistently worked on projects from initial concept with community engagement activities to deal closing and construction activities. These experiences frame my research approach through real-world lenses that accurately reflect the challenges of understanding neighborhood dynamics, developing strategic and long-range plans, and managing the financial prospects of project viability given current market conditions.

2. LITERATURE REVIEW

To fulfill the purpose of this work and answer my research questions, this literature review represents a specific selection of topics and authors that have completed research addressing the nuances of neighborhood-scale housing shifts and demographic migrations. The five authors reviewed in this chapter represent the two theoretical lenses for my research: the economics of the investment-disinvestment cycle and the demographics of the invasion-succession cycle. The theories within this literature frame my research within the economic context of the principal role that capital flows and financial considerations play in housing submarket changes. This economic perspective encompasses not only financial cycles, but also the related demographic processes and spatial patterns that occur in conjunction with investment and disinvestment. Thus, this chapter builds the theoretical foundation for my research – as well as presenting details about the economic and demographic profiles for neighborhoods, which then is used in conjunction with the methods presented in Chapter 3. For readers of my work, it is important to note that even though Chapters 2 and 3 are separate, they must be read in tandem to understand how my mixed methods approach proposes to create a comprehensive portrait of neighborhood change that considers economic, demographic, and spatial factors.

While my research specifically focuses on the deterioration and capital abandonment of housing submarkets, this subject matter fits within a larger body of literature related to the cyclicity of neighborhood change, neighborhood succession, and gentrification. Originating in the early 1920s, this research has an extensive history and a large body of work that has evolved and adapted as American cities experienced change. A notable period of thought occurred during the 1970s and 1980s when numerous researchers assessed America's changing development pattern of urban reinvestment and repopulation with the contrast of continuing suburbanization. While the terminology for these urbanization processes has varied, they share similarities and are reasonably synonymous; the terms

include back to the city, resettlement, revitalization, reinvasion, gentrification, urban pioneering, reinvestment, renovation, and private-market rehabilitation.¹ Thus, the historical context for this subject matter will be prevalent throughout my research because of the interrelatedness of these concepts and processes through multiple periods of Milwaukee's history. However, my research will emphasize a specific subset of this subject matter that focuses on the investment-disinvestment cycle of housing submarkets and the correlated demographic trends and spatial patterns.

A. Economic Theories: Investment-Disinvestment Cycle

To assess economic changes in Milwaukee's housing submarkets, the research of Calvin Bradford, Leonard Rubinowitz, and Neil Smith are cited because of their arguments related to the processes of financial cycles, the roles of public and private sector actors, and the importance of capital availability in neighborhoods. From different perspectives, the authors argue that investment cycles and capital flows in housing submarkets are the result of the intentional behaviors and efforts of individuals and institutions. Motivated by the desire for capital accumulation and profiteering, the influence of these actors can be identified and tracked through local real estate cycles. These authors have specific bearing on my research because the detailed nature of their work provides a framework to break down the cycles of capital flows into individual periods of time and identify underlying patterns impacting the neighborhood's demographics and built environment.

A.i. Investment-Disinvestment Cycle (Bradford and Rubinowitz 1975)

In their article "The Urban-Suburban Investment-Divestment Process: Consequences for Older Neighborhoods" (1975), Calvin Bradford and Leonard Rubinowitz present a counterargument to the rational hypotheses of trickle-down economic theory and the human ecology model of invasion-succession.² Instead, they argue that urban-suburban investment patterns are the direct result of

¹ Laska and Spain, *Back to the City* (1980), xi-xii.

² Bradford and Rubinowitz, "The Urban-Suburban Investment-Divestment Process" (1975), 78-79.

deliberate actions taken by public and private actors in local property markets. Thus, it is entirely plausible that interventions in market behaviors can be considered for both the public and private sectors. The authors argue that the investment-disinvestment processes of inner-city neighborhoods and suburban communities should not be seen as natural or inevitable.³ Instead, they draw the connection between the ubiquitous availability of mortgage credit in suburbia with restricted access to that same credit in urban neighborhoods; this credit access is a key determinant in housing reinvestment.

Bradford and Rubinowitz connect inner city disinvestment and suburbanization through the investor-developer complex. As America's housing markets changed, they argue that developers, investors, and bankers altered their real estate projects and investment criteria to maximize profitability. These alterations were manifested in a spatial way by suburban investment and urban disinvestment.⁴ Developers responded to increasing development costs by transitioning from single-family to multi-family projects, embracing cost reductions in shared-wall construction and the volume of units delivered, and employed the planned unit development (PUD) to reduce their regulatory burden.⁵ Large institutional investors, in the form of banks and life insurance companies, adopted real estate as an alternative investment class, subsequently requiring projects to produce a higher rate of return to compete with other investment types.⁶ These changes in investment patterns put inner city neighborhoods at a disadvantage because developers began to need larger tracts of land only located in the suburbs and the economics of new construction pushed developers to deliver housing to the 75th percentile of income and above – known as the “market of preference.”⁷

³ Bradford and Rubinowitz (1975), 79.

⁴ Ibid.

⁵ Ibid., 80.

⁶ Ibid., 81.

⁷ Ibid., 82.

The authors assert that this decision making created a de facto form of redlining.⁸ Because real estate investments shifted to the suburbs, older, inner-city neighborhoods were not able to attract capital. This capital abandonment resulted in deterioration. As inner-city neighborhoods struggled economically, bankers and appraisers created a reinforcing cycle of disinvestment through lower risk tolerances and below-market appraisals. Thus, this capital abandonment became a self-fulfilling prophecy: the investment grade status of the suburbs lured investors and the confidence of bankers, while inner city neighborhoods became undesirable and entered a continuous cycle of foreclosures and abandonment.⁹

A.ii. Capital Depreciation Cycle (Smith 1979)

In his article “Toward a Theory of Gentrification: A Back to the City Movement by Capital, not People” (1979), Neil Smith confronted the popularized narratives about “back to the city” and gentrification at a time when the consumer sovereignty hypothesis and residential land use theory predominated as the explanations for the economic behaviors of renters and homeowners. Specifically, he challenged the assertion that people were re-urbanizing in American cities due to changes in lifestyle choices. His work questioned whether personal preferences had sufficient strength in people’s decision-making processes to influence their locational preferences, or whether the capital returns of reinvestment were the true motivation.¹⁰ He articulated that American cities were undergoing a “fundamental restructuring of urban space” and that the broad characterizations inherent in the “back to the city” movement were a) overly generalized and did not explain the nuances of preferences within the American public, and b) did not account for the influence of the neighborhood land economy and the profits it could return.¹¹

⁸ Bradford and Rubinowitz (1975), 82.

⁹ Ibid., 83-84, 86.

¹⁰ Smith, “Toward a Theory of Gentrification” (1979), 539, 540.

¹¹ Ibid., 538.

As a matter of economic production and consumption, Smith argues that the flow of capital resulting from these processes were driving renewed interest in American cities.¹² The actors influencing this flow of capital are motivated by the profits generated from these investments and less so by lifestyle preferences. These groups include builders, developers, landlords, mortgage lenders, government agencies, real estate agents, and tenants. Due to this profit-seeking motivation, Smith clarifies the issue at hand and asks a poignant question: “A theory of gentrification must therefore explain why some neighborhoods are profitable to redevelop while others are not. What are the conditions of profitability?”¹³

Smith argues that the underpinning of the neighborhood land economy are the commodities of buildings and land, which are influenced by investment decisions in the capital depreciation and gentrification cycles. Essentially, he proposes that investments in neighborhoods create commodities cycles in the land and buildings based on their value. Investors assess the future use of the property and how its potential can be financially capitalized into profits. Thus, the overarching goal of investors is capital accumulation and their decisions are based on the motivation to drive profitability.¹⁴ In the capital depreciation cycle, the potential profitability of land and buildings steadily declines through its multiple stages until investors deem the neighborhood unprofitable. Smith characterizes these stages as the first cycle of use with new construction, then a mix of landlordism and homeownership, then blockbusting and blowout in the initial losses in profitability, then redlining with increasingly limited capital access, and finally the abandonment of capital in the neighborhood.¹⁵ The reversal of this capital depreciation and devaluation is then gentrification – or the moment when Smith argues that the market

¹² Smith (1979), 540.

¹³ Ibid.

¹⁴ Ibid., 541-543.

¹⁵ Ibid., 543-545.

re-evaluates the capital potential of a neighborhood and determines it can profit from the rent gap. Gentrification is thus a function of investors calculating that the future capitalized value of land and buildings exceeds its current value after acquisitions and rehabilitation. Smith implicitly identifies gentrification as the beginnings of a new capital appreciation phase when the neighborhood is being “recycled.”¹⁶

B. Demographic Theories: Invasion-Succession Cycle

The work of Roderick McKenzie, Dennis Gale, George and Eunice Grier, and William Grigsby develop specific theories and methodologies that can be utilized to track the cyclicity of demographic changes and housing filtration at the broader citywide scale and at the refined scale of housing submarkets. Because of this adaptability, their research is transferable to Milwaukee’s diverse neighborhood geographies, which will allow me to build a cohesive timeline of neighborhood cycles, identify the interrelatedness of demographic patterns and economic changes, and develop detailed segmentation of dwelling units and occupants in housing submarkets. This simultaneous use of the economic and demographic literature specifically operationalizes my research purpose of employing multi-disciplinary analysis methods to analyze longitudinal housing submarket trends in Milwaukee.

B.i. Neighborhood Invasion-Succession (McKenzie 1921-1929)

In an anthology of collected works, Amos Hawley presents a series of essays from Roderick McKenzie in *On Human Ecology* (1980). A researcher at the University of Chicago, McKenzie developed a perspective on the perpetual change of communities. His detailed studies and disaggregation of community processes led to his work on neighborhood succession. At a unique time in American history, this anthology frames over a decade of research (1921-1933) through the perspective of emerging thought on the United States’ first period of industrialization at the turn of the 20th Century.

¹⁶ Smith (1979), 545.

McKenzie captured not only a period of economic transition and industrial growth, but also the unique effects of the Roaring Twenties and the social sorting that resulted from mass immigration to the United States. These lenses yielded conclusions highlighting the influence of local economic drivers and places of employment, and then the follow-on social effects of individual decisions to locate in culturally homogenous areas; the formation of these areas being primarily driven by social considerations, but powered by a local employer. In the essays, a set of topics emerges: the cyclical nature of communities and community organization, the connectivity of urban districts, and the factors influencing urban economic productivity. Each of these topics is interrelated and interdependent, which demonstrates the complexity and heterogeneity of cyclical change in communities.

McKenzie argues that the cyclical fashion of community change operates around the equilibrium of resource inputs and the local economic base. Depending on local growth or decline, the community can reach a status quo or equilibrium when the natural resources, population, and economic base of a community are aligned. He was clear: "Under a given state of natural resources and in a given condition of the arts the community tends to increase in size and structure until it reaches the point of population adjustment to the economic base" – also known as the "point of maximum development" or the "point of culmination or climax."¹⁷ A disturbance in the equilibrium can result from changes in communications, industry, or the local economic base. If the change is large enough, it can produce a "new cycle of adjustment," which may be positive or negative. A positive adjustment can lead to growth or differentiation; a negative adjustment can be a "retractive influence."

McKenzie then goes on to discuss the spatial relationships of a neighborhood economy and the interconnectedness of place. He states that neighborhoods are dependent on the "ecological factors" of

¹⁷ McKenzie, *The Ecological Approach* (1924), 8.

geography, economy, culture, and politics.¹⁸ Similar to the invasion stimuli discussed in the previous paragraph, these factors have bearing on community organization. As time passes, neighborhoods adopt identifiable spatial forms based on their economies and populations. Specifically, certain ecological processes become apparent: segregation, invasion, and succession.¹⁹ Segregation results from forces of selection and is the concentration of attributes or people in the community.²⁰ Attributes of segregation are economics and jobs, language, race, and culture. Invasion is a displacement process and “implies the encroachment of one area of segregation upon another, usually an adjoining area.”²¹ Succession is the regular and predictable change in land and space use with the population typically reflecting changes in the local economic base. A complete succession cycle is defined by “a complete change in population type between the first and last stages, or a complete change in use.”²²

He argued that these cycles of adjustment occur in “successional sequence” and may be precipitated by an invasion.²³ An invasion being the introduction of a new behavior or user in the local market that causes a change from existing conditions. McKenzie stated that these invasions manifested in two primary ways: change in land use or change in neighborhood occupants. A change in land use occurs when an area shifts from, for example, residential to industrial, while a change in occupants can impact residents and the small business community. Though the initial invasion may be small, the effects can ripple through the neighborhood:

¹⁸ McKenzie (1924), 23.

¹⁹ McKenzie also discusses concentration and centralization, thus making a list of five ecological processes. Concentration and centralization are not discussed in this literature review because the scale of the processes is larger than the individual neighborhood. Both are seen from the regional and city/county scale. Though still important for consideration, the other three processes have more bearing on this dissertation.

²⁰ McKenzie (1924), 30.

²¹ *Ibid.*, 31.

²² *Ibid.*

²³ *Ibid.*, 14.

Invasions produce successional stages of different qualitative significance, that is, the economic character of the district may rise or fall as the result of certain types of invasion. This qualitative aspect is reflected in the fluctuations of land or rental values.²⁴

These invasions can be triggered by a variety of stimuli. These include: changes in modes and routes of transportation, obsolescence and deterioration of buildings, construction of new private or public developments, change in industry mix, changes in the local economic base, and real estate advertising.²⁵

Notice in this list the intersectional nature of these stimuli. Transportation is connected to the local workforce, which is connected to local industry, which is connected to local land use, which is connected to property values. In this way, McKenzie highlights the cascading nature of succession and invasion.

B.ii. Risk Stages in Urban Resettlement (Gale 1976, 1979)

In two research papers – “Neighborhood Resettlement: Washington, D.C.” (1976) and “Middle Class Resettlement in Older Urban Neighborhoods: The Evidence and the Implications” (1979), Dennis Gale discusses the risk appetites of different population groups that make residential location decisions during a resettlement movement.²⁶ In what may be described as a high-risk environment (i.e., deteriorated building condition, higher rate of crime, no or low-quality amenities), certain individuals or couples are going to have a higher likelihood of making the decision to move to that neighborhood and accept the risks associated with being pioneers. As conditions improve, other individuals, couples, and families may begin arriving that have seen the success of pioneers – but have a lower risk tolerance and allowed others to test the proverbially waters. The assumption of these groups is that higher-income individuals will continue to move to the neighborhood. Gale classifies these groups as risk-oblivious, risk-prone, and risk-averse with demographic indicators of household size, racial composition, annual income, age, education, and occupation.²⁷ These groups are profiled in Table 2.1.

²⁴ McKenzie (1924), 14.

²⁵ Ibid., 14-15.

²⁶ Gale, “Middle Class Resettlement in Older Urban Neighborhoods” (1979), 293.

²⁷ Gale, “Neighborhood Resettlement” (1976), 105-109. Gale (1979), 294-295.

Table 2.1: Population Patterns in Resettlement Neighborhoods

	<i>Risk Tolerance</i>	<i>Family Unit</i>	<i>Description and Behaviors</i>
<i>Risk Oblivious</i>	High	Singles, childless couples	Purchase older homes with low assessed values. Desire to be in a neighborhood with low housing expenses, culturally accepting environment, and homes with historic architecture. Have a general tendency to mix well with indigenous residents.
<i>Risk Prone</i>	Medium	Singles, childless couples, families with preschool children	Attracted by publicity of real estate market and potential for property value appreciation (economic goals). May have conflicts with indigenous residents with complaints about noise, crime, and poor property maintenance (social goals/issues). Rehabilitating property market starts to attract third-party property investors. Neighborhood organization may emerge. Some public infrastructure investments may occur by the municipality. New small businesses move to the neighborhood.
<i>Risk Averse</i>	Low	Singles, families with older children	Neighborhood establishes middle-class identity with market-rate property values. Purchase properties previously renovated by the risk oblivious and risk prone. Historic district may be established with neighborhood organization. Infrastructure reinvestment occurs by the municipality. Neighborhood advocacy is firmly driven by middle-class interests. Developers compete for remaining possible project sites.

Note: The “Family Unit” column uses household as the unit of measure. Though it identifies singles as potential residents, activity in the neighborhood would be analyzed at the household level.

Source: Gale (1976), 105-109. Gale (1979), 300.

B.iii. Stages of Urban Displacement (Grier 1978)

In their article “Urban Displacement: A Reconnaissance” (1978), George and Eunice Grier pioneered the development of the concept of displacement and provided an organized framework for its study before other researchers adopted a common standard. In their discussion, the Griers emphasize that

understanding displacement requires the identification and analysis of local neighborhood conditions and the agents behaving in the environment.²⁸ Their discussion notes that displacement can occur in neighborhoods that are declining, stable, or experiencing revitalization and gentrification.²⁹ Based on their analysis, displacement does not solely occur in revitalizing neighborhoods; they make the point that it can occur in a variety of conditions. Additionally, they clarify that displaced households can be characterized in a variety of ways: renters and owners, different races, and different ages, incomes, and household types. They make clear, though, that minority, low-to-moderate income, and elderly households are disproportionately impacted by the economic conditions that precipitate displacement.³⁰

The Griers provide a general definition of displacement, as well as the definitions for the three types of displacement they identify. They make the point that their definition of displacement is meant to be both comprehensive and broad enough to accommodate a variety of conditions and agents. Their definition is as follows:

“Displacement occurs when any household is forced to move from its residence by conditions which affect the dwelling or its immediate surroundings, and which:

1. Are beyond the household’s reasonable ability to control or prevent;
2. Occur despite the households’ having met all previously-imposed conditions of occupancy; and
3. Make continued occupancy by that household impossible, hazardous, or unaffordable.”³¹

In identifying the three types of displacement, the authors emphasize that broader market forces have a strong affect on the neighborhood’s economic conditions and the movement of its residents. They

²⁸ Grier, “Urban Displacement” (1978), 256.

²⁹ Ibid., 252.

³⁰ Ibid., 253.

³¹ Ibid., 256.

emphasize the economics of displacement and the factors driving population movements. Their three definitions include:³²

- **Disinvestment Displacement:** A property deteriorates to such an extent that it is no longer financially viable to maintain. The owner allows the property to remain vacant or further deteriorate until it is no longer habitable.
- **Reinvestment Displacement:** The value of a property increases to a level that attracts a more affluent market segment. The property is then renovated and either rented to new tenants or sold.
- **Displacement Due to Enhanced Competition:** Demand exceeds supply in a local market for properties that are in a good condition. This limited supply forces buyers and renters to compete, resulting in increases in prices, rent, and property taxes.

B.iv. Housing Market Filtration (Grigsby 1963)

As urban renewal projects occurred in cities across America, William Grigsby sought to analyze housing markets and the relationship between suburban housing construction and inner-city decline. His thesis articulated that “the decisive force reshaping American cities has been the high volume of suburban building, directed largely by market forces and constrained by the most tenuous of planning controls, rather than direct renewal efforts.”³³ His research expanded the scale of analysis to develop a regional or metropolitan perspective arguing that urban and suburban housing markets were inextricably linked and affected one another. Grigsby argued that private and public actors were actively involved in changes in the housing market with the chief goal being the maximization of price appreciation and the prevention of loss.³⁴ To more clearly understand these shifts, he developed an approach that defined the local market structure through a housing submarket matrix, which then allowed him to assess the

³² Grier (1978), 253-255.

³³ Grigsby, *Housing Markets and Public Policy* (1963), 5.

³⁴ Grigsby (1963), 23.

filtering process of how demographic groups occupied housing submarkets. His perspective on filtration expanded the understanding of the life cycle of a dwelling unit and the differences in local conditions when an occupant considered the unit satisfactory.³⁵

Grigsby emphasized that the housing submarkets of a city are interrelated; and, when analyzed simultaneously, researchers can better understand supply and demand shifts within and between submarkets. Because occupants of the dwelling units are making various types of locational decisions, he argued that linkages existed between submarkets because of their occupants. Thus, these linkages helped to explain changes in submarkets over time because of both their relationships to one another and their individual characteristics. In building a housing submarket matrix, Grigsby utilized data to create two profiles: one for dwellings units, and another for occupants. The dwelling unit profile included characteristics about location, tenure, value, type of structure, quality, condition, age, and size. The occupant profile included characteristics about age and sex of head of household, family income, race, family size, and employment location of head of household.³⁶ In studying these profiles in a longitudinal analysis, Grigsby argued that occupancy patterns could be identified within and between housing submarkets. As the occupancy patterns shifted over time, he argued that researchers could track changes in housing substitution as dwelling units competed with one another for occupants.³⁷ When households made their locational decisions, they could be based on housing quality, affordability, amenities, racial or ethnic character, transportation facilities and access, and access to jobs.³⁸ As households occupied or vacated housing units, a filtering process occurred that saw supply and demand shifts in housing submarkets. Grigsby identified three filtering processes that occurred in

³⁵ Grigsby (1963), 25.

³⁶ Ibid., 31, 37-38, 40, 48.

³⁷ Ibid., 34.

³⁸ Ibid., 36, 55.

neighborhoods: changes in occupancy, changes in value, and changes in housing standards.³⁹ Each of these processes are interrelated; as supply and demand dynamics shift in occupancy, value, and housing standards, the changes are reflected in the housing submarket. Changes in occupancy typically result as dwelling units in a submarket – specifically older units – filter down to lower income groups as higher income groups leave. This can be driven by either a reduction in value of the unit – either sale price or rent – and/or a decrease in the standards or conditions of the unit.⁴⁰ At the time that Grigsby wrote his book in 1963, he was not only examining inner city revitalization and urban renewal but also the effects of rapidly expanding metropolitan housing markets into the suburbs. Thus, as higher income groups accessed newer housing with higher standards, this typically meant movement away from the city center into a more suburban setting. An important consideration in assessing the desires of occupants is tracking changes in housing standards. Grigsby defined “standards” as housing conditions and housing obsolescence. Housing conditions, or housing quality, addressed the habitability of a dwelling unit – that typically meaning, a unit’s overall cleanliness and hygiene and the presence of functioning infrastructure like plumbing, electricity, good windows and doors, and no leaks or drafts.⁴¹ Differently, housing obsolescence addresses whether or not a dwelling unit is technologically and stylistically desirable by a tenant, and whether the unit possesses the locational advantages to an occupant.⁴² Thus, the filtering process is an interplay of supply and demand between the needs, constraints, and desires of occupants, the standards and conditions of housing, and the affordability of dwelling units. Because of this interrelatedness, the housing submarket matrix is used in conjunction with the filtering process to track changes in neighborhoods.

³⁹ Grigsby (1963), 85.

⁴⁰ In presenting the filtering processes, Grigsby addresses the topic by discussing the research of multiple authors that had sought to concretely define these changes in housing submarkets. This discussion occurred throughout the entirety of Chapter III of his book. Ibid., 86-87, 87-91, 91-95.

⁴¹ Ibid., 95-98.

⁴² Ibid., 100, 102-103.

3. RESEARCH METHODOLOGY

My research methodology will develop the model for a series of assessment tools to study and analyze historic housing submarket changes at the refined geographic scales of the block and parcel levels in Milwaukee. Created within the framework of a city information model (CIM), the tools will utilize 2D and 3D GIS software to integrate demographic, economic, and spatial data. These data overlays will enable the analysis of trends in Milwaukee's housing submarkets. The tools will be limited by data availability. Available datasets will be incorporated into the CIM; however, data gaps may exist if sufficient data is not available. The CIM will have the dual abilities as an assessment tool to conduct spatial and system analyses. Because housing submarket changes occur at the intersection of multiple trends, these overlapping patterns will be discernible with an integrated analysis framework.

The potential for this type of research methodology in Milwaukee is feasible and has previous precedent in research that I conducted in 2015 and 2018.¹ The newest development in mapping technology is the ability to take 2D spatial datasets and visualize them through 3D renderings. This software advancement allows for comparisons between multiple historical time periods in a rapidly rendered format, as opposed to other software that requires the manual extrusion of buildings.

Because of the variety of historical datasets available, Milwaukee provides a unique opportunity to develop this CIM. Milwaukee benefits from an ample supply of historical data that includes demographic datasets, shapefiles, raster aerial photography, and historic maps. When combined, these resources can be blended and pooled to provide unique insights. The other notable characteristic of

¹ The first study was conducted under the auspices of an emerging Water Technology District in the Walker's Point neighborhood. See Kristian Vaughn, "Milwaukee Water Technology District Economic Investment Analysis 2010-2014" (2015). The second study adopted a different lens to look at the Walker's Point neighborhood in its entirety. See Kristian Vaughn, "Walker's Point Neighborhood: Economic Performance Study 2010-2018" (2018).

Milwaukee's data is its availability at a granular scale. Fortunately, the data exists to examine the city at the block, parcel, and building scale. As contrasted with other cities, Milwaukee benefits from this notable distinction. This availability of historical data creates an important contrast when examining longitudinal trends, which has special bearing on my research's focus on housing submarkets.

A. Case Study Design

My research adopts a case study approach to focus on select housing submarkets in Milwaukee. The broader purpose in developing my research method is to incorporate a detailed scope of study to maintain the validity of the research results, address the multiple case study geographies to analyze a diverse set of neighborhoods in Milwaukee, and build a time series analysis of changes to understand their longitudinal impacts. Developing case studies for multiple housing submarkets creates a unique perspective that allows for a more comprehensive assessment of patterns analysis to identify unique, discrete events versus multiple, interrelated events. Because many of the critical factors in Milwaukee's housing submarkets are interrelated, the case study method positions my research to address intersectional issues and identify their commonalities and differences. As discussed in the literature review in Chapter 2 and what will be presented in the subsequent sections of this chapter, my research relies on a mixed methods approach. One of my research's true strengths is its multi-disciplinary perspective that seeks to simultaneously address the economic, demographic, and spatial patterns present in the deterioration and capital abandonment of Milwaukee's housing submarkets.

To implement a mixed methods approach, my research focuses on building a data model and CIM that is specifically suited for American industrial cities. The intent is to a) further expand on the school of thought of capital abandonment – and by extension capital reinvestment – of America's Rust Belt cities, and b) create templates that are transferable among cities depending on the needs of the researcher and data availability. Milwaukee and the selected housing submarkets serve as the case study

geographies to test and refine this approach with the hope that researchers can leverage this work for future projects. Table 3.1 details the three data profiles that are central to this effort and serve as the basic skeleton of the 2D and 3D data foundation for analysis. Each of these data profiles are outlined and built to be utilized in 2D and 3D analysis depending on the needs of the research.

Table 3.1: Data Profiles for 2D and 3D Analysis

<i>Profile</i>	<i>Attributes</i>
Economic	<p>Dwelling Units: location, tenure, value (sale price or rent), type of structure, quality, condition, age, size</p> <p>Mortgages: issuing agency or bank, outstanding debt, interest rate, foreclosure rate</p>
Demographic	<p>Household Characteristics: age and sex of household members, household or family income, number of individuals per household, race and/or ethnicity</p> <p>Employment: Salary or wages, educational attainment, literacy, unemployment</p>
Spatial	<p>Circulation Network: paths per block, length and width, permeability within block, orientation, slope</p> <p>Block Occupancy: occupancy factor, building compactness, building sites per block, number of floors per building per block, area of block</p> <p>Block Form: general block form, number of lots on block, form of building sites on block, placement and direction of building sites, size of blocks, distribution of sizes, block orientation</p> <p>Lot Occupancy: number of residential buildings, number of all buildings, habitable space within buildings and as percent of lot and block areas, building coverage on lot, floor area ratio, building height</p>

This multi-disciplinary approach is not only designed to develop a comprehensive perspective on housing submarket deterioration, but it specifically addresses the limitations of the existing literature and seeks to fill multiple research voids using the case study approach and new technologies. The existing body of literature on neighborhood succession, gentrification, and displacement admit numerous limitations that inhibit the analysis of longitudinal trends through a historical assessment. My research methodology proposes to address these limitations in the following ways:

- My case study approach employing mixed methods creates a multi-disciplinary perspective that will utilize numerous qualitative and quantitative information sources to knit together

previously unrelated datasets. This ability to blend multiple sources allows me to conduct longitudinal research and analyze the economic, demographic, and spatial patterns of Milwaukee's housing submarkets from 1910 to 1970. Due to a lack of data and insufficiencies in existing datasets, previously published studies have struggled to effectively capture the gentrification and displacement phenomena. Current data does not capture the needed granularity of housing conditions in American neighborhoods, nor does it ask survey respondents for qualitative interpretations of neighborhood conditions. Additionally, it does not account for the unstable housing conditions of households, limitations of residential mobility rates, poor or inadequate measures, and the inappropriate timing of data collection.²

- The case study geographies identified in Section D of this chapter have historical significance in Milwaukee and are contextually appropriate for the city's neighborhoods. These housing submarkets were intentionally selected to a) build the case study approach for my research, and b) overcome the persistent issue of researchers utilizing Census Tracts as proxies for neighborhoods. Due to historical variations in Census geographies, they lack the validity and reliability to be used as places in studies. Because Census Tracts rely on decennial data to be drawn, their use is also problematic because of the extended time intervals from one decade to the next. If a significant economic or population shift occurs during the decadal interval, there will be no accounting for the change until the start of the next decade.³ As discussed in the previous bullet point, my mixed methods approach of using numerous data sources provides insights into intra-decadal neighborhood changes.

² The datasets most often relied on by researchers include the American Housing Survey, the American Community Survey (ACS), the Decennial Census, Medicaid data, municipal assessor data, the Federal Reserve Bank of New York Consumer Credit Panel/Equifax, and the Panel Study of Income Dynamics (PSID). Dragan, "Does Gentrification Displace Poor Children?" (2019), 6-7, 10. Ellen, "Can Gentrification Be Inclusive?" (2017), 2.

³ Vigdor, et al., "Does Gentrification Harm the Poor?" (2002), 135. Freeman, "Displacement or Succession?" (2005), 467, 469. Ding, et al., "Gentrification and residential mobility" (2016), 38-39. Dragan (2019), 11.

- As opposed to relying exclusively on the statistical methods of multiple regression analysis, my research proposes to develop the alternative perspective of a case study approach. While multiple regression is valuable in select circumstances, studies conducted since the 1990s have not concluded with statistically significant evidence that neighborhoods undergoing gentrification see increases in the displacement of existing residents. Ellen (2017) notes a full list of studies that have identified these results.⁴ To address this limitation, my case study methodology foregoes the more definitive and causative nature of statistics with the exploratory and explanatory purposes of blending multiple, historical datasets to create a cohesive portrait of Milwaukee’s inner city housing submarkets. My approach intends to identify and connect longitudinal trends in the city to develop a data-rich narrative.

In the subsequent sections of this chapter, multiple aspects of this mixed methods approach are outlined. In Section B, a literature review of city information models, digital twins, and built environment catalogues is presented. This discussion is meant to outline the existing work of practitioners and researchers employing 2D and 3D analysis methods. These details are then specifically applied to Milwaukee in the data model proposed in Section C. The housing submarkets for my research are presented and discussed in Section D.

B. Analysis Methods

The literature about analysis methods provides my research with two related, yet different, components: 1) the CIM framework to create 2D and 3D diagnostic tools, and 2) the design analysis methods to conduct qualitative analyses of changes in the built environment and quantitative pattern analysis of the attributes of blocks, lots, and structures. The CIM is the integral piece of technology for

⁴ Ellen (2017), 2. *See also* Vigdor, et al. (2002), 149; and, Sumka, “Neighborhood Revitalization and Displacement” (1979), 486.

my research that acts as one of the most important research contributions of my work. The existing CIM literature provides the theoretical proposals for the creation of the technology with limited operational examples. When paired with ESRI's available software, the proposals can be operationalized and adapted for the case study geographies in Milwaukee. The urban morphology considerations presented in the research by Anne Vernez-Moudon, Alireza Arsiya Ravari, Mehrdad Mazloomi, Joao Silva Leite, and Rui Justo provide the qualitative and quantitative analysis techniques that are built into the CIM's diagnostic capabilities. When analyzed in conjunction with the economic and demographic data, this represents my comprehensive case study approach.

B.i. City Information Models & Digital Twins

While architects, designers, and planners considered the transition from BIM to CIM, the emergence of the internet of things (IoT) and smart cities encouraged the development of the concept of digital twins. There are substantial similarities between CIM and digital twins; and, as the literature seems to indicate, the terms are currently being used almost interchangeably in the professional lexicon. In recent years, it appears that researchers from numerous fields are acting in parallel but have yet to share ideas across their disciplines. For the purposes of my research, it is important to clarify that the literature on CIM is far more detailed and developed than that of digital twins; though, literature about digital twins is included in this section. As a result, this section emphasizes CIM and notes digital twins when appropriate. Because my research and its accompanying digital tools are a proof concept for CIM, my work explores the distinction between CIM and digital twins.

City information models are digital tools created by recent software advances that allow researchers and practitioners to conduct diagnostic assessments of urban environments. The tools allow for an interactive, dynamic visualization of the built environment with the enhanced capability of incorporating additional levels of detail through the layering of economic and social data. Thus, CIM can be leveraged

to provide a more holistic perspective of urban communities. Because the data is digitized, CIM also provides the ability to conduct scenario modelling through a researcher's ability to alter attributes to efficiently analyze different outcomes. Stojanovski emphasized that CIM presents urban elements within 3D space, which "[enriches] [the researcher's perspective] with multilevel and multiscale views, [a] designer toolbox and [an] inventory of 3D elements with their relationships."⁵ These abilities lend CIM to a variety of uses. Simonelli and Amorim (2018) presented four possible uses for CIM based on the needs of the researcher: descriptive, exploratory, planning, or predictive. A descriptive model visualizes data to present the existing conditions of an environment; an exploratory model allows the user to consider other possible scenarios or realities; a planning model considers different variables within the descriptive and exploratory models to determine significance; and, a predictive model uses the three previous models to anticipate future scenarios.⁶ This adaptability of CIM allows the researcher to create models of varying complexities depending on the needs of the analysis, which can be significant when leveraged with other methodologies to assess communities.

The CIM literature presents a variety of uses for the models and demonstrates the advantages of their diversity and adaptability. Across the body of literature, CIM is well positioned to assist with systems analysis, regulatory management, and the assessment of design typologies.⁷ It has significant strengths in urban design analysis because of its ability to visualize qualitative design aspects of the environment while simultaneously managing a database of social and economic characteristics. CIM enables a rule-based, elemental approach that allows for a descriptive analysis of existing conditions and a forward-

⁵ Stojanovski, "City information modeling (CIM) and urbanism: Blocks, connections, territories, people and situations" (2013), 4.

⁶ Simonelli and Amorim, "City Information Modeling: General Aspects and Conceptualization" (2018), 319.

⁷ Simonelli and Amorim (2018), 321. Schnabel, et al., "Using parametric modelling in form-based code design for high-dense cities" (2016), 1384.

looking predictive basis for analyzing scenarios. Within the literature, the following uses of CIM have been proposed:

- Schnabel, et al. (2017) proposed a process and data framework for the digitization of design morphologies. The authors specifically identified buildings, streets, and blocks within the urban transect for land use management. Their goal was to use this data within the context of form-based codes to create predictive modelling for ideal development patterns.⁸
- Xu, et al. (2014) developed a data model for the adaptation of BIM to CIM. The proposal is complex and detailed, which makes it informative. However, collecting the volume of data proposed would be difficult to manage. Thus, as a hypothetical data model, the article proposes an extensive list of variables for consideration. An individual researcher would need to determine if those variables were pertinent to their research.
- Stojanovski (2013, 2017, 2018) emphasized an elemental approach to neighborhood development. He envisioned the potential for procedural modelling of urban scenarios with design elements where a researcher could “model and analyse urban scenarios with generative procedures, rules and typological processes.”⁹ His work also appears in the urban morphology literature where he developed a multi-variate regression model to assess the statistical significance of design elements as variables.
- Duarte, et al. (2012) proposed the creation of an AI-based system that uses Christopher Alexander’s *Pattern Language* (1977) to create a dictionary of place. This “urban design machine” would use three sub-models to assess an urban environment: the formulation model

⁸ Schnabel, et al. (2016), 1383-1386.

⁹ Stojanovski, “City Information Modelling (CIM) and Urban Design: Morphological Structure, Design Elements and Programming Classes in CIM” (2018), 507.

to propose urban problems, the generation model to create design solutions, and the evaluation model to assess the efficacy of the design alternatives.¹⁰

Because CIM is built on and operates within a digital architecture, the creation of the models requires that the various data sources be digitized into an appropriate format for the software. With respect to qualitative factors, the question is whether or not they *can* be digitized. That digitization process is inherently quantitative because the qualitative factor needs to fit within the constraints of the software. If a researcher is working in CAD, SketchUp, or drawing by hand, then qualitative factors can be more easily considered. However, a challenge would then be presented in developing a fair comparison between the quantitative factors in CIM and the qualitative information presented from other sources. Thus, it becomes a balancing act. The power of CIM is not in the fact that it is a universal diagnostic tool. Its power comes from its ability to be used in conjunction with other methodologies to then leverage multiple datasets simultaneously. It is still incumbent upon the researcher to build auditing procedures into their methodologies to ensure that perspectives are considered fairly. In scenario modelling, the researcher could use CIM to rapidly visualize an environment and consider alternative scenarios. The researcher would then need to share the results with their colleagues, decision makers, or neighborhood residents to receive feedback. Importantly, it must be emphasized that computers and software cannot solve every problem. Despite the potential of AI and machine learning (ML), the role of humans in the analysis of urban environments is still critical. The role of software is to augment human analysis, not replace it. Considering these points, the following limitations of CIM can be considered:

- There is no commonly accepted data model or professional standards for CIM. Researchers have built hypothetical data models for their proposals or collected data to conduct specific

¹⁰ Duarte, et al., “City Induction: A Model for Formulating, Generating, and Evaluating Urban Designs” (2012), 80, 83.

analyses, but there is no central reference to define the scope of data for CIM. The literature has referenced ISO 37120, CityGML, and the City Induction Project as possible standards. However, the literature does not indicate that researchers have uniformly adopted these standards. Dantas (2019) and Gil and Duarte (2011) have tried to address this issue in their work.

- This lack of a common data model and professional standards raises the risk of bias in CIM due to data selection on the part of the researcher. Whether the model is used for planning or predictive purposes, the selected data can determine which perspectives are included or excluded. This is particularly concerning for statistical analyses because of the potential influence of spurious variables, the misrepresentation of data, and the risk of misinformed algorithms for predictive analytics. To mitigate these risks, researchers need to acknowledge the limitations of their analyses, address missing or poor quality data, and identify data proxies if appropriate.
- As discussed by Simonelli and Amorim (2018), CIM can be employed for a variety of reasons. It has the ability to be leveraged in powerful ways, but it also can be underutilized. For the purposes of general visualization and information gathering, descriptive or exploratory models have overarching value. The researcher can assess the environment, quantify descriptive statistics, and analyze qualitative factors. But, if the model is not further developed, then it essentially becomes 3D GIS. The value of CIM is determined when the researcher defines the purpose of the model. If the goals of the model are clearly defined, then it can be developed with a complex framework and interactive user interface that serves a broader purpose.

B.ii. Built Environment Catalogues

B.ii.a. Neighborhood Housing (Moudon 1989)

In the development of the field of urban morphology, distinct traditions and methodologies originated from the German, British, and Italian perspectives. In her 1989 book *Built for Change: Neighborhood Architecture in San Francisco*, Anne Vernez-Moudon established the American school on the topic and built a framework for analyzing residential neighborhoods through her case study approach of the Alamo Square neighborhood in San Francisco. At a time when the United States was witnessing a discernible period of urban reinvestment, Moudon sought to add a design perspective to the ongoing research that focused on social and economic considerations.¹¹ The research conducted a historical assessment of the neighborhood to understand the adaptability of residential space and frame the community within the broader context of the city.¹² In addition to quantifying the spatial changes that had occurred over the study period, the work discussed the meaning and relevance of the trends. Moudon emphasized the role of the individual citizen in defining space needs and examining how daily life changed the spatial character of the neighborhood.

Moudon developed a detailed dataset of block- and structure-level data about the Alamo Square neighborhood. In the Preface and Introduction, she acknowledges that the methodology developed over time. Even though the research team developed a framework initially, it was continually updated as the work progressed. This evolution of the research ultimately served multiple purposes: 1) to establish a transferable methodology for research in other neighborhoods, 2) to build a detailed portrait of urban space use in Alamo Square, and 3) to then use that portrait to discuss the historical evolution of space use and the implications of changes over time. Moudon's book is lengthy and detailed with the chapters chronicling her effort and methodology from initial data collection and creation of the housing

¹¹ Moudon, *Built for Change: Neighborhood Architecture in San Francisco* (1989), xvi.

¹² *Ibid.*, xi.

catalogue to the historical assessment of change in the neighborhood, and then a robust discussion about relationships between those changes. Within these larger sections, the following additional detail is noteworthy.

Historic Housing Catalogue: The catalogue focused on blocks, lots, and structures as the three key units of measure. The geography, topography, and street grid are discussed as the framework for the three key units. With that defined focus, the analysis then details the design of block and lot form and quantifies their characteristics of dimensions, area, land use, and land rights. It also addresses the nuances of alleys, small lots, and pre-grid development. The structures catalogue assesses the typology of house form to lots, public and private façades, and the more detailed housing elements of stoops, commercial bases, and negative built residential spaces.

Quantifying and Assessing Change: The housing catalogue relied on historical data, primarily Sanborn Fire Insurance Maps from the late 1800s and early 1900s, to create a foundation for the database. By then tracking spatial changes over time, the research develops a longitudinal portrait of the neighborhood. This includes new construction and demolition, subdivisions of land, new house forms, the organization of dwelling units, and new uses of corridors. Additionally, urban renewal plays a role in the data as the neighborhood reacted to demolitions and new infill construction – some of which was properly scaled to the existing built environment whereas others were too large and out of place.

Identifying Relationships within the Change: In the final chapters of the book, Moudon discusses the relationships between the neighborhood's original character and how it changed over the course of 60-80 years. At a refined scale, this discussion focused on the role of residential land bases (e.g., garages, in-home businesses), side yards, recesses in housing form, and street ends. At a larger scale, this included a detailed assessment of block form, building

coverage on lots and blocks, primary and secondary circulation networks for vehicles and pedestrians, and land aggregation and the collectivization of space.

B.ii.b. Morphological Indices of Paths and Blocks (Ravari and Mazloomi 2015)

In their article “A Framework for Urban Morphology with Respect to the Form” (2015), Alireza Arsiya

Ravari and Mehrdad Mazloomi quantify the spatial implications of neighborhood construction by developing morphological indices for blocks and paths. Their perspective examines the morphology of informal and formal space as it appears in developing and industrialized nations. This approach provides an alternative perspective when considering environments that have developed organically versus those that have been strongly influenced by centralized planning efforts. Their work embraces a multi-disciplinary perspective to analyze the morphology of blocks in conjunction with the cultural, social, economic, and political influences of the community.¹³

Their two indices allow for the deconstruction of urban space and the simultaneous design assessment and quantification of its spatial elements. Their work includes concept drawings for identifying and examining different spatial profiles, while also cataloguing the unique characteristics of these spaces.¹⁴ Their index for paths is adaptive and flexible to consider not only streets and sidewalks, but also alleys, informal foot trails, and other paths that may be present in informal environments. Their path index included indicators for number of paths per block, average length and width, the degree to which the paths permeated the block, and the orientation, slope, and distribution method of the paths. Similarly, their block index reflected a flexibility to accommodate a diversity of urban forms. The number of indicators in the block index was more substantial than that of paths. They include density factors of occupancy, building compactness, number of building sites per block, average number of floors per

¹³ Ravari and Mazloomi, “A Framework for Urban Morphology” (2015), 92.

¹⁴ Ibid., 100.

building per block, and area of a block; the overall form of building sites on a block, placement of building sites, and direction of building sites; and, size of the blocks, distribution of size, block orientation, and general form of the blocks.

B.ii.c. Urban Block Elements and Linear Urban Systems (Leite and Justo 2017)

In their article “Typo-morphology: from research to architectural education” (2017), Joao Silva Leite and Rui Justo present their methodological framework for assessing structured urban space through the decomposition of its components and its evolution through history.¹⁵ Their work focuses on the analysis of neighborhood block structures and linear urban systems; specifically, they provide case study examples of the longitudinal studies of urban block structures as they change through history.

Whether the urban block or linear system, the authors focus on six overarching elements: topography, perimeter, plots structure, built fabric, courtyard, and building.¹⁶ Topography provides the natural constraints and drivers for urban block design. The perimeter articulates the block boundaries and the physical form of public and private space. The plot or lot structure defines the individual blocks. The buildings define the use of the block structures and differentiate its interior and exterior spaces. The courtyard identifies open space for public or private uses, while the individual buildings provide a framework for the block structure while creating interior environments for individual users.

C. Data Model

C.i. Development of the City Information Model & Digital Twin

The historical model for my research will use available data to create a framework that is substantially similar to those proposed for contemporary CIMs. The intent is to re-create historic neighborhood environments using 2D and 3D GIS. With recent advances in data availability and new analysis software, building dynamic historical environments is now possible. My research will adapt the contemporary CIM

¹⁵ Leite and Justo, “Typo-morphology: from research to architectural education” (2017), 1176, 1179.

¹⁶ Ibid., 1177.

framework to the historic Milwaukee environment and create a template that can be replicated elsewhere.

The historical CIM will develop an analysis strategy that digitizes, pools, and blends data across multiple time periods to create longitudinal comparisons of the economic, demographic, and spatial attributes of housing submarkets. The challenge in effectively addressing these data profiles is the completeness of available data. Detailed data is not available for each of these profiles, but select sources exist that either address the profiles directly or offer reasonable proxies.

To create the historical CIM, a multi-step process will be utilized to create the 2D GIS framework for analysis with the 3D modelling then being extruded from those data sources. A variety of data types will be adapted and processed to be visualized simultaneously. These will include raster images, historical documents, spreadsheets in .CSV and .XLS format, and shapefiles. The process is visually represented in Figure 3.1 and summarized in the following bullet points.

- **Pooling Raster Datasets:** Multiple sources of maps and aerial photography are available that have been georeferenced to Milwaukee County's coordinate system (NAD 1983 State Plane Wisconsin South FIPS 4803 (US Feet)). Neighborhood geographies from other data sources will be overlaid onto the raster datasets to refine the historical CIM framework.
- **Digitizing Raster Datasets:** In addition to the historical maps, other references are available that will be utilized to create additional data layers. Each of the raster datasets will be digitized into point, line, and polygon files. Data dictionaries will then be created to provide metadata for the datasets.
- **Pooling Spatial Datasets to Create the CIM Framework:** The raster datasets will be maintained as background imagery, while the digitized datasets will be overlaid for dynamic modelling.

Other datasets that are already available as shapefiles will be incorporated to create additional data layers. This will create an integrated framework that serves as the data foundation for the historical analysis.

Within this digital architecture for the CIM, my mixed methods approach utilizes the data profiles previously presented in Table 3.1 to assess the demographic, economic, and spatial attributes of housing submarket conditions during the study time period. Based on the availability of primary- and secondary-source historical data, these data profiles are used to create point-in-time assessments of the state of housing submarkets to then analyze trends and patterns across Milwaukee's neighborhoods. With my research's focus on understanding the disinvestment and capital abandonment processes, the ability of the CIM and the underlying data profiles to track the cyclicity of change in the city's neighborhoods allows for refined analysis at the block and parcel scales.

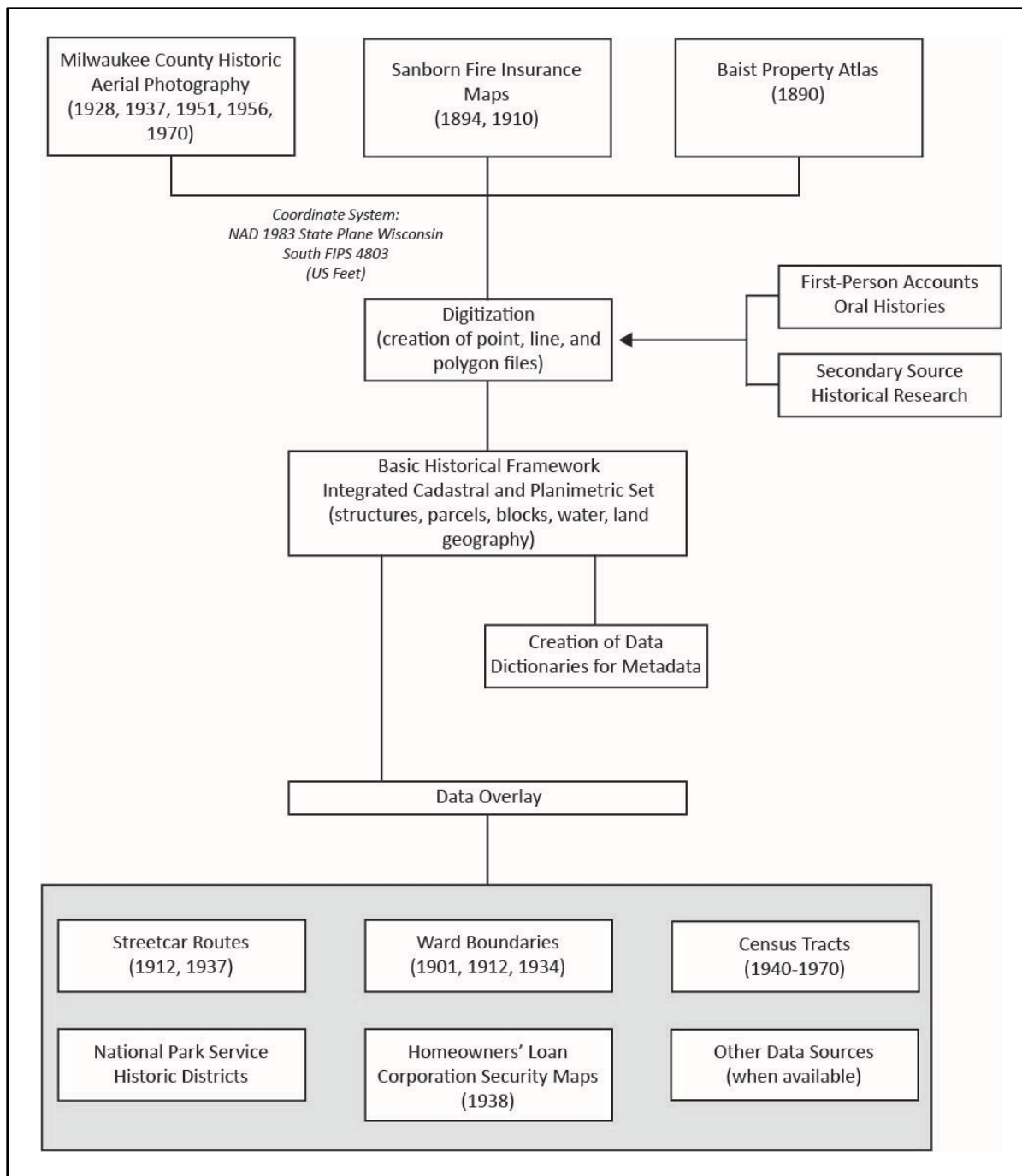


Figure 3.1: Generalized CIM Framework for Case Study Geographies

C.ii. Data Availability

Of the variety of data sources utilized in my research, data availability is a primary limitation of this analysis. The abundant data available for Milwaukee will feed the proposed CIM, however not all of the sources have data extending the entire length of the research timeframe. Certain sources are only

available at specific points in time or over specific periods of time. Thus, the available data will be stitched together to document housing submarket changes in Milwaukee. My research will utilize the full datasets available for the full length of time that they are available. When data gaps or breaks exist, they will be identified.

D. Case Study Geographies

In identifying and mapping the case study geographies for my research, the intent is to establish the spatial epicenter or genesis for disinvestment and capital abandonment patterns in Milwaukee's inner core housing submarkets.¹⁷ Because these submarkets developed over time, various historical geographies overlap and interact with one another to produce a regulatory and market environment that constrained local neighborhood economies. Identifying these relationships builds a spatial reference for my research to construct the models necessary to reverse engineer the disinvestment and capital abandonment processes.

The overall research study area is composed of three overlapping geographies that share a common impetus as either regulatory- or market-based controls in the inner core neighborhoods. The intent in delineating this research study area is to incorporate inter- and intra-decadal geographies that assist in accurately identifying the boundaries of housing submarkets. The comparison of these case study geographies facilitates the assessment of how multiple historical influences converged to control Milwaukee's neighborhood housing. These case study geographies include:

¹⁷ The term "inner core" is derived from Mayor Frank Zeidler's 1960 study, "Mayor's Study Committee On Social Problems in the Inner Core Area of the City." For my research, I use this term to reference an Inner Core North and an Inner Core South. See "Mayor's Study Committee on Social Problems in the Inner Core Area of the City: Final Report to The Honorable Frank P. Zeidler, Mayor" (1960). See also Charles T. O'Reilly, "The Inner Core-North, A Study of Milwaukee's Negro Community," University of Wisconsin-Milwaukee, School of Social Work: Milwaukee, 1963; and, Charles T. O'Reilly, et al., "The People of the Inner Core-North: A Study of Milwaukee's Negro Community," LePlay Research, Inc.: New York, 1965.

- **1916 Slum Wards:** Due to concerns voiced by urban reformers and public health advocates, the five slum wards identified in 1916 established the original spatial basis for neighborhoods suffering unhygienic living conditions, congestion and density, and concerns about potential decreases in property values. These five wards then became the focus of City leadership in the codification and enforcement of Milwaukee’s first zoning code.
- **1920 Commercial & Light Manufacturing Zoning:** To protect Milwaukee’s central business district and eliminate slum conditions, commercial and light manufacturing zoning were enacted throughout the city’s inner core neighborhoods to protect business interests. This regulatory action negatively impacted diverse, mixed-use neighborhoods. In addition, the City’s 1924 Platting Guide established regulatory controls for new subdivisions on Milwaukee’s periphery to create homogenous land use districts and segregate uses.
- **1938 Homeowners’ Loan Corporation (HOLC) “D”-Graded Districts:** The delineation of “D”-graded HOLC districts served to communicate the negative perception of lenders and restrict capital access in inner core neighborhoods by labeling them as “hazardous.” As a market control, this further confined inner core neighborhoods that had previously been re-zoned.

When considered collectively, these geographies interact in a mosaic pattern over an approximately 25-year period. The impacts of these geographies were not limited or discrete, however; instead, they created a convergence of regulatory and market actions that persisted through multiple decades of Milwaukee’s history and produced the cumulative effects of disinvestment and capital abandonment. Figure 3.2 presents the inter-relatedness of the geographies and how they segmented land uses and populations in neighborhoods. Figures 3.3 and 3.4 present maps of the case study geographies.

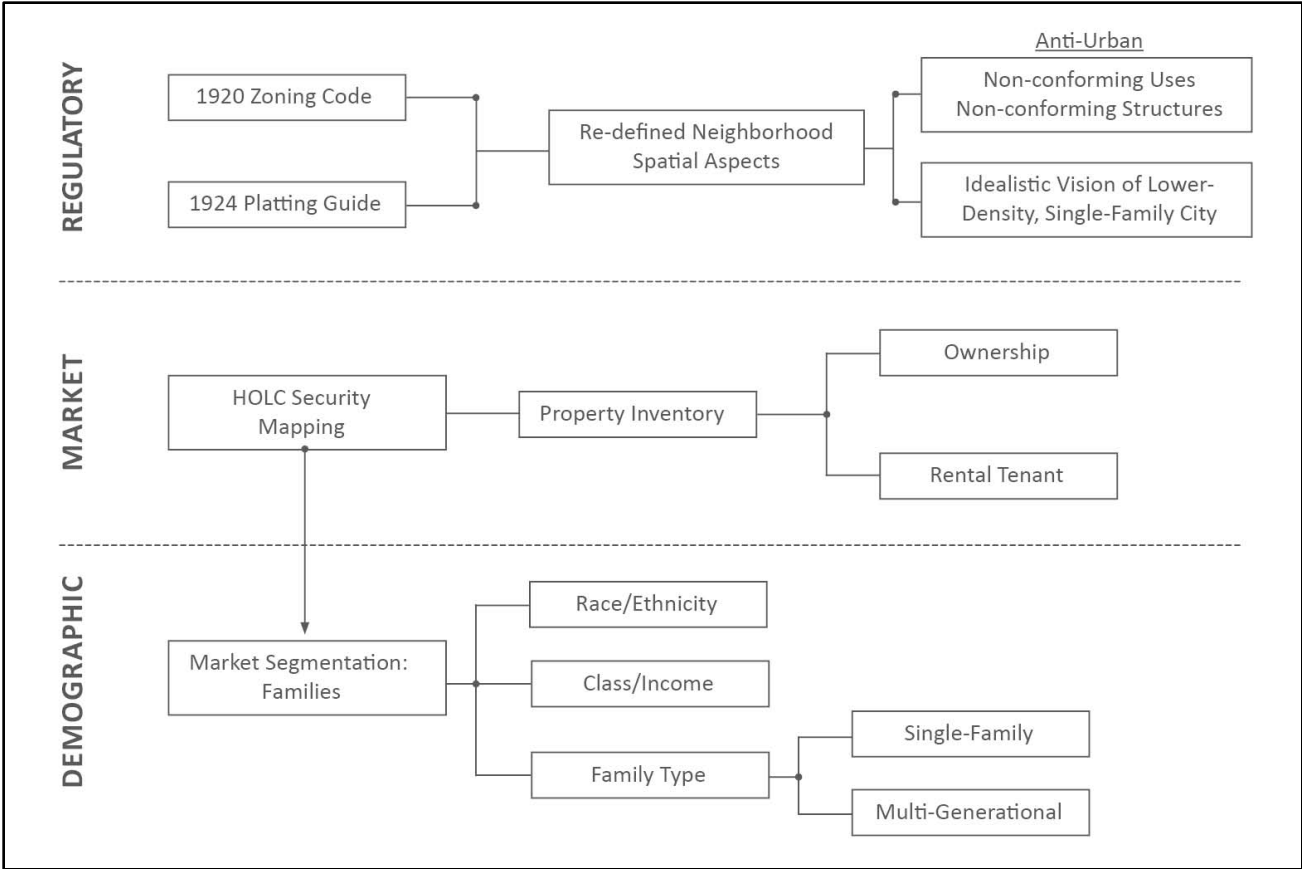


Figure 3.2: Inter-Related Elements & Cumulative Effects of Case Study Geographies

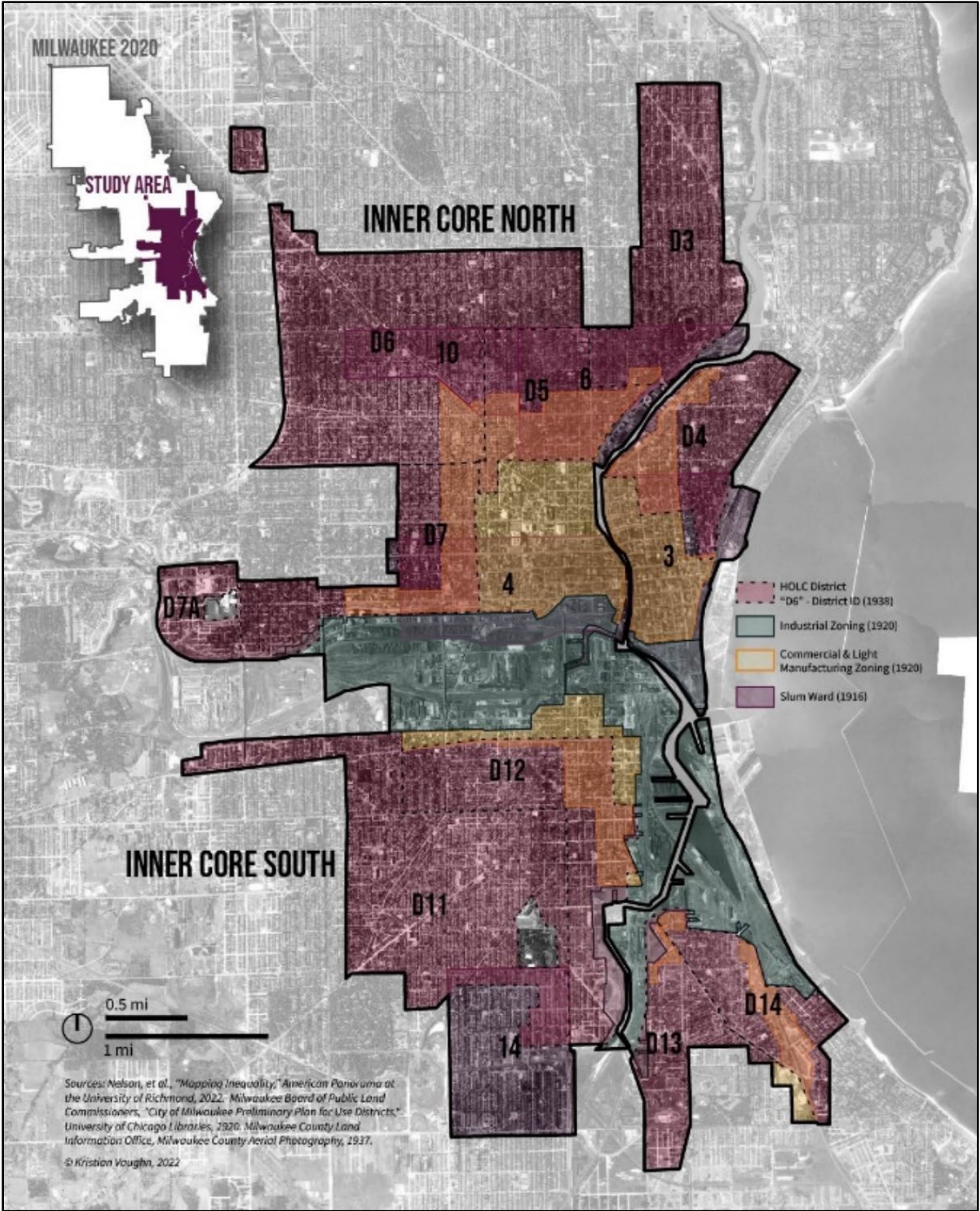


Figure 3.3: Overlay of Case Study Geographies in the Inner Core North & South

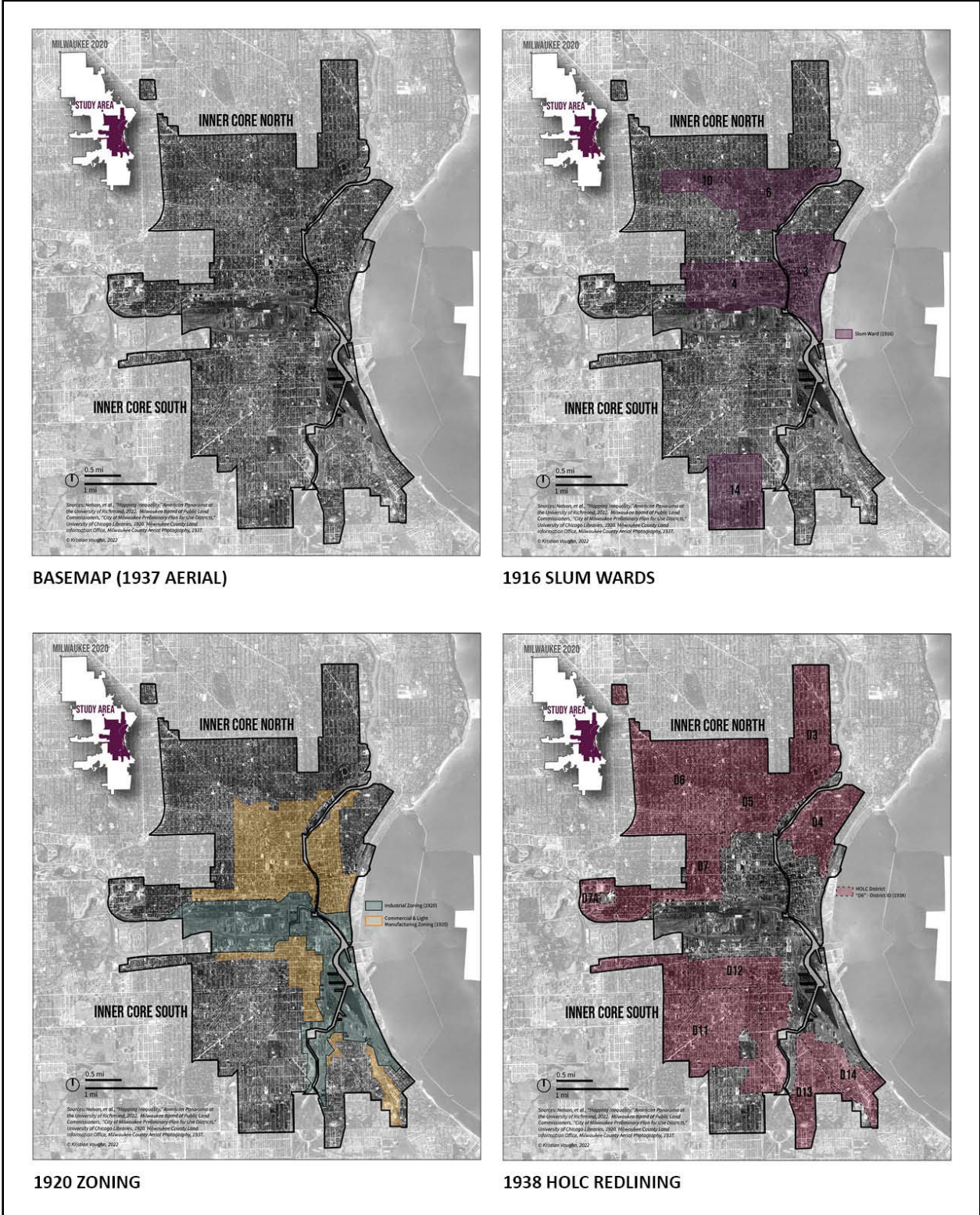


Figure 3.4: Comparison of Case Study Geographies in the Inner Core North & South

4. ANALYSIS RESULTS

Preface

The story of Milwaukee's housing submarkets is one of ambiguities, ironies, and paradoxes. Socio-culturally, it is a story of immigration, culturally distinct racial and ethnic enclaves, vibrant culture, and the American Experience. From a leadership perspective, it is a history of intentional behaviors, political ideology, protectionist laws, and centralized planning efforts. Economically, it is a story of the collision between capitalism, free markets, progressive idealism, and a city's history of mixed-use, dynamic neighborhood economies. This mix of attributes makes for a compelling historical narrative, but a lack of clarity. It will become evident that there are no clean lines or easy explanations in Milwaukee's history.

In its basic structure, this research presents and analyzes evidence across a sixty-year historical timeline from 1910 to 1970. This discussion occurs in a linear way by assessing historical events consecutively year by year. Its purpose is to catalogue these events into significant time periods and assess their impact. Because of the cyclicity of neighborhood change, this allows for the analysis of the episodic nature of the city's inner core housing submarkets. Overlaid on this timeline structure is a set of recurring themes that provide a backdrop – or context – for the individual events. This context helps to create a thread that connects the pieces of evidence to develop the timeline and frame the events into periods. These themes include: slum clearance and blight elimination, public health, housing supply, urban reform ideologies, and the politics of leadership.

Fundamentally, this is a local story: a local story about the evolution of gateway districts from the landing spot for immigrants at the turn of the 20th century into neighborhoods suffering from prolonged disinvestment and capital abandonment of their housing submarkets. It is a story that illustrates that

the American Experience is imperfect; and, when housing is used as a prism to understand Milwaukee as a multi-faceted city, gray areas and blind spots are revealed.

Part I: A Densified and Industrialized Milwaukee, 1910-1930

A. Milwaukee by 1910

Though Milwaukee in 1910 had reached a new, higher-level state of density and industrialization, the city had been steadily developing since its founding as a fur trading outpost in the 1830s. This means that the city had already experienced multiple macro-level cycles of citywide change as well as micro-level cycles at the neighborhood scale. Even by 1910, Milwaukee still held the character and sense of opportunity of a frontier city in the American Midwest. It was a hub of economic activity and freight shipping that placed it as one of the country's principal manufacturing cities and a key growth driver for Wisconsin.

By 1910, the city had largely achieved a unified spatial form and a more cohesive identity. When originally founded, the city was broken into three villages – the east side at Kilbourntown, the west side at Juneautown, and the south side at Walker's Point. The villages were each centrally located along the area's three principal rivers – Milwaukee, Menomonee, and Kinnickinnic, which – by extension – gave the villages access to Lake Michigan via the harbor inlet. The villages competed against one another for multiple decades to attract new residents and businesses. However, by the last quarter of the 19th century, that competition had significantly waned and the city became whole. Though some of the city's streets were misaligned from one edge of a river to another, the city's government coalesced to such an extent that the remnants of the village's competition were outweighed by a unified government and economy.

By the 1910s, Milwaukee's neighborhoods were unregulated property markets that developed organically over the previous 60 years based on the needs of residents and businesses. The irony of

these districts was their highly-dense, mixed-use nature – which produced a dynamic amount of activity – juxtaposed with the socio-cultural homogeneity of racial and ethnic enclaves. The districts represented centers of momentum for the city – both socio-culturally and economically – because of local institutions and social centers that served as binding agents for the community, as well as the advantages of proximity (co-location) of residences to commercial and industrial districts. This proximity was further facilitated by the city’s streetcar network that allowed residents of other neighborhoods to access jobs in parts of the city that were easily accessible on foot by those districts’ residents.

B. Housing at the Nexus of the City’s Challenges

The condition of Milwaukee’s housing market and its dwelling unit inventory came into sharp focus in the late 1910s and early 1920s as the city confronted the congestion of urbanization and industrialization, the definition of racial and ethnic enclaves in select neighborhoods, and the desire by city leadership to showcase Milwaukee as a model for urban development across the country. Whereas previously the city did not have a vision for its future expansion, housing became a focal point for the city leadership as a vehicle to realize the broader ambitions of industrializing the city further and exercising greater control over future development. The myriad of forces colliding during this time period ultimately created a series of catalysts that would manifest in multi-decadal demographic, economic, and spatial trends. This research presents these multi-faceted periods of time in four categories: competing leadership ideologies and market interventions, slum conditions, defensible space and the emergence of the Iron Ring, and the definition and expansion of Milwaukee’s metropolitan housing market. This organization of the evidence is meant to segment historical events and data into the appropriate thematic elements and then draw connections between each.

- A. Competing Leadership Ideologies and Market Interventions:** With the election of Daniel Hoan as Milwaukee’s second socialist mayor in 1916, the city experienced an ideological shift in leadership that created an intersect between capitalism, socialism, Progressive Era reformers,

and city conservationists. This produced an interesting decision-making dynamic based on free markets and profit motivations, the welfare of the city's workingmen and their families, and the desire to defend the morality of the family unit.

- B. Slum Conditions:** Milwaukee's identification as the second most dense city in the country by the 1920 Decennial Census sounded the alarm in the city. Reformers determined that deteriorated housing conditions in the city's slum wards could no longer be overlooked. While there were legitimate motivations to protect public health, there was also an undercurrent of anti-immigrant and racial animus towards the residents of the slum wards in addition to business interests that sought to protect property values.
- C. Defensible Space and the Emergence of the Iron Ring:** City leadership and reformers feared the contagion effect of the slum conditions. Primarily, they believed the economic productivity of the central business district (CBD) and land values of private property were susceptible to degradation if the slums were allowed to expand. These fears catalyzed the beginning of reforms that focused on institutionalized planning and zoning for the city and the decentralization of the city's housing market.
- D. Definition and Expansion of Milwaukee's Metropolitan Housing Market:** By 1940, Milwaukee's metropolitan housing market had been more concretely defined – both quantitatively and spatially. Due to the widespread adoption of the automobile and the expansion of the streetcar network, Milwaukee came to encompass the city itself and its surrounding industrial suburbs. The expanded housing market offered some residents more choices, subsequently shifted supply and demand in the housing inventory, altered the economic center of the city, and created new competition between housing submarkets. These trends were further accelerated by the construction of the highway system in the 1960s.

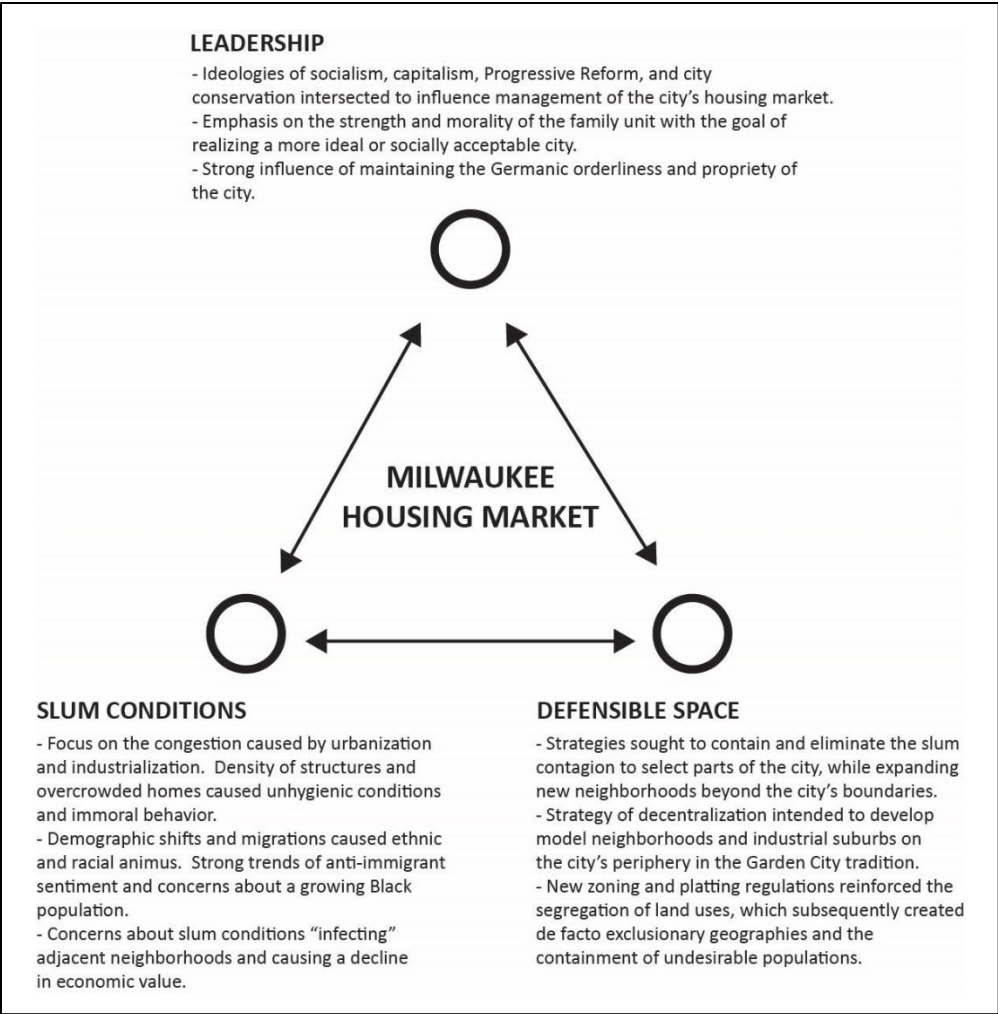


Figure 4.1: Nexus of Key Themes in Milwaukee’s Housing Market by 1920

C. Old Milwaukee: The City from 1910-1920

The regular influx of immigrants into Milwaukee was a primary determinant of the city’s growth. While it had densified and industrialized extremely quickly from the last quarter of the 19th century into the first 20 years of the 20th, the constant flow of new residents served as a fuel for the city’s productivity. The 1910s served as a decisive decade for the city as the prosperity of this economic activity was apparent, but so too were the resulting negative consequences of congested neighborhoods, densely packed residential districts, and the public health concerns of cleanliness and infectious disease.

It is important to clarify that Milwaukee's expansion in economic activity did not necessarily correlate to the physical expansion of the city over a wider area by the 1910s; instead, the city added residential, commercial, and industrial density into its existing footprint. The most acute densification emanated from city's original villages of Kilbourntown, Juneautown, and Walker's Point – multiple decades later these areas would be classified as the inner core. This spatial concentration of people and businesses was facilitated by a highly dense city where neighborhood resources and job centers were proximate to one another – typically within walking distance or a short streetcar ride. Due to the lack of efficient means to commute in and out of the city on a daily basis, Milwaukee achieved an urban economy almost fully contained within its municipal boundary; this also meaning the city's housing market was similarly contained.

C.i. Ethnic & Racial Enclaves of Milwaukee's "Second Class" City

Understanding the distribution and characteristics of the ethnic and racial enclaves in 1910s Milwaukee establishes a foundation for the city's spatial economy. While there are other regulatory and economic considerations, a defining factor of Milwaukee's densest neighborhoods was their socio-cultural diversity and status as gateway districts for immigrants. The relationships between these enclaves highlight the complexity of a variety of communities interacting in confined urban space. Some relationships were highly isolated by segregation, while others were characterized by a mutually beneficial co-existence among multiple groups.

The identification of these ethnic and racial enclaves is an important step in understanding and mapping the social centers of the city – in large part because these neighborhoods were centers of socio-cultural and economic power. Ironically, the majority of these enclaves were later identified as being located in the city's slum wards despite their economic productivity and diversity. The stories of these communities demonstrate the dissonance between the actions and motivations of City leadership and

the realities of daily life in the neighborhoods. In a de facto sense, these enclaves are the spatial foundation for Milwaukee's housing submarkets and the creation of a second-class city within the larger socio-economic hierarchy.

C.i.a. Jewish Community

By the turn of the 20th century, Milwaukee's Jewish community migrated northward from downtown into a fairly expansive area encompassed by Third to Thirteenth Streets and Vliet Street to North Avenue. The community had originated near the Haymarket cattle market and expanded north and west over a 30-year period.¹ Some research also indicates a concentration by 1910 in a four-block area around North 12th and Harmon Streets (modern-day 12th and Brown Streets). Conveniently located, the community was near a thriving neighborhood commercial district along West Walnut Street with access to a north-south streetcar line running on North 12th Street.² Primarily composed of Russian and Polish Jews that began arriving in the 1880s, the community was socio-culturally homogenous with an orthodox element.³ By the end of World War I, the community began migrating into other neighborhoods in search of economic opportunity. This migration pattern occurred rapidly during the 1920s, was slowed due to the Great Depression in the 1930s, and was completed by the 1940s.

Similar to other immigrant enclaves, the neighborhood was regarded poorly by the city's upper class and leaders because of poor housing conditions. Viewed as "unsanitary and substandard," the district had a negative public image: "On the outside of these dilapidated dwellings, the yards displayed the occupation of the resident - - the wares of the rag pickers and the junk dealers; on the inside, 'the plaster is cracked and grimy, the floors are black and worn, the doors hang unevenly.'"⁴ Located in the

¹ Louis J. Swichkow and Lloyd P. Gartner, *The History of the Jews of Milwaukee* (1963), 166.

² Schmitz, *Milwaukee and its Black Community* (1979), 4-5.

³ Swichkow and Gartner (1963), 65-68.

⁴ Schmitz (1979), 4. See also Swichkow and Gartner (1963), 167-168.

Sixth and Tenth Wards just north of the central business district, the area would continue to be known as a working- and lower-class area well after the 1910s and would maintain its status as a gateway district for new immigrants into the 1940s.

The population migration of Milwaukee's Jews out of the Sixth and Tenth Wards is a good case study to consider the multiple countervailing forces of housing submarket filtration: shifting demographics that produce socio-cultural diversity in the local population, the continuous search for better economic opportunity, and the role of prejudice and fear as catalysts for the out-migration from a neighborhood. Black Milwaukee did not have a spatially concentrated population in the city until the 1910s. Prior to that decade, many Blacks were scattered throughout the city without a defined community or cohesive political voice.⁵ With the onset of World War I, the Black community became more defined in the Sixth Ward in what became known as "Little Africa." This Black population in-migration put pressure on the Jewish community located in the Sixth and Tenth Wards as they saw their neighborhood begin to change. Once an almost exclusive White, Jewish community, the ethnic and racial tone of the neighborhood shifted in the early 1910s with the arrival of Blacks and Greeks.⁶ With this change, concerns grew enough in the Jewish community to cause a partial influence to out-migrate. Note the two pieces of evidence below that illustrate these views.

The move from the areas was also, in part, spurred by the threat to the orthodox Jews of cultural dilution. Kosher shops stood cheek to jowl with storefront churches. The acting director of the Milwaukee Jewish Community Center (which was named the Abraham Lincoln Settlement House) noted that 'our sidewalks are filled with Jewish boys and girls, mingling with non-Jewish youth from the fast deteriorating neighborhood; a mixture of Negroes, Slavs, Italians, Greeks, and other nationalities!'⁷

The large number of blacks who had moved into the area, and the 'Twenty different retarded nationalities...Even the most enthusiastic assimilationist would not wish that our Jewish children should

⁵ Schmitz (1979), 2.

⁶ Buchanan, *Black Milwaukee 1890-1915* (1974), 13-14. See also Swichkow and Gartner (1963), 168.

⁷ Schmitz (1979), 5. See also City of Milwaukee, "Central Business District Historic Resources Survey" (1986), 37. Note: The quote is excerpted verbatim from Louis Swichkow and Lloyd Gartner, *The History of the Jews in Milwaukee* (1963), 222.

form their character in such association. Any impartial sociologist knows that in such areas demoralization and delinquency grow.’⁸

Additionally, the increase in economic opportunity following World War I enabled the younger Jewish generations to find housing in other neighborhoods beginning in the 1920s. This economic motivation coupled with the pressures and perceived strife of cultural heterogeneity caused a period of housing filtration in the Sixth Ward.

This variety of factors is demonstrative of the contradictions inherent in Milwaukee’s gateway districts. Despite prejudice and discrimination that was prevalent based both on race and national origin, a hallmark of the city’s densest neighborhoods was their diversity and the co-existence of multiple communities for mutual benefit. This socio-cultural mosaic was no more true than in the Jewish community in the Sixth and Tenth Wards. The aforementioned evidence notwithstanding, Milwaukee’s Jewish community became known for its acceptance of immigrant groups building a community side-by-side with Blacks, Greeks, Romanians, Ukrainians, the Dutch, the Chinese, and Czechoslovakians.⁹

C.i.b. Black Milwaukee

The Black community in Milwaukee was more of a footnote for the first 60 years of the city. Because the community was extremely small and lacked a defined concentration in any neighborhood, it was simultaneously noticed and overlooked.¹⁰ With this passive acceptance, Black Milwaukee was not the focus of leadership considerations or the general public. This is not to say that Black Milwaukeeans did not suffer prejudice and discrimination;¹¹ but, the city’s leadership and its benign neglect continued into the end of the 19th century, but shifted at the beginning of the 20th.

⁸ Schmitz (1979), 5.

⁹ Women’s Club of Wisconsin, “Racial Map of Milwaukee” (1918). Maurine Foster Huang, *Chinese without a Chinatown* (1988), 101-102. Paul Geenen, *Images of America: Milwaukee’s Bronzeville 1900-1950* (2006), 11.

¹⁰ Schmitz (1979), 1.

¹¹ City of Milwaukee (1986), 1-33.

Similar to the city's other immigrant groups, Black Milwaukee began to spatially coalesce in its own gateway district – what was known as “the Bad Lands” – in the early 1900s. Prior to that, Blacks were more or less self-organized into a series of colonies across the city that allowed them to live in close proximity to their jobs. The largest colony to emerge by 1900, however, was located just north of the central business district and served as the community's spatial epicenter.¹² The Bad Lands was Milwaukee's vice district. Essentially an entertainment district of ill repute, the six square-block area offered city residents and travelers with access to gambling dens, stall saloons, sporting houses, and brothels. Inter-mixed with these businesses were single-family homes, duplexes, triplexes, and alley houses that offered cheap, low-quality housing for Blacks. The general condition of this area was very poor: “These vice areas, of course, were the least desirable residential sections of town. Their tumbled-down boarding houses and tired old residences, however, were all that most Negro newcomers could afford. Many voluntarily settled in the neighborhood to be near their own people, although it was seldom a matter of free choice.”¹³ From this spatial epicenter of Black Milwaukee around 1900, the community extended further north and west into the first iteration of Milwaukee's “Little Africa” bounded by Grand Avenue (now Wisconsin Avenue), State, 3rd, and 8th Streets. As one researcher stated, “Enclaves of Negroes could still be found scattered about the metropolis, and there was yet no segregated, all-Negro ghetto; but as the race population had increased, so had its consolidation into one section of town.”^{14, 15}

¹² City of Milwaukee (1986), 34-35. *See also* Buchanan (1974), 10, Maps A-F in Chapter I.

¹³ Buchanan (1974), 10.

¹⁴ Buchanan (1974), 1.

¹⁵ Within existing research, the professional lexicon differs in reference to racial and ethnic neighborhoods. Some refer to them as enclaves, ghettos, or colonies. Specifically for Black areas of cities, they have been referred to as Negro colonies, colored districts, and Black belts. *See* Buchanan (1974), 1, 6-10.

Of the various racial and ethnic enclaves that existed in the city, many grew out of necessity. For reasons of safety and conflict avoidance, shared culture, proximity to jobs, and cheap housing, people of similar cultures and races came to reside in the same neighborhoods. For Black Milwaukee, its main colony of “Little Africa” was the hub of the community, but three other neighborhoods acted as satellites in the early 1900s.

River Street Neighborhood: Another of Milwaukee’s vice districts, the River Street Neighborhood was the city’s prostitution district. In the general vicinity of River Street between Oneida (Wells) Street and Juneau Avenue, the four-block stretch was primarily composed of female boarding houses that acted as brothels surrounded by commercial and industrial operations mixed with cheap housing.¹⁶

Railroad Porters Neighborhood: The upper class of Black Milwaukee were residents with the longest tenure in the city owed to their jobs as Pullman porters and railway clerks at firms in the Menomonee Valley and the Chicago, Milwaukee, & St. Paul Railroad Depot near 4th and Sycamore Streets. Clustered around 8th Street and St. Paul Avenue, these families were known as the high-society group of the community. In particular, 8th Street Blacks were considered fashionable and highly regarded in the community.¹⁷

Illinois Steel Colony in Bayview: Eager to overcome the racial employment barriers in Milwaukee’s industries, Blacks were willing to work as strikebreakers during union protests. This opened the door in 1898 at the Illinois Steel Company in Bayview when company leadership decided to allow Black workers to cross the picket line and fill employment vacancies during a strike. Surprisingly, the company retained the Black employees at the end of the strike and continued their employment. For a short-lived period, this continuous employment saw the

¹⁶ Buchanan (1974), 9-10.

¹⁷ Buchanan (1974), 6-7, 13.

establishment of a Black colony in Bayview for the workers and their families. However, in 1904, the company succumbed to race hostilities and terminated all Black employees – thus disbanding the colony.¹⁸

World War I and the immediate years following served as the catalyst for the First Great Migration of southern Blacks into Milwaukee. Due to restrictive U.S. immigration policies and increased war production in industries, northern cities needed workers in the late 1910s.¹⁹ Eyeing an opportunity to leave the Jim Crow South and find economic opportunity, Blacks began moving northward. In contrast to other northern industrial cities, Milwaukee did not initially experience a large influx of Black migrants. In this regard, Milwaukee and Chicago are linked in the First Great Migration. For southern Blacks, Chicago was seen as one of the lands of economic opportunity in the North – yet Milwaukee was lesser known. As Blacks immigrated to Chicago, there was a discovery process whereby the Windy City became – at times – an intermediary or stopover location before Black migrants continued on to Milwaukee. For this reason, some researchers posit that Chicago and Milwaukee shared a regional Black population in the late 1800s and early 1900s before the cities adopted their own unique Black identities.²⁰ Once the increase in immigration was sufficient to help establish Milwaukee’s first Black neighborhood, this then attracted the attention of city leadership and the general public.

By the 1910s, the spatial locus of Black Milwaukee shifted to an area just north of the central business district in a series of neighborhoods along North 5th Street in what became known as “Little Africa.”²¹ The community straddled the boundary between the Second and Sixth Wards in a high-density, mixed-

¹⁸ City of Milwaukee (1986), 38-39.

¹⁹ City of Milwaukee (1986), ii, 3.

²⁰ Buchanan (1974), 4-6.

²¹ Schmitz (1979), 2.

use district with streetcar lines running along State, 3rd, 6th, 7th, Chestnut, Winnebago, and Walnut Streets. Two key social centers in the community were St. Mark's African Methodist Church at North 4th and Cedar Streets (modern-day Vel R. Phillips and West Kilbourn Avenues) and Calvary Baptist Church originally located on 7th Street between Wisconsin Avenue and Wells Street.²² Importantly, these two churches dictated the direction of the Black migration further north and west into the neighborhoods. As the community was pushed into new neighborhoods, both churches moved a few blocks north to re-establish themselves, subsequently also causing a migration in the small business community to follow suit.

Not only did the churches serve as the Black community's social center, they also began playing an important social welfare role in securing housing for newly arrived Blacks. Housing for Blacks was in short supply due to rent profiteering and the underproduction of housing citywide. Frequently, the churches combined their finances to purchase older homes that were converted into rooming houses. Multiple examples of this exist: the converted Mueller mansion at 5th and Galena and two "home[s] for Negro working girls" in the same vicinity.²³ In addition, established Blacks served as guides for the newcomers, like Mrs. B. Nicholas who operated a housing counseling center at 325 Wells Street. Importantly, this housing for Blacks became an important component of the city's informal housing supply. Willing to take in lodgers and boarders, Black families made rooms available as rentals that were known in their community, but not a part of the formal housing inventory of single-family homes and

²² City of Milwaukee (1986), 35-36. *See also* Buchanan (1974), 8, 11. Also note that the 1910 Sanborn Maps for Milwaukee identify the church as St. Mark's A.M.E. Church at 4th and Cedar. Uniquely, the building includes the notation of "NEGRO" to denote the race of the parishioners. It was rare for this notation to be made on structures in the Milwaukee Sanborn Maps, as few were specifically attributed to an ethnic or racial community.

²³ City of Milwaukee (1986), 36-37, 53.

apartments. Historical research from the 1910s shows multiple examples of Black families renting rooms in this way.²⁴

The constant shifting and filtration of Black Milwaukee out of one neighborhood into another was a hallmark of the community for the first half of the 20th century. Facing constant pressures circa 1910, “the dynamics of economics and demography denied the black population a stable boundary. With the downtown on the south and the relatively expensive housing on the east serving as barriers against black migration in those direction [*sic*], the pressure from the growth of light manufacturing and commercial development pushed the blacks [north] towards the area dominated by the Russian Jews who had settled around Walnut Street since the 1880’s.”²⁵

C.i.c. Kaszub Fishing Colony

The Kaszub Fishing Colony on Jones Island provides a case study environment to assess the impacts of urban industrialization in Milwaukee in the first half of the 20th century. Though the context for the community was different than the city’s mainland neighborhoods, the Island provides an opportunity to analyze a homogenous ethnic enclave physically separate from the city that functioned as a semi-autonomous neighborhood. Though not immune from industrialization, the Island’s Polish and German communities were impacted by the land use decisions of City leadership and ultimately suffered the displacement of their entire population to other parts of the city. As in the assessment of other city neighborhoods, this analysis of the Island focuses on the community’s demographics, the basic economics of the community, and the socio-cultural components of the Island’s built environment.

²⁴ Buchanan (1974), 11-13.

²⁵ Schmitz (1979), 2-3. *See also* City of Milwaukee (1986), 35; and Buchanan (1974), 11, 13-14.

The physical form of Jones Island was as a shape shifter for the first 30 years of Milwaukee's history. Whether because of erosion caused by Lake Michigan's waves or dredging by city residents, it constantly morphed between an island and peninsula. The naturally occurring southern inlet was formally dredged and engineered by 1852 with an additional northern inlet dredged by 1858.²⁶ By 1876, the southern inlet was filled with sand and dirt; and, Jones Island assumed the beginnings of its modern form as a large, sandbar peninsula. Geographically, it was a bare piece of land with marsh, Milwaukee River, and Kinnickinnic Bay to the west, the original harbor inlet to the south, the new harbor inlet to the north in its modern location, and sandy beaches and Lake Michigan to the east.²⁷ At once austere and also promising, the harsh conditions of the peninsula only presented opportunities to those literally willing to weather the lake's storms. Named after James Monroe Jones, the peninsula was the location of his shipbuilding company, which included multiple buildings, a steam mill, a floating dock, and a short railroad track.²⁸ With its ideal waterfront location, early Milwaukee settlers displaced the peninsula's original Native American residents in the late 1830s. Thereafter, Jones built his company over a 30-year period until a financial panic and severe weather forced its closure by 1861.²⁹

Of its advantages, Jones Island possessed the unique characteristic of being dual facing: the calm waters of the interior canals and rivers afforded prime opportunity for docking to the west, while the eastern shore was exposed to the intensity of Lake Michigan's waves. For many immigrant communities – including the Kaszubs, Germans, Dutch, English, and Irish, this geography created the ideal environment for hunting and larger-scale fishing operations.³⁰ As the Island's community developed further, fishing

²⁶ Ruth Kriehn, *The Fisherfolk of Jones Island* (1988), 5-6.

²⁷ Increase A. Lapham, "Map of Milwaukee" (1852). Henry F. Walling, "Map of the County of Milwaukee, Wisconsin," published by M.H. Tyler (1858). H. Belden & Co., "Illustrated Historical Atlas of Milwaukee County, Wisconsin" (1876). Kriehn (1988), 2.

²⁸ Henry F. Walling, "Map of the County of Milwaukee, Wisconsin," published by M.H. Tyler, 1858. Gurda (2018).

²⁹ Gurda (2018). Gurda (1978), 77-78. Kriehn (1988), 2-4, 21.

³⁰ Kriehn (1988), 6, 8.

became the dominant industry of the local economy – and, specifically came to define the Kashubian community earning it local notoriety and a place in the city’s broader economy.

Following the displacement of the original Native American residents, the population of White settlers on the Island was regularly in flux. Various nationalities used the Island for hunting and fishing, but the community was – at most – a series of shanties.³¹ By the early 1870s, this dynamic shifted with an influx of Kashubian and German immigrants to the Island.³² At the urging of Jacob Muza, the Kaszubs began arriving from northern Poland after Muza’s landing in Milwaukee in 1872. Seeing the potential of Jones Island, he purchased a home on the peninsula and a claim to a portion of its vacant land. With vision in tow, he sent word home that Milwaukee held promise.³³ With Milwaukee’s swelling corps of manufacturing workers, the Kaszubs took to the city’s production economy quickly; but, they found their real cultural home on Jones Island. It was from there that they began their commercial fishing operations, which subsequently fed Milwaukee. A novelty of its time, the village was a throwback to European seaside communities.³⁴ Unlike what many Milwaukeeans had seen in a while, the dense foot worn paths and cottages rekindled a sense of nostalgia. Though dependent on Milwaukee for commerce, the village developed entirely on its own. With homes of various sizes, a public school, shops, and saloons, the Kaszubs created an integrated community that was largely self-functioning. Research and estimates from Gurda (1978, 2018) and Kriehn (1988) indicate a community population by 1900 of approximately 1,200-1,600 residents with 300 total families by 1910.

³¹ Kriehn (1988), 6.

³² Kriehn (1988), 12, 14.

³³ Gurda (1978), 78-79. Kriehn (1988), 14-16.

³⁴ Gurda (1978), 80.

Table 4.1: Building Inventory of Kaszub Fishing Colony, 1910

<i>Building Type</i>	<i>Quantity</i>
Residential*	358
Cottage – 1 story	186
Cottage – 2 story	4
Secondary Structure (e.g., shed, out house)	162
Stable	6
Commercial	14
Store – 1 story	9
Store – 2 story	2
Entertainment Hall	1
Secondary Structure	2
Maritime & Fishing	34
Boathouse	24
Net House	6
Pier	4
Municipal	4
Public School	1
Milwaukee Garbage Disposal Plant	1
Menomonee River Special Sewerage Pumping Station	1
U.S. Life Saving Station	1
Total	410

*Notes: *All residential structures were single family.*

Sources: Sanborn Fire Insurance Maps, 1910.

The cultural dynamic of the Island was unique. While it is known for its Kashubian population, a small German community also lived on Jones Island and thrived in the fishing industry. Despite historical animosity between the two communities, there was an unspoken sense of cooperation on the Island. The cooperative fishermen’s organizations and the sense of fishing as a family affair acted as binding agents for families and drew the community closer together. When Illinois Steel and the City made their push to evict the Island community beginning in the late 1890s, it bonded the Kaszubs and Germans into solidarity as allies for the better part of 25 years.³⁵

Though their home was physically separate from the rest of the city, the Kaszubs very intently integrated into Milwaukee. They became known for their bountiful supply of fish: trout, whitefish, perch, cisco,

³⁵ Kriehn (1988), 13, 21.

and sturgeon. Some of which was sold wholesale in Milwaukee's markets, while other offerings of the fresh, smoked, or salted variety were sold door-to-door in city neighborhoods.³⁶ This influence extended as far north as Walnut Street and 16th and Center Streets as Kashubian women regularly made fish deliveries in the Black and Jewish communities.³⁷ These fish sales are indicative of the interactions between local neighborhood economies in the city, and the facilitation of that commerce by the streetcar lines that allowed the Kashubian women to travel from the Island into other neighborhoods.

The social aspects and night life of the Island became well known for intrepid Milwaukeeans. In true Wisconsin fashion, the peninsula abounded with saloons and taverns. For a night of fun, mainlanders would travel across the river for fish fries and revelry.³⁸ The Kaszubs were dutifully devout and attended St. Stanislaus parish on a weekly basis regularly supporting the church with fish deliveries. Additionally, St. Joseph's Orphanage received regular fish deliveries to feed the children.³⁹ In celebration of Kashubian and German culture, the Island had multiple polka bands, the Fishermen's Chorus, and the German Jones Island Men's Chorus. Some Islanders travelled to the mainland to participate in the Milwaukee Liederkrantz Maennerchor. They also frequently fielded a baseball team to participate in the city league.⁴⁰ This type of cultural exchange highlights the irony of the Island's identity within the city: simultaneously an active participant and contributor to Milwaukee, while also separate and distinct.

In a spatial study of the peninsula, the colony had a physical form and layout uniquely suited to its residents. It defied traditional, rectilinear platting and zoning, but was highly functional for the residents and enabled their local economy. Figure 4.2 visualizes the spatial character of the community

³⁶ Gurda (1978), 81, 83.

³⁷ Kriehn (1988), 36-40.

³⁸ Gurda (1978), 88-89.

³⁹ Kriehn (1988), 21.

⁴⁰ Gurda (1978), 81-84. Kriehn (1988), 28.

and highlights the nuances of the colony at its most dense in the 1910s. Though the maps may give the impression that the peninsula was large, it was in fact relatively small at only 35.27 acres. It thus achieved a level of density that was reflective of the socio-cultural character of the Kaszubs. Notably, the colony exhibited a set of special characteristics:

- The entirety of the community is oriented towards the westside of the peninsula along the Milwaukee River and Kinnickinnic Bay. The eastside was constantly subjected to the power of Lake Michigan's waves, which caused regular shifting of the coastal sands making permanent construction infeasible. Instead, the community oriented its piers, boathouses, and net houses to the calmer waters of the interior bay. This allowed them to not only launch their boats into the lake via the harbor inlet, but to also travel across the bay to the mainland. This thus made Kinnickinnic Bay the front door to the community.
- The city's platting of blocks and streets on the peninsula date back to the 1850s. For the next 30-40 years, it retained that basic land use structure, but was then altered when the Kaszubs started building homes. Thus, the peninsula in 1910 retained the original plats, but the actual spatial structure of the cottages and garden fences were a juxtaposed and contradictory overlay. This was largely enabled because the city never built roadways or other infrastructure on the peninsula.⁴¹
- The 1910 Sanborn Maps do not indicate parcel lines for the colony, but wood garden fences appear on the maps and seem to act as a proxy for parcel lines by delineating familial divisions of land and building ownership. This supposition is confirmed by the 1914 Jones Island Property Survey conducted by the City of Milwaukee. Additionally, the fences create the pedestrian circulation network for the community. Automobiles were not present on the peninsula, though multiple homeowners had stables for their horses.

⁴¹ Gurda (1978), 88, 90-92.

- Of the colony's 410 structures, almost half – or 186 – were one-story cottages. At an average area of 560 square feet, they were small compared to today's standards. Of the four two-story cottages, the average total area was 1,300 square feet with an average 650 square feet per floor. The average area of a one-story commercial store was 715 square feet. Generally, the structures on the peninsula – whether residential or commercial – were small. It appears that they were appropriately sized for the community.

KASZUB FISHING COLONY



Top: Historic digital twin of Kaszub Fishing Colony built on 1910 Sanborn Fire Insurance Map.

Bottom: The transformation of the peninsula from the Kaszub Fishing Colony into the Port of Milwaukee by 1937.



From left to right: series of Kaszub fishing cottages and boat launches on the waterfront; a detailed perspective of a two-story, Kaszub cottage; and, fishing nets on drying reels at a boat launch. Date of photos: April and May, 1936. Source: Library of Congress

Figure 4.2: Visualization of Kaszub Fishing Colony, 1910-1937

By the turn of the 20th Century, Milwaukee leadership had grown frustrated with the Kaszubs. The demands of Milwaukee's industrial progress began to highlight Jones Island as an ideal location for infrastructure, notably an improved port with rail access. Jacob Muza arguably held the claim to the land of Jones Island for the Kaszubs, while the City argued that the villagers were squatters paying taxes only on their personal property. The legal record on this point is unclear. As will be discussed, the Illinois Steel Co. claimed ownership of the land as part of its sizeable operations on the north end of Bayview. To a certain extent, this ownership is supported by the parcel records in the 1890 Baist Property Atlas.⁴² The maps indicate the company's ownership from its steel mill operations in Bayview northward along the Kinnickinnic River into the Jones Island peninsula. However, other records contradict these findings. The City of Milwaukee conducted the 1914 Jones Island Property Survey as an effort to document and quantify the fishing colony. The Milwaukee Public Library's collection of these records shows 230 maps and survey cards documenting parcel lines, land use and parcel structures, parcel ownership, and family structure. Though these records do indicate some ownership by the Illinois Steel Co., they also show private ownership by the Kaszubs and Germans. While the Sanborn Fire Insurance Maps of 1894 and 1910 do not show ownership records, the 1910 maps provide a detailed portrait of the colony's built environment. Separately, written records from the proceedings of the Milwaukee Common Council indicate ongoing work by the Harbor Commission through June 1920 to expand the port.⁴³ While the Illinois Steel Co. is specifically mentioned, there is no discussion about a residential population or community on the peninsula. Because ambiguity existed around the land

⁴² George Baist, "Baist's Property Atlas of the City of Milwaukee and Vicinity, Wisconsin," published by G.W. Baist, 1898.

⁴³ Milwaukee Common Council, "Proceedings of the Common Council of the City of Milwaukee: For the Year Ending December 31, 1920," 1921, pp. 244-245.

ownership issue, the land dispute and conflict became a protracted 30-year legal battle to evict the fishermen and begin the development of an industrialized port at Jones Island.⁴⁴

Jones Island satisfied the industrial needs of Milwaukee for multiple reasons. By 1900, the city was growing an increasingly urgent need for a garbage crematory and sewerage treatment plant. In concert with the city's needs, the Illinois Steel Co. occupied a large industrial complex just to the south of the peninsula. With an expanding business, the company needed modern port facilities for larger Great Lakes freighters.⁴⁵ This coincidence of needs between the city and Illinois Steel Co. created a united front against the Kaszubs. The villagers claimed adverse occupancy and fought the evictions, while the Illinois Steel Co. claimed prior title to the land – in direct conflict with Jacob Muza's 1872 purchase.

As the court battle was waged over the peninsula's land, the Kaszubs held steadfast in their fight to keep their homes; and, the courts largely agreed with them. It was rare for a Kaszub to lose his court case, thus making the City's eviction campaign slow and tedious.⁴⁶ Simultaneous to the legal fight, the City built a garbage crematory on the northern end of the peninsula to service all of Milwaukee. Operational in 1902, the daily burning of garbage resulted in the village being blanketed in foul smelling ash.⁴⁷ As the remnants of the burned garbage rose from the crematory, its natural fall pattern landed directly on the fishermen's homes. Additionally, the city refused to extend infrastructure to the peninsula during this time. While the once idyllic lakeside community quickly lost its allure, the villagers remained in their homes.

⁴⁴ For a detailed assessment of the land dispute, see Gurda (1978), 102-111; and, Kriehn (1988), 91-106.

⁴⁵ Gurda (1978), 103-104, 107-109.

⁴⁶ Gurda (1978), 103-107.

⁴⁷ Gurda (1978), 88.

It was another 20 years before the Kaszubs and Germans finally acquiesced to the City. By 1914, the garbage crematory was no longer sufficient. The city needed a fully functioning sewage treatment plant. When the City renewed its campaign to take Jones Island, it shifted strategies: evictions were the stick, but money was the carrot. Over a 10-year period, the city proceeded to buy the fishermen's homes to make way for a modern port. After many of the final villagers left by the early 1920s, Jones Island began its transition into its modern form. The final small group of residents remained until the early 1940s. By that time, the United States was engulfed in World War II; and, the Port of Milwaukee held strategic national security interest. In 1943, the remaining Kaszubs were removed.⁴⁸

The history of the Kaszub Fishing Colony provides a study in a notable ethnic enclave during the city's urban industrialization period, while also highlighting the processes and effects of a sustained government campaign to evict them from their homes. The Kaszubs were an immigrant community that found a physical home in an area of Milwaukee not unlike their homeland: northern Poland. Over its 50-year history, the colony was culturally distinct, yet physically isolated. It became an enclave and facsimile of the Kaszubs' motherland. Despite many parts of the city advancing into the modernity of the 20th Century, the village was excluded from participating – predominantly because city leaders refused to extend infrastructure to the peninsula. This created a paradoxical community: culturally vibrant and productive, but an anachronism. Viewed as an impediment to progress and further industrialization, the colony became the target of city leadership and its new doctrine of enhanced land use regulations.

⁴⁸ Gurda (1978), 109-111.

C.i.d. Chinese Milwaukee

In contrast to Milwaukee's other ethnic enclaves, the Chinese community was spatially disparate in the city's neighborhoods at the turn of the 20th century. Lacking an epicenter for the community, small business owners and workers – all predominantly men – typically lived above the business in which they owned or worked.⁴⁹ Chinese immigrants primarily began arriving in Milwaukee in the late 1870s in search of work – with the trend continuing into the 1920s.⁵⁰ After leaving their families behind in China, the men intended to regularly send money home and eventually bring their families to Milwaukee. With an overwhelmingly male population, they created a bachelor society with a strong social network.⁵¹ What they lacked in a spatially cohesive community in the city, they compensated with a social fabric that mimicked a physical gateway district. Predominantly owning and working in laundries, restaurants, and import-export businesses, the men created a landing spot for new arrivals with a safety net that included housing and employment.

Despite being so dispersed, the history of the Chinese community highlights unique socio-cultural and economic aspects of Milwaukee in the 1920s and 1930s that help to clarify other ethnic and racial enclaves in the city. With distinct physical features and suffering from a language barrier, Chinese immigrants were easily identified in the city.⁵² Facing prejudice and regular harassment, they sought to find a peaceful co-existence with other communities in the city; but, they were spatially limited by racial covenants that prevented them from owning property in certain neighborhoods.⁵³ The residential and business patterns of Milwaukee's Chinese were largely based on three factors: 1) the small size of their

⁴⁹ Maurine Foster Huang, *Chinese without a Chinatown* (1988), 94, 103. Note: Despite the lack of a spatial epicenter, 1910 Decennial Census data indicates that the majority of Chinese were located in the city's Fourth Ward. In addition, oral histories suggest a possible locus of the community located at 4th and State Streets.

⁵⁰ Huang (1988), 85, 93.

⁵¹ Huang (1988), 91-92.

⁵² Huang (1988), 99.

⁵³ Huang (1988), 161.

community, 2) locating their businesses in neighborhoods with residents that were likely to be paying customers, and 3) the influence of their cultural *tong* that dictated a spatial dispersion between businesses to reduce competition among community members.⁵⁴

To be successful in business and assimilate into the neighborhoods, the Chinese capitalized on the symbiotic relationship they had with their customers and co-located their laundries and restaurants in friendly communities. Though they settled on the west and east sides of the Milwaukee River, the Chinese found a welcome home in the Jewish community in the central city. Willing to pay for laundry services and fond of Chinese food, the west side Jewish were good paying customers. However, the Chinese businessmen knew that the wealthier Jewish of the lower East Side were not fond of their services. Similarly, the Polish and Germans of the south side were “too thrifty” and unwilling to pay for house services and had a distaste for Chinese food. As a result, the Chinese located the majority of their businesses west of the Milwaukee River in the central business district and surrounding neighborhoods to the north and west.⁵⁵

In following decades, the Chinese found themselves caught in the middle of Milwaukee’s emerging race-based politics in the post-World War II era. Though they had been living alongside the Jewish and Black communities in the central city, the Second Great Migration caused significant population shifts in the city. For fear of losing their White customers, the Chinese struggled with providing services to Black customers. This ironically created a situation in which Milwaukee’s two physically distinct communities – Chinese and Blacks – suffered a break in relationships to bow to the social pressures of the city’s Whites.⁵⁶

⁵⁴ Huang (1988), 104.

⁵⁵ Huang (1988), 101-102.

⁵⁶ Huang (1988), 144.

C.i.e. Little Italy

Milwaukee's Little Italy developed in the Third Ward as Italian immigration substantially increased in the city at the end of the 19th century.⁵⁷ Similar to the Jewish and Black communities, the Italians inherited their neighborhood and housing from a previous immigrant group. Originally the home of the Irish, the "Bloody Third" contained the housing stock of the original built environment of Juneautown dating to the mid-1800s.⁵⁸ While the neighborhood suffered significant damage as a result of the Third Ward Fire of 1892, a period of rapid re-building meant that the Italians had little influence in adapting the buildings through new construction or additions. As a result, they occupied the neighborhood's housing units in their original state.

The Italian community, predominantly the portion in the Third Ward, felt a cohesiveness amongst its members. The neighborhood itself was described as a "ghetto" and a "little ethnic enclave." As new immigrants arrived, the neighborhood offered a landing spot with jobs, housing, and a place for religious worship.⁵⁹ Additionally, enclaves in the lower First Ward and Bayview developed to form the entire Italian community.⁶⁰ Sicilians occupied the Third Ward, while northern Italians primarily lived in Bayview.⁶¹

For Italians in the lower Third Ward, a localized economy developed that served the specific needs of the community. Insulated from other neighborhoods, local residents could live their daily lives almost

⁵⁷ George La Piana, "The Italians of Milwaukee" (1915), 5. Albert Cosimo Meloni, "Milwaukee's 'Little Italy'" (1969), 6, 20-21.

⁵⁸ Meloni (1969), 21.

⁵⁹ Giuseppe Balestrieri, Part 1 – Oral History Interview (1991). LeRoy Bertoncini, Part 1 – Oral History Interview (1991). Marquette University's *Children in Urban America Project* conducted a series of oral history interviews in 1991 of some of Milwaukee's founding Italians. The details provided by the interviewees give perspective on daily life in the neighborhood that is otherwise missing from secondary historical materials.

⁶⁰ Antoinette Carini, Part 2 – Oral History Interview (1991). Oswald Natarelli, Part 3 – Oral History Interview (1991).

⁶¹ Anthony Dicristo, Part 2 – Oral History Interview (1991). Elsie Falbo, Part 2 – Oral History Interview (1991). Grace M. Falbo, Part 2 – Oral History Interview (1991). La Piana (1915), 5. Meloni (1969), 18-19.

entirely separate from the broader city. Estimated at a total population of 9,000 by 1915, the Italian community was served by a parallel economy that included grocery stores, saloons, bakeries, meat markets, cobblers, barber shops, and wholesale produce sellers.⁶² This insulated environment contained not only an economic component but also a socio-cultural one. The 3rd District School and the Madonna Dei Pompei Catholic Church served as important social centers in the community.⁶³ Also known as the Detroit Street School, the 3rd District School was expanded in the early 1900s to accommodate the growing number of students. In addition to the original school building, the city added multiple temporary buildings to house additional classrooms and a natatorium.⁶⁴ While the church held regular services, a marketplace for local goods, and societies for children (catechism, St. Aloysius Society, Altar Boys' Society), the school hosted additional activities for children, including billiards, sewing and tailoring classes, basketball, and storytelling.⁶⁵

Despite their “separateness” and insulation, oral histories from children of the neighborhood’s original Italian families reflect ethnic divisions in the city. After arriving in Milwaukee, the children (adults at the time of the oral history interviews) reported experiencing discrimination in school, frequently by the name calling of “Dago, Guineas, and Wop.”⁶⁶ In the first decades of the 20th century, a portion of the city’s Irish population continued to live in the Third Ward – despite the majority of the community moving to Milwaukee’s west side. These remaining Irish began to live alongside newly arrived Italians as immigration continued. Additionally, elements of the city’s German population lived in the Third Ward as that community spilled over from the First Ward to the north.⁶⁷ This juxtaposition between socio-

⁶² La Piana (1915), 5, 9-10.

⁶³ Giuseppe Balestrieri, Part 1 – Oral History Interview (1991).

⁶⁴ Catherine M. Balestrieri, Part 1 – Oral History Interview (1991).

⁶⁵ Anthony T. Machi, Part 3 – Oral History Interview (1991). Sam Purpero, Part 3 – Oral History Interview (1991).

⁶⁶ Giuseppe Balestrieri, Part 1 – Oral History Interview (1991).

⁶⁷ Rose Carini, Part 2 – Oral History Interview (1991).

cultural isolation and ethnic and racial mixing highlights the nuances of enclaves and ghettos in Milwaukee. While communities clustered based on their ethnic and cultural attributes, few were able to exist in complete isolation from the city's broader diversity.

The growing Italian community expanded into the existing built environment of the Third Ward and occupied available housing units. The new immigrants either lived as boarders or occupied rental housing as a family. When only considering the number of families, density in the community was relatively manageable. However, a substantial number of Italian immigrants were either single men or those who left families in Italy. As a result, housing units typically contained a family with at least one boarder.⁶⁸ This thus increased the number of people per housing unit and risked deteriorating housing conditions due to congestion. Conversely, families relied on boarders for the additional rental income to offset their own housing costs.⁶⁹ This produced an environment where the density of people was an economic necessity and not necessarily circumstances by choice. The majority of existing housing units made single-family homes and duplexes available for rent. One oral history interviewee noted his family's original, second-floor flat as a "San Francisco house with the stairs going up."⁷⁰ Interviewees also noted the common practice of occupying an apartment flat either in a duplex or above a small business in the neighborhood. The children typically played near to the flat or at the 3rd District School, while the parents worked in the shops or at industrial companies within walking distance.⁷¹ These conditions reflect the constraints placed on the Italian community by the built environment. People

⁶⁸ La Piana (1915), 16.

⁶⁹ La Piana (1915), 16-17.

⁷⁰ Giuseppe Balestrieri, Part 1 – Oral History Interview (1991).

⁷¹ Gaetania Balestrieri, Part 1 – Oral History Interview (1991). LeRoy Bertoncini, Part 1 – Oral History Interview (1991). Antoinette Carini, Part 2 – Oral History Interview (1991). Mary Ann Valenti Sarsfield Koerner, Part 3 – Oral History Interview (1991).

were required to adapt their living conditions and daily lives without the ability to physically alter their homes.

C.i.f. Milwaukee's Polonia

In contrast to Milwaukee's other ethnic and racial enclaves, the city's Polish community did not inherit its neighborhood from a previous group of immigrants; instead, the community built its own city within a city on the south side. The residential landscape of the Polish neighborhoods was a direct reflection of their socio-cultural and economic influences. Because the Polish began their south side neighborhood building campaign as early as the 1870s, it allowed them to implement their own housing strategies and build an insulated community that was simultaneously autonomous from the larger city yet integrated into its fabric.

When Progressive Reformer ideologies began to dominate the thought processes of City leadership in the 1910s, the Polish south side was already well established. The blocks and parcels had been platted by the mid-1890s in the initial homebuilding campaign, which thereafter resulted in a second housing cycle of densification beginning in the late 1890s that produced the Polish flat and alley houses.⁷²

Despite the mature development pattern of the Polish neighborhoods, reformers still sought to impose their beliefs on the community, primarily: poverty as an issue of morality, fears about contagious disease, and the ill effects of housing congestion and density on the morals of a family.⁷³

Pursuing their desire of Americanization, the Polish sought to realize their ambitions of success through homeownership. The housing type that facilitated this social goal due to its economic feasibility was the

⁷² George Baist, "Baist's Property Atlas of the City of Milwaukee and Vicinity, Wisconsin" (1898). Sanborn Fire Insurance Company, "Sanborn Maps for the City of Milwaukee" (1894). Judith T. Kenny, "'Americanizing' Milwaukee's Polish South Side" (1994), 46, 47.

⁷³ Kenny (1994), 46, 47.

common worker's cottage. This pursuit highlights the unique attribute of the Polish neighborhoods – as compared to their peers in other ethnic and racial enclaves – that housing was a link between socio-cultural norms and economic mobility.⁷⁴ Because the Polish were the dominant community on the south side, they were able to dictate housing construction and adaptation based on their needs.⁷⁵

The worker's cottage was not a unique American house form. Common to many industrial cities, it accommodated an acceptable standard of living for a family at a reasonable cost.⁷⁶ Though designs varied, the worker's cottage typically offered a parlor, kitchen, and one to two bedrooms.⁷⁷ The worker's cottages on Milwaukee's south side came to embody a unique version of the house form as the Polish community engaged in a sustained period of housing adaptation. Once a family paid off the original cottage, they typically began construction on additional units. This resulted in the addition of the basement apartments of Polish flats and alley houses.⁷⁸ The Polish housing adaptation reflects their strong desire to Americanize their community and achieve financial independence. They leveraged housing as a vehicle to achieve stability in their community and provide for their families.⁷⁹

The rental income generated from the additional housing units helped homeowners pay off their mortgages more quickly and generate a source of funds for additional construction. Once the units were built, the homeowner could maintain their status as a landlord for an extended period of time to

⁷⁴ John Gurda, "A Separate Settlement" (1974), 9-10.

⁷⁵ Kenny (1994), 45, 47, 48.

⁷⁶ Thomas C. Hubka and Judith T. Kenny, "The Workers' Cottage in Milwaukee's Polish Community" (2000), 34-35, 38.

⁷⁷ Hubka and Kenny (2000), 37.

⁷⁸ Hubka and Kenny (2000), 36.

⁷⁹ Hubka and Kenny (2000), 39-40, 44.

benefit from the rental income; or, once the mortgages were paid off, they could convert the home back to a single-family residence because they no longer needed the rental income generated by boarders.⁸⁰

To facilitate the housing construction, the Polish community ultimately created its own parallel housing economy on the south side. This included community members who were architects, contractors, and house movers.⁸¹ To finance home construction, community members relied on local building and loan associations, known as “skarbi” or “skarb.”⁸² Within Milwaukee, the skarbi were an excellent example of mutual assistance provided by community members to one another. As a stock corporation, the skarbi provided an affordable form of capital for home mortgages. Because the financial health of the skarbi relied on mortgage holders paying their monthly dues on time, the entire enterprise was a community affair built on the ability of borrowers to repay. If borrowers failed to make timely payments, then the financial structure of the skarbi would fail and the community would no longer have access to a source of capital. Thus, borrowers had not only a personal incentive to pay monthly payments on their homes, but also a responsibility to their fellow community members to maintain the financial health of the skarbi.⁸³

The continuous adaptation of housing in the Polish neighborhoods resulted in a high-density pattern of one- and two-family homes. Urban reformers decried this level of congestion as unacceptable, while the realities of the built environment indicated that achieving this level of density acted as “a mechanism of financing” for would-be homeowners and newly arrived immigrants.⁸⁴ Of particular concern to reformers was the basement apartment. The Polish south side was referred to by some as

⁸⁰ Hubka and Kenny (2000), 40, 43, 45.

⁸¹ Hubka and Kenny (2000), 39.

⁸² Hubka and Kenny (2000), 45. Suzanne M. Zukowski, “From Peasant to Proletarian” (2009), 7.

⁸³ Zukowski (2009), 12, 16.

⁸⁴ Kenny (1994), 47.

an area of “cave dwellers” because of the number of one-family cottages that were converted into Polish flats.⁸⁵ Despite the negative perception, the basement apartments of Polish flats were typically only sunk three to four feet below grade, which allowed for standard height windows. These added housing units created an important additional source of income for homeowners. However, the public health concerns of unsanitary conditions in these dense neighborhoods were not unfounded.⁸⁶ Primarily, these concerns focused on the number of people per housing unit. With a family and multiple boarders, the housing could quickly become overcrowded resulting in unhygienic conditions.

By the 1910s, urban reformers needed to craft a unique approach to exercise control over the built environment to limit congestion. In new neighborhoods on the periphery of the city, the zoning and platting codes could be easily enforced; but, that was not true in Milwaukee’s dense, original neighborhoods on the north and south sides.⁸⁷ With an existing built environment, zoning and platting guides in these neighborhoods did little to control new housing because there was little to no construction activity. However, they did effectively constrain the adaptation of housing by restricting the construction of Polish flats and alley houses. This thus eliminated a crucial avenue for immigrant families to elevate their standing in the socio-economic hierarchy because it limited their financial ability to develop affordable housing.⁸⁸ The regulatory approach of zoning and platting – largely dictated by a sense of morality – completely negated the financial needs of working-class families and significantly retarded their ability to develop housing for themselves.

⁸⁵Hubka and Kenny (2000), 41.

⁸⁶ Hubka and Kenny (2000), 42.

⁸⁷ Kenny (1994), 49.

⁸⁸ Kenny (1994), 49.

C.ii. The Original City, Gateway Districts, & Slum Wards

C.ii.a. 1910-1930 Baseline for Milwaukee

Milwaukee reached a defining moment by the late 1910s and early 1920s. The city's population had rapidly increased since its founding, heavy manufacturing dominated key areas along the city's waterways and railroad corridors, and the city's neighborhoods became uniquely dense ethnic and racial enclaves of single-family and duplex housing. Political and social currents nationally and within the city demanded a modernization of Milwaukee to accommodate its future needs and growth. Thus began a discernible period of centralized, master planning in the city in the interwar years from the late 1910s through the 1940s that reshaped the ethnic, racial, and spatial attributes of housing in Milwaukee.

From the city's initial settlement in the 1830s, Milwaukee had grown exponentially from what was essentially a trading outpost to the United States' second most dense city by 1920.⁸⁹ Its spatial character resembled a radiating pattern of growth that nucleated at the central business district along Grand Avenue and the confluence of the Milwaukee and Menomonee Rivers. The city's oldest neighborhoods emanated from the three original settlements of Kilbourntown, Juneautown, and Walker's Point. By the 1920s and 1930s, Milwaukee's growth had further developed these settlements into the city's most dense neighborhoods and industrial districts. This research's study area is characterized by the growth of these areas to purposefully include the original settlements and the expansion of the neighborhoods, which ultimately produces a geography that closely aligns to Milwaukee's municipal boundary in 1920. Table 4.2 and Figure 4.3 present a comparison of these geographies to provide context.

⁸⁹ McCarthy (2006), 36.

Table 4.2: Comparison of Milwaukee Geographies, 1852-2020

<i>Geography</i>	<i>Area (square miles)</i>
Original Milwaukee Settlements (1852)	3.60
Research Study Area (1920, 1938)	13.24
1910 Municipal Boundary	22.22
1920, 1930 Municipal Boundary	26.02
2020 Municipal Boundary	96.74

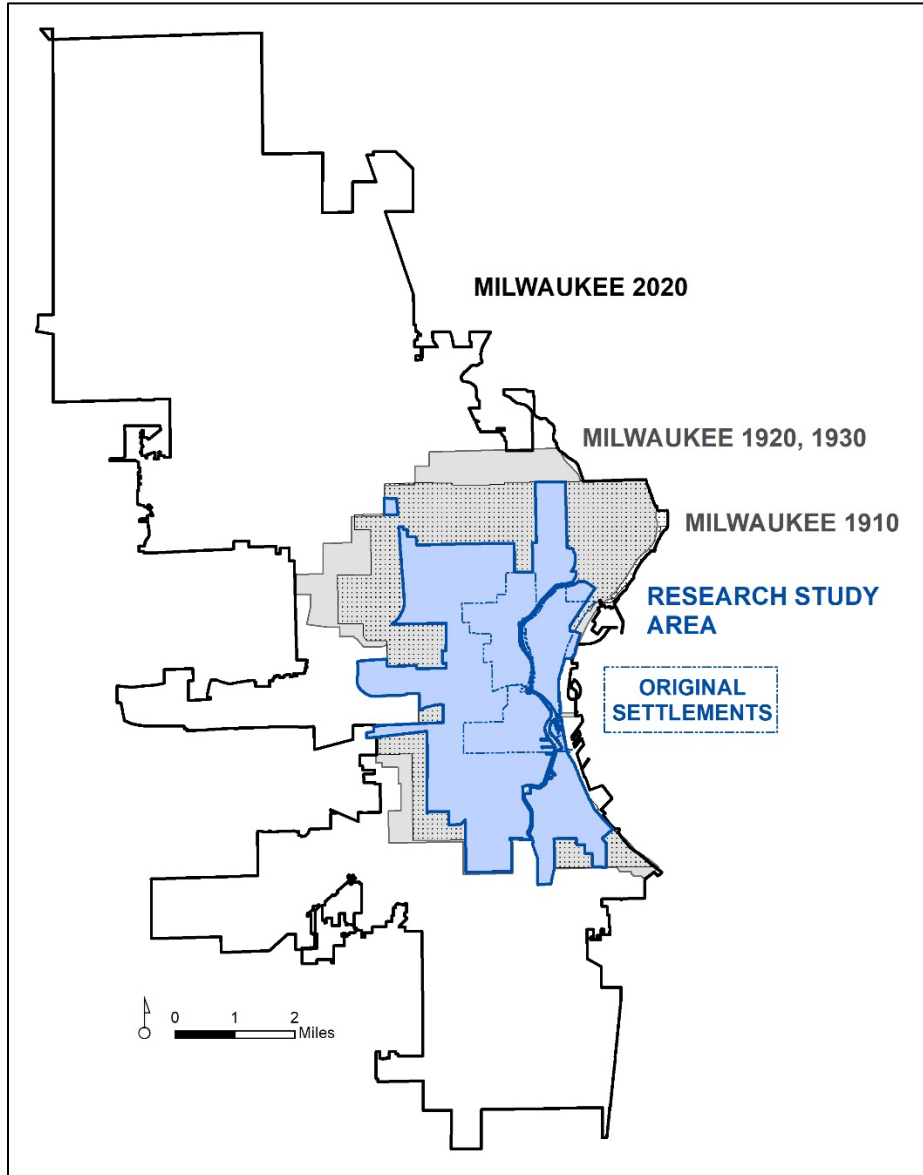


Figure 4.3: Comparison of Milwaukee Geographies, 1852-2020

In the 70 years from 1850 to 1920, Milwaukee's population increased twenty-onefold from 20,061 to 457,147.⁹⁰ This exponential growth coincided with the massive densification and industrialization of the neighborhoods surrounding the central business district. The density of Milwaukee by 1920 was notable in comparison to other American cities because the city was relatively short; that meaning, it did not have the taller apartment buildings and skyscrapers characteristic of East Coast cities. Instead, Milwaukee was predominantly a city of neighborhoods with commercial corridors of two- to four-story buildings surrounded by residential neighborhoods of one- to two-story single-family homes and duplexes. It was a low-rise city that was "a quintessentially Midwest metropolis," similar to Chicago and Detroit.⁹¹ These spatial characteristics created a unique environment for the city's ethnic and racial enclaves that ultimately determined the form and function of the neighborhoods. Additionally, Milwaukee's growth in the 1920s was largely dictated by the ability of workers to easily access their jobs. Because the city benefited from a robust streetcar network, Milwaukee's geographic extent was determined by ease of access to public transit.⁹²

C.ii.b. Scope and Characteristics of Slum Conditions

At the start of the research time period in 1910, a baseline of data is available that provides a general overview of Milwaukee's population and the housing market; however, more granular data is not available. While there was an inherent acknowledgment that the city was rapidly growing and industrializing, there was no basis in the data to substantiate the significance of this urbanization. That would come later with 1920 Decennial Census data. The 1910 baseline of data indicates three general points: 1) a total city population of 373,857, 2) a total number of families of 80,566, and 3) a total number of dwellings of 60,724. The city was almost exclusively composed of native- or foreign-born Whites with Blacks, Indians, and Chinese making up only a little more than a quarter of a percentage

⁹⁰ United States Department of Commerce, *Decennial Census*, 1850, 1920.

⁹¹ McCarthy (2006), 40.

⁹² Clay McShane, *Technology and Reform: Street Railways and the Growth of Milwaukee, 1887-1900* (1975), 7.

point of the population. While this data is available at the ward level, additional detail beyond totals of population, families, and dwellings is not specified. Additionally, the number of wards and their boundaries shifted in the city from 1910 to 1920. As a result, the lack of specific data in 1910 coupled with changes in the ward structures prevents a detailed comparison across the two decades. The increasing level of detail starting in the 1920 data provides a more accurate picture of the city's neighborhoods.

In contrast to the relationship between the city's contemporary housing market and the broader region, the city's housing market in 1920 was largely contained within the municipal boundary. This was chiefly because the remaining areas of Milwaukee County were rural. In 1920, the city contained 106,101 homes, which constituted 86.4% of Milwaukee County's 122,694 total homes.⁹³ The city housing supply was predominantly focused on renters with almost 64% of units identified as rentals. This varied by district but was noticeable in the Italian District of the Third Ward, the Jewish District of the Fourth Ward, the Russian Jew and Black District of the Sixth Ward, and the ethnically mixed Tenth Ward. In contrast, the Polish District of the Fourteenth Ward was almost evenly split between renters and owners. These five wards constituted the slum districts of the 1910s, as identified by Thompson (1910), Hegemann (1916), McCarthy (2006), and detailed in Tables 4.3 and 4.4. From a spatial perspective, the city's housing market was confined to a defined geography within the city's municipal boundary. The primary reason for this captive housing market was the inability of people and goods to move efficiently over long distances due to limitations in transportation. To reduce the burdens of time and cost on daily transit, people and companies needed to co-locate and concentrate themselves in close proximity to one another. Thus, the decentralization of city's housing market had yet to occur in 1920.

⁹³ United States Department of Commerce, *Decennial Census*, 1920.

Table 4.3: Comparison of Milwaukee’s Housing Supply, 1920

Wards	Total Homes [†]	Rented Homes (perc. of total)	Owned Homes (perc. of total)
Milwaukee, County			
---	122,694	74,421 (60.65%)	47,248 (38.50%)
Milwaukee, City of			
---	106,101	67,853 (63.95%)	37,382 (35.23%)
Slum Wards*			
3 – Italian District	3,633	3,315 (91.25%)	251 (6.91%)
4 – Jewish District	3,683	3,251 (88.27%)	354 (9.61%)
6 – Russian Jew & Black District	4,671	3,692 (79.04%)	956 (20.47%)
10 – “The Submerged Tenth”	3,426	2,503 (73.06%)	899 (26.24%)
14 – Polish District	3,423	1,730 (50.54%)	1,672 (48.85%)
All Other Wards			
1	4,285	3,083 (71.95%)	1,168 (27.26%)
2	4,185	3,585 (85.66%)	563 (13.45%)
5	3,821	3,005 (78.64%)	741 (19.39%)
7	4,850	3,099 (63.90%)	1,733 (35.73%)
8	4,223	2,580 (61.09%)	1,621 (38.39%)
9	4,601	3,470 (75.42%)	1,105 (24.02%)
11	3,791	1,984 (52.33%)	1,770 (46.69%)
12	3,674	2,504 (68.15%)	1,146 (31.19%)
13	4,547	2,905 (63.89%)	1,620 (35.63%)
15	3,349	2,111 (63.03%)	1,205 (35.98%)
16	2,749	1,940 (70.57%)	779 (28.34%)
17	4,244	2,180 (51.37%)	2,034 (47.93%)
18	4,150	2,330 (56.14%)	1,776 (42.80%)
19	4,599	2,657 (57.77%)	1,907 (41.47%)
20	5,998	2,847 (47.47%)	3,124 (52.08%)
21	4,839	2,705 (55.90%)	2,113 (43.67%)
22	6,021	3,228 (53.61%)	2,765 (45.92%)
23	4,956	2,954 (59.60%)	1,954 (39.43%)
24	3,474	1,710 (49.22%)	1,737 (50.00%)
25	4,909	2,485 (50.62%)	2,389 (48.67%)

Notes: [†]“Rented Homes” and “Owned Homes” may not total exactly to “Total Homes” because of homes with “Tenure Unknown” in 1920 Census data. *As identified by Thompson (1910), Hegemann (1916), and McCarthy (2006).

Sources: United States Decennial Census 1920, Thompson (1910), Hegemann (1916), McCarthy (2006).

As Milwaukee industrialized and densified, it became clear that the city was growing into an urban area comparable to Chicago, New York, and other major East Coast cities.⁹⁴ While Milwaukee's leadership sought this economic power and prestige, it also saw concerning trends in slum conditions that had become apparent in select neighborhoods in the cities. Efforts to study and address the issue focused on housing reforms as the primary means to eliminate the deteriorated living environments and develop a more idyllic city. By the 1910s in American history, there was intense scrutiny on the role of tenements as the primary contributors to poor housing conditions; but, Milwaukee was distinct in that it did not possess the spatial character of larger cities and instead was primarily a city of "cottage dwellings."⁹⁵ Thus, the approach to Milwaukee's housing problems needed to be spatially adapted to a city of dense neighborhoods of single-family and duplex dwellings in which some were experiencing acute deterioration. Of these slum conditions, top of mind was "the dark rooms, the overcrowding, the filth, [and] the insanitary toilets."⁹⁶ Additionally, the number of dwellings per parcel was concerning – with emphasis placed on alley houses. Table 4.4 describes conditions in three of Milwaukee's slum wards, which were of particular concern to city leadership.

⁹⁴ Carl Thompson, "The Housing Awakening, Part II" (1910), 367. Also note that during Milwaukee's master planning efforts, the city was frequently compared to East Coast and European cities, notably those in France, Italy, Germany, and Austria. There was a desire from leadership to rise to the level of those other cities to achieve a sense of economic, cultural, and design prowess.

⁹⁵ Thompson (1910), 367-368.

⁹⁶ Thompson (1910), 369.

Table 4.4: Characteristics of Milwaukee’s Slum Wards, 1910

<i>Ward</i>	<i>Characteristics</i>
3 – Italian District	<ul style="list-style-type: none"> • Notes acuteness of poor conditions in housing. • Poor plumbing with pipes leaking from one floor to another. • Families living in same rooms as livestock and wild animals. • Dark and cramped rooms. • Lack of access to basic healthcare. • Worst of conditions are found in basement dwellings. • Alleys are a collection of garbage and waste.
4 – Jewish District	<ul style="list-style-type: none"> • Substandard shacks crowd alleys limiting sunlight and fresh air. • Overcrowding of dwellings with too many families produces unsanitary conditions. • Poor housing conditions include lack of functioning toilets, unstable stairways, and accumulation of human waste in rooms.
14 – Polish District	<ul style="list-style-type: none"> • Known as “the city wilderness.” Regards the blocks of housing as “the monotony of waves” against the backdrop of smoke from nearby industrial districts. • Individual houses were typically overcrowded with multiple families and boarders. Parcels were further crowded with alley houses. • Density of homes prevent sunlight from coming through windows. • Families living in close proximity to livestock and wild animals.

Sources: Thompson (1910), 368-370. Meloni (1969), 33-36.

Milwaukee’s reformers saw the three wards described in Table 4.4 as the “foci of the disease” of slum conditions in the city.⁹⁷ As the city was expected to continue expanding at a strong rate of growth, there was concern of a contagion effect of slum conditions spreading to other wards and afflicting larger parts of the city.⁹⁸ While the conditions were considered to be a social problem, it was clear to reformers that the “slums [were] an economic problem that threatened the vitality and wealth of the entire city,” as noted in a 1919 *Milwaukee Journal* article: “The housing problem is not confined to one district, thirteen out of the 25 wards in the city have poor housing. ... It is pointed out that since one-half of this area lies in districts of high land value, the economic loss to the community through non improvement of the property and the consequent inadequate taxation, is considerable.”⁹⁹ There was hope by many in what

⁹⁷ Thompson (1910), 367.

⁹⁸ Thompson (1910), 369-370.

⁹⁹ McCarthy (2006), 42-44.

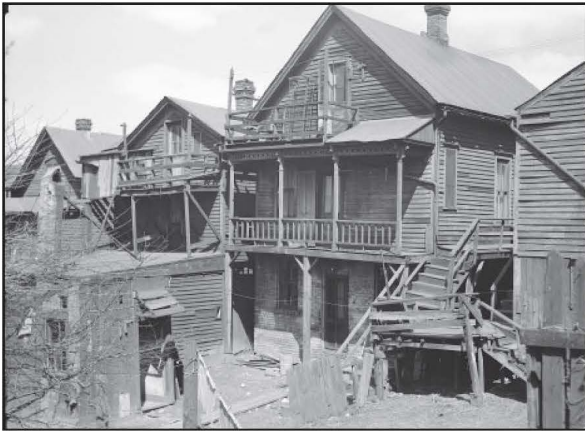
was regarded as “The Milwaukee of Tomorrow,” which was envisioned as model dwellings on the edges of the city that would take advantage of the natural landscape, fresh air, and sunshine to create an ideal or utopian setting for workingmen and their families. To achieve this vision, the city needed to pursue multiple, large-scale efforts to facilitate the construction of housing in a way that satisfied the needs and desires of city leadership and the average worker. As Milwaukee expanded, these efforts included a municipal effort to build affordable worker housing, a proportionate expansion of the city’s rapid transit infrastructure to allow for easy movement of workers, and an emphasis on ensuring employment in the city paid workers a livable wage.¹⁰⁰

- **Municipal Housing:** Vacant farmland was to be acquired by the city to plat and build model neighborhoods with accompanying commercial uses and industrial districts at the outer edges of the city. The intent was to create housing that provided workers and their families with access to nature. The city intended to create a lease-to-own financing program that would allow workers to buy the homes affordably.
- **Rapid Transit:** Expansion of the city was predicated on the availability of public transit to move workers efficiently from the residential neighborhoods to the industrial districts. This unified streetcar system was intended to include the urban railways as well as the interurban lines, thereby providing intra-city connections and longer distance routes to outlying communities.
- **Wages and Employment:** Reformers saw steady employment and wages commensurate with the cost of living as critical to improving housing conditions. They charged that immigrants were particularly susceptible to suffering low wages because they were “poor and ignorant classes of working people.”¹⁰¹ Because middle class workers with higher wages were better able to move

¹⁰⁰ Thompson (1910), 372-376.

¹⁰¹ Thompson (1910), 376.

into model neighborhoods, it was argued that economic conditions for lower wage earners needed to improve to realize the vision of a slum-free city.



Rear of houses and backyards in slum conditions. Location not identified.



Housing in the industrial district. Location presumably around northern Walker's Point or the Menomonee Valley.



Junk yard adjacent to the backyards of housing. Location not identified.



Residential area in the industrial district. Location presumably around northern Walker's Point.



Housing along an alley at 1012 West Somers Street.



Housing alongside a commercial structure at 437 North Jackson Street. Note the basement apartment in the middle building.

Image Source: Library of Congress, 1936.

Figure 4.4: Photos of Housing Conditions in Milwaukee's Slum Wards

C.ii.c. Spatial Analysis of Gateway Districts & Slum Wards

Prior to 1920, the city's neighborhoods developed organically. While basic rectilinear platting was instituted at the founding of the city in the 1840s, the form, function, and use of blocks and parcels was responsive to the needs of residents and businesses. Thus, each ward was unique unto itself with a highly functional built environment. The wards in and around the central business district were characterized by economic diversity with a clustering of mixed uses, access to public transit, and nearby industrial districts. When demographics and the housing inventory are also considered, the portrait of the city's neighborhoods become more nuanced and granular.

To study the demographic, economic, and spatial characteristics of the slum wards, their context within the city's housing market needs to be established. Of the five slum wards, four are clustered around the CBD and are in immediate proximity to the predominantly German wards on the west and northwest sides of the city. The outlying slum ward – Ward 14 – is on the southern edge of the city. Because Milwaukee's leadership and culture was heavy with Germanic influences, comparing the slum wards to those with a majority of German residents provides a needed comparison. It can be hypothesized that the German wards were of a more preferred status in the hierarchy of the city. Table 4.5 provides an overview of the distribution of population, families, and dwellings for the city from 1920-1930.

Table 4.5: Housing Market Distribution by Ward Designation, 1920-1930

Geography	1920	1930
Population		
City	457,147	578,249
Slum Wards	86,910 (19.01%)	91,095 (15.75%)
German Wards	79,864 (17.47%)	143,335 (24.79%)
Families		
City	106,101	143,349
Slum Wards	18,836 (17.75%)	20,952 (14.62%)
German Wards	19,967 (18.82%)	37,757 (26.34%)
Dwellings		
City	66,915	94,204
Slum Wards	9,886 (14.77%)	11,078 (11.76%)
German Wards	13,400 (20.03%)	26,711 (28.35%)

Notes: Values reported as count of people and percent of total city population in parentheses.

Sources: United States Decennial Census 1920, 1930.

As housing submarkets, the spatial context for the slum wards presents a study in irony. While the previously discussed public health concerns identified unhygienic living conditions, other aspects of the wards contradict arguments that the policy of containment was warranted to prevent the spreading of the slum conditions. Dissonance is somewhat apparent in the logic and motivations of decision makers because of the vastly different characters and uses of the neighborhoods. Because each was distinct with a unique mix of uses, their labelling as “slum” or “ghetto” obfuscated the individuality of the districts and was overly broad. It does not appear to be factually accurate that the entirety of these wards were slum districts. It appears that the higher density portions of the wards may have suffered from deteriorated conditions or undesirable populations, but the wards were economically productive areas.

At a macro scale, Figures 4.5 and 4.6 visualize the spatial attributes of these various housing submarkets. The maps provide an overview of the interrelatedness of elements in each neighborhood, including ward designations, waterways, railroad corridors, streetcar lines, the CBD, and the city’s original three settlements.

- **Ward Designations:** The majority of the wards – both slum and German – are clustered north of the Menomonee River along the streetcar lines emanating from the CBD. In 1920, German Milwaukee was located along the western and northern periphery of the downtown area. For the slum wards, four of the five were in some of the city’s oldest neighborhoods along the Milwaukee River in what had been Kilbourntown and Juneautown. The outlier of the wards – Ward 14 – was on the city’s southern boundary and was identified as a prominently Polish neighborhood. Additionally, Wards 3 and 4 encompassed almost the entirety of the CBD along Grand Avenue.
- **Transit Corridors:** The railroad corridors and streetcar lines provide the economic contours of the city for the radial lines of commercial and industrial activity extending into the neighborhoods. These corridors provide a reference for the industrial districts and freight yards throughout the city, as well as important overlaps at riverfront freight and grain terminals. In 1920, the streetcar lines provided the primary mode of transportation for longer distance travel throughout the city and facilitated a high degree of access for the centrally located wards.
- **Original Villages & Central Business District:** The original neighborhoods of Milwaukee were built around the confluence of the Milwaukee and Menomonee Rivers. From the CBD along Grand Avenue, the neighborhoods grew north, east, and south hugging the riverfronts, which provided a spatial form distinctly reflective of a riparian influence. Of the slum wards, Wards 3, 4, 6, and 10 are contained within the original settlements of the city and are directly accessible to the CBD.

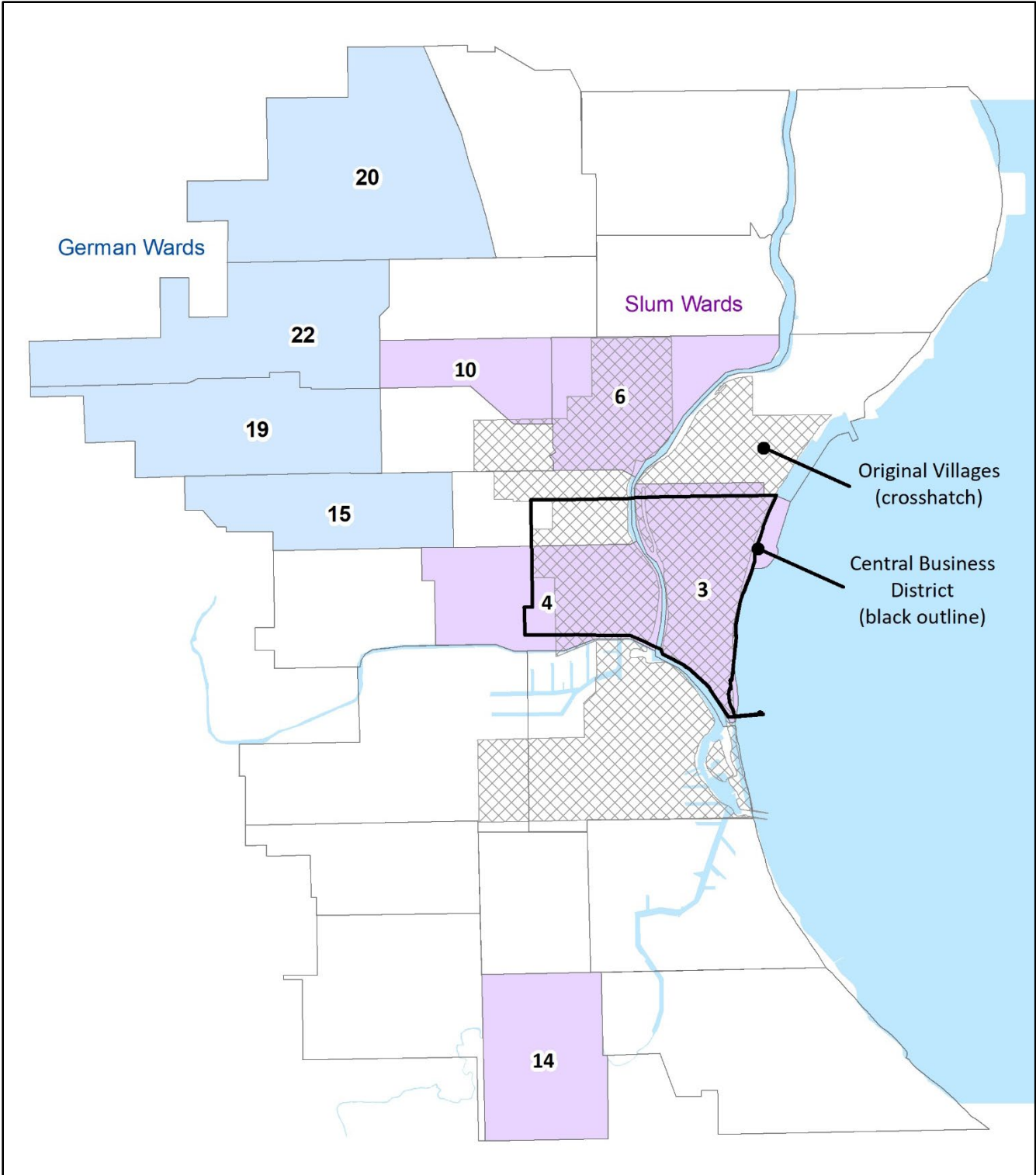


Figure 4.5: Visualization of Housing Submarkets, 1920

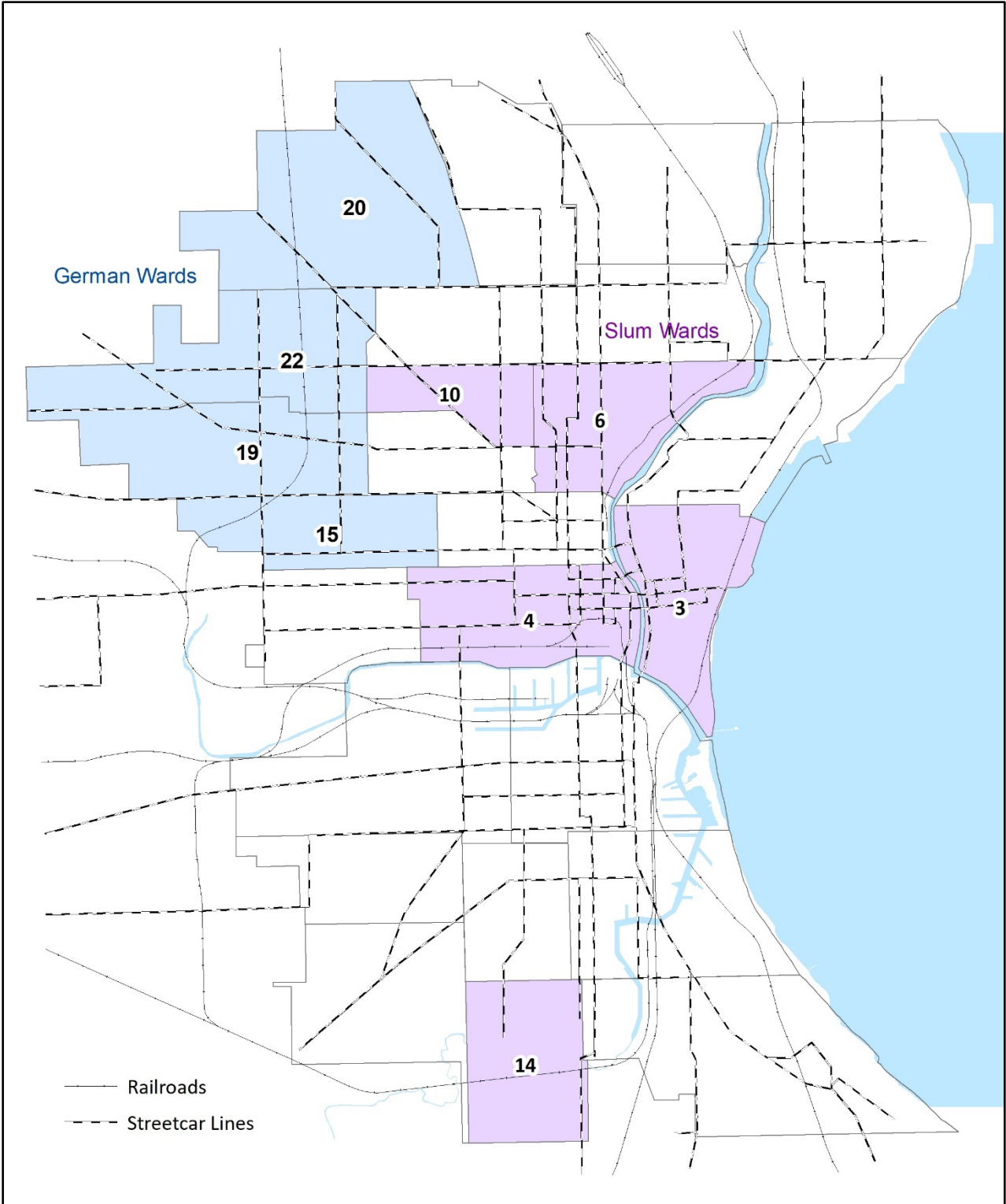


Figure 4.6: Visualization of Housing Submarkets with Transit Corridors Overlaid, 1920

When examining the historic demographics and economics of the Milwaukee housing market, the analysis benefits from data collected at the ward level. Because Milwaukee was regarded as a “Principal City,” the Decennial Census collected ward-level data dating back to the latter half of the 1800s.¹⁰²

While the data in 1920 is fairly general, it provides a reasonable baseline to understand the market at that time. As previously discussed, the extent of Milwaukee’s housing market was largely found within the city’s municipal boundary. By 1930, the demographic and housing market data becomes more refined with the addition of ward-level data quantifying the value of owner-occupied and rental housing. Additionally, the 1918 racial map of the city can be used to complement the Census data to better understand the ethnic and racial composition of the city. Table 4.6 and Figure 4.7 outline the housing market from 1920-1930 and provide comparisons of the slum wards.

- Despite assertions that Milwaukee was a city of homeowners, families predominantly rented their homes. In 1920, the prevalence of rentals outpaced owner-occupied families at a ratio of 2:1 for the city overall. This ratio increased substantially in the slum wards with the highest in Ward 3 of 13:1. In contrast, the German wards maintained the average of 2:1 with Ward 20 being unique with a majority of owner-occupants. This trend held true into the 1930 data, though homeownership did increase in the slum wards. Thus, the family housing tenure data indicates that the ratio of renters to owner-occupants was greater in the slum wards than in the German wards.
- Milwaukee was an overwhelmingly White city that primarily saw ethnic differences between nationalities and native- versus foreign-born Whites. The slum wards were some of the city’s most ethnically diverse neighborhoods with up to four or five different communities in close proximity to one another. Ward 14 was the outlier in that it was a 100% Polish neighborhood.

¹⁰² In the 1920 Census, a “Principal City” was a designation given to cities of certain sizes, typically those greater than 100,000 people. See United States Department of Commerce, “Fourteenth Census of the United States: Volume 2, Chapter I: Color or Race, Nativity, and Parentage,” 1920, pp. 19-20.

For comparison, the Third Ward included Germans, Italians, Blacks, and Greeks; the Fourth Ward included Greeks, Blacks, Armenians and Syrians, Serbians, Austrians and Hungarians, Belgians, Germans, and Irish; the Sixth Ward included Poles, Germans, Blacks, Bulgarians, and Irish; and, the Tenth Ward included Irish, Germans, Czechoslovakians, and Dutch.

- Though Black Milwaukee was still small by 1920 – only accounting for 0.49% of the city’s total population, Ward 6 emerged as the locus of the community. This began to be increasingly defined into the 1930s as the proportion of Black Milwaukee concentrated in the Sixth Ward increased from 35.3% to 56.5%. The formation of Black Milwaukee was noticed as early as the 1910s with the district being nicknamed “Nigger Alley” and “Black Bottom.”¹⁰³ As Milwaukee’s Black population continued to grow, its concentration in the ward became more prominent.
- Calculations for congestion in the slum wards indicates a higher density of people per dwelling and families per dwelling. Compared to the city at large and the German wards, it is apparent that multiple families were living in a single dwelling unit in the slum wards – most likely with boarders to earn additional money. However, the number of people per family were similar across the wards.
- The owner-occupied housing value and average monthly rent data from the 1930 Census does not indicate a discernible trend between the slum and German wards. It is evident in the owner-occupied housing values that far fewer families owned their homes in the slum wards; but, the bar charts in Figure 5 do not show skewed data. Similarly for average monthly rent, there are variations in how the data revolve around the mode of \$30-\$49 per month. However, the variation appears to be rather moderate without dramatic differences from ward to ward.

¹⁰³ McCarthy (2006), 42. Note that in McCarthy’s in-text citation, he references a primary source: “Milwaukee Press Club, *Once a Year* 13 (1919): 25.”

Table 4.6: Milwaukee Housing Market, 1920-1930

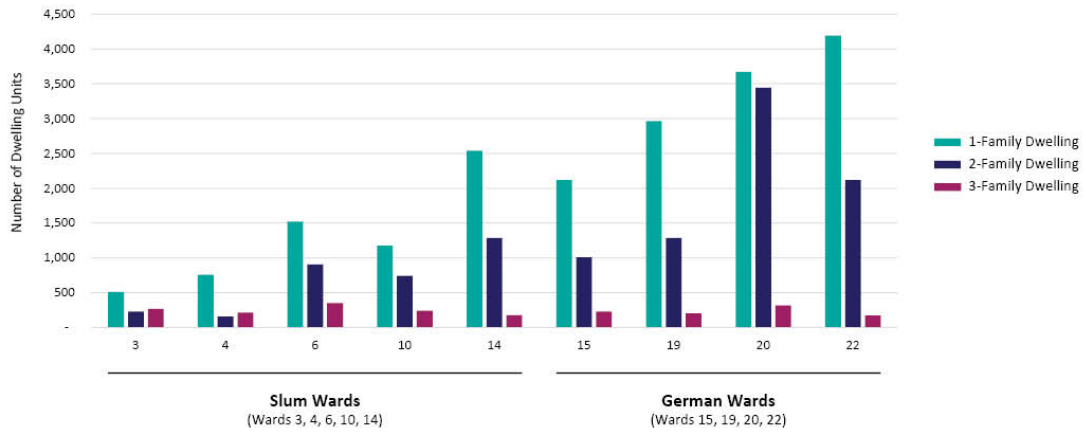
Ward	Demographics			Family Housing Tenure		Density		
	Native White	Foreign-born White	Black	Owner-occupied	Rental	Ppl. per Family	Ppl. per Dwelling Unit	Families per Dwelling Unit
-- 1920 --								
Milwaukee, City of								
---	344,756	110,068	2,229	37,382	67,853	4.31	6.83	1.59
Slum Wards								
3	12,360	4,717	146	251	3,315	4.74	11.71	2.47
4	12,742	4,096	161	354	3,251	4.63	10.10	2.18
6	11,772	7,217	787	956	3,692	4.24	7.43	1.75
10	9,317	4,985	6	899	2,503	4.18	7.20	1.72
14	12,976	5,581	0	1,672	1,730	5.42	8.93	1.65
German Wards*								
15	11,203	2,320	2	1,205	2,111	4.04	6.07	1.50
19	15,190	2,935	0	1,907	2,657	3.94	6.16	1.56
20	19,737	4,574	12	3,124	2,847	4.06	5.76	1.42
22	20,170	3,721	0	2,765	3,228	3.97	5.96	1.50
-- 1930 --								
Milwaukee, City of								
---	459,424	109,383	7,501	60,679	80,643	4.03	6.14	1.52
Slum Wards								
3	12,008	2,971	38	213	3,377	4.06	15.01	3.69
4	12,559	2,443	20	324	2,933	4.52	13.39	2.96
6	10,381	4,405	4,241	1,071	3,441	4.06	6.86	1.69
10	9,325	4,713	264	1,017	2,456	4.08	6.62	1.62
14	21,750	5,727	0	3,310	2,310	4.83	6.87	1.42
German Wards*								
15	18,062	3,314	4	2,092	3,254	3.96	6.37	1.61
19	19,969	3,805	3	2,900	3,381	3.75	5.35	1.43
20	52,702	11,285	16	9,530	7,211	3.78	5.15	1.36
22	28,678	5,455	0	4,557	4,392	3.75	5.27	1.40

Notes: *Wards identified as majority German wards using the 1918 Racial Map of Milwaukee.

Sources: United States Decennial Census 1920, 1930.

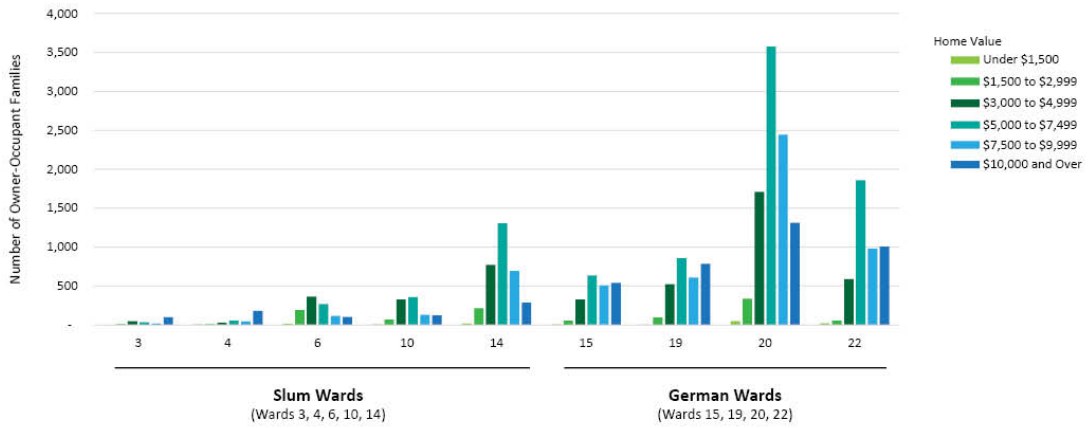
Dwelling Unit Mix by Select Wards, 1930

Source: U.S. Decennial Census, 1930



Value of Owner-Occupied Homes by Select Wards, 1930

Source: U.S. Decennial Census, 1930



Average Monthly Rent for Renting Families by Select Wards, 1930

Source: U.S. Decennial Census, 1930

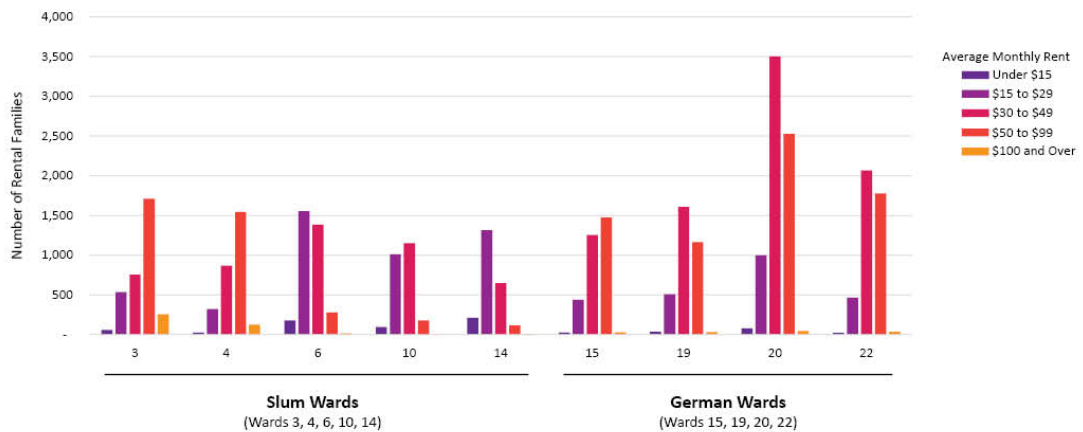


Figure 4.7: Data Visualizations of City Housing Market, 1930

A detailed assessment of the slum wards at the block and parcel scales reveals a nuanced structure of socio-cultural and economic geographies. The genesis for these communities were centers of gravity that drove momentum and daily life for residents. In studying these areas, the identification of social centers and nearby economic assets frames the assembly of these places into a mosaic of neighborhoods.¹⁰⁴ A comparison of attributes from neighborhood to neighborhood provides important insights into how the enclaves were structured and how the socio-cultural communities operated. The detailed understanding of the structure of these neighborhoods helps to identify the drivers of the communities and how residents built a cohesive environment.

Important to note, the ethnic and racial enclaves within the slum wards had previously undergone the city-building process. Contained within neighborhoods closest to the city's historic center, structures within the enclaves were 30-70 years old. By the late 1910s, these neighborhoods had already experienced their initial period of construction by the original residents followed by a second housing market cycle of densification that added additional structures. These neighborhoods formed the bulk of Milwaukee's informal housing market for the city's working-class families. Discussed by Zunz (1982), a city's informal housing market was composed of working-class residents that relied on owner-occupied and rented cottages for housing with an absence of real estate developers and realtors building new units.¹⁰⁵ A city's informal housing market could be found either in the oldest neighborhoods that had experienced two or more filtration cycles of new residents or in neighborhoods where banks were unwilling to lend for single-family home construction.

¹⁰⁴ Urban history research in Milwaukee benefits from a focus on the social geography and political economy of neighborhood structures. For a discussion on "social centers," see Jozwiak, "Politics in Play" (2003), 11-12, 14. For a critique of Ernest Burgess' "concentric zone model" in Milwaukee, see Kenny, et al., "Beyond the 'Zone of Workingmen's Homes'" (2006).

¹⁰⁵ Olivier Zunz, *Changing Face of Inequality* (1982), 161-176.

The irony of the slum ward designation for select neighborhoods in Milwaukee was the blunt approach it embodied. By the late 1910s, Milwaukee was only large enough to contain 25 wards. As a result, each ward – particularly those in the inner core areas – typically contained multiple neighborhoods and a mix of uses. Instead of addressing blight with a greater degree of specificity, the City designated large swaths of multiple neighborhoods – even upper-class ones – as in poor condition. It was too broad of a declaration to say that all blocks and structures in the slum wards were blighted, yet it was the City's preferred approach. A detailed analysis of the slum wards reveals that Milwaukee's earliest urban reforms were far more impactful to individual neighborhoods when analyzed at the block level. From a macro perspective, supporters argued that the reforms were broadly beneficial and protective of workingmen and their families. However, when viewed at the block-level scale, it becomes clear that the reforms were scalpel-like tools to divide neighborhoods and impact local property markets. The impact of this blunt approach was no more evident than in the Third Ward. Little Italy occupied a significant portion of the lower area of the ward in a mixed-use district composed of residential, commercial, and industrial uses.

The Third Ward was fairly expansive, extending along a bluffed peninsula at its northern extent to at-grade dockwalls and beaches at its southern point. The ward lay between the Milwaukee River and Lake Michigan with an area measuring roughly nine blocks wide and fifteen blocks long. Originally the site of Juneautown, the ward developed as a semi-autonomous city with Kilbourntown being its mirror to the west. By the 1910s, the ward had developed into a dynamic, heterogeneous environment encompassing a portion of the central business district, Little Italy, the Chicago & Northwestern Railroad Depot, City Hall, Milwaukee County Court House, United States Government Building, multiple ethnic enclaves, and the River Street prostitution district.

Multiple ethnic and racial communities lived in the Third Ward, but the neighborhood's most prominent were the Italians. Concentrated in the lower area of the ward, Little Italy encompassed approximately 35 square blocks of mixed land uses, including a residential district, commercial corridor, and industrial uses to the south. Elements of the Italian community pushed northward in a linear arrangement to the ward's boundary along Knapp Street. Incidentally, multiple ethnic communities clustered along Knapp Street: the Greeks and Blacks to the west, Italians and Germans in the center, and Germans and Anglo-Saxons to the east.

When the City instituted zoning in 1920, the majority of the ward was designated "Commercial and Light Manufacturing." A small portion along its southern tip was designated "Industrial;" and, a pocket in the northeast corner of the ward was designated "Local Business" and "Residence." Zoning the northeast corner of the ward as "Local Business" and "Residence" is, in hindsight, a direct action by the City to protect the German and Anglo-Saxon residents living in those blocks. In contrast to other ethnic and racial groups, the Germans and Anglo-Saxons were shielded by a protective barrier of land use regulation that preserved their homes as conforming uses, maintained their property values, protected them from encroaching commercial uses, and defended Juneau Park from further development. The City's decision to zone Little Italy as "Commercial and Light Manufacturing" gave tacit permission to and acted as a regulatory intervention that served to accelerate a shift in ongoing land uses in the neighborhood. This process had been ongoing in the ward for at least a decade prior to the institution of zoning, but it was well recognized by City leadership and the business community that the Third Ward was likely to become one of the city's commercial centers.¹⁰⁶ As a result, landlords implicitly embraced rent profiteering against the Italians. Property owners anticipated the shift in land uses, abandoned maintenance on residential properties and allowed them to deteriorate, but maintained market-rate

¹⁰⁶ Meloni (1969), 31-33.

rents for working class people. La Piana (1915) calculated an average monthly rent in Little Italy of \$12.00. Assuming the average Italian family earned approximately \$400 per year, housing costs represented over 30% of a family's gross annual expenditures.¹⁰⁷ Having found a home in the neighborhood, Italians were unwilling to leave their ethnic enclave and its socio-cultural safety net, thereby limiting their job prospects to companies within easy access of the neighborhood. As a result, the community was trapped in an upside-down housing market with poor conditions and inflated rents.

In contrast to Little Italy, Milwaukee's Polonia on the south side was fundamentally different. Of any designated slum ward, the Polish Fourteenth Ward stands as the outlier. At the time of its designation, the ward was on the furthest periphery of the city's south side and still under construction. Numerous lots and blocks stood vacant; and, those that were occupied with houses typically only contained a single-family home. Polish flats and alley houses were not prevalent in the Fourteenth Ward. In contrast, the other Polish wards – the Eighth, Eleventh, Twelfth, and Seventeenth – were far more mature and had entered their second housing cycle of densification. Thus, the historical record is unclear as to why the Fourteenth was designated a slum. In retrospect, it would have been more appropriate for the City to designate the Eighth or Eleventh Wards as slums due to their housing congestion. It could be hypothesized, then, that the City sought to prevent further contagion of congestion by proactively designating the Fourteenth as a slum, but this is unverifiable.

The Fourteenth Ward represented the continued expansion of the city's homogenous Polish community into undeveloped lands in the rural periphery. It was generally flat with little topography measuring 12 blocks wide and 8 blocks long, but transected by the Kinnickinnic River. As the neighborhoods developed, new housing construction included the planting of a regular pattern of street trees. The

¹⁰⁷ La Piana (1915), 14, 15.

ward contained no parks, but Pulaski Park and Kosciuszko Park bordered the ward on the west and north sides, respectively. In contrast with the other slum wards, the Fourteenth was a series of majority residential neighborhoods. Limited industrial uses in the neighborhood included the Milwaukee Brewery Co., the Independent Milwaukee Brewery, the Rediske Vinegar Co., the H. Berthelet Sewer Pipe Co., and the A.J. Lindemann & Hoverson Co. Numerous Roman Catholic churches provided religious services; and, the 14th District Public School No. 2 was the neighborhood school for children.

As an under-developed ward, the 1920 zoning designations had a nominal impact on the neighborhoods. The pattern of land uses was expected. The “Local Business” district designated parcels along the major thoroughfares, while the “Residence” district designated the remaining residential parcels. The existing commercial and industrial uses were designated “Commercial and Light Manufacturing” and “Industrial” districts along the Chicago & Northwestern Railroad corridor.

While the Third Ward was marked by nuance and the Fourteenth by homogeneity, the mix of inner core slum wards west of the Milwaukee River is a study in complexity. The west side, inner core wards were the Fourth, Sixth, and Tenth. Stretching across the majority of the city’s original neighborhoods of Kilbourntown, these slum wards included a diverse array of uses, including the central business district, multiple industrial districts, numerous commercial corridors, and an abundance of residential blocks. Similar to curiosities and eccentricities in the identification of the Third and Fourteenth Wards, the designation of the Kilbourntown wards as slums is perplexing. Furthermore, the demographic populations and built environment attributes deemed unsuitable were also present in the Second Ward, which served as a connector between the Fourth and Sixth Wards; however, the Second was never discussed as a slum. The historical record does not reflect why.

The Fourth, Sixth, and Tenth Wards were quintessential immigrant quarters. The high-density environments with a mix of residential, commercial, and industrial uses were opportunistic neighborhoods that provided people with jobs and housing access. Notwithstanding the deteriorated housing conditions and issues associated with incompatible land uses, the neighborhoods served a critical role in acting as a landing spot for newly-arrived immigrants and first generation Americans. Across the three wards, numerous ethnic and racial groups built communities: Greek, Black, Jewish, Polish, Armenian, Syrian, Austrian, Hungarian, Belgian, Irish, Serbian, Romanian, Dutch, Czechoslovakian, and German. These wards epitomized the notion of an American cultural melting pot.

The west side slum wards were key elements in Milwaukee's economic productivity: homes to numerous working-class families, job centers along the industrial and commercial corridors, and the main commercial artery of Grand Avenue in the central business district. The Fourth Ward was the western half of the central business district and the southern reach of the German residential neighborhoods; the Sixth Ward was a dense, mixed-use community with diverse populations; and, the Tenth Ward was a mixed-use transition area of commercial corridors and residential blocks. Ironically, the exemption of the Second Ward from slum designation essentially negated the immigrant communities clustered on its eastern side. While the reason for this is not known, it cannot be overlooked that those immigrant communities served as an important social connector as the Third Street commercial corridor moved northward.

The west side slum wards were expansive. Covering over 275 square blocks, the three wards dominated the west side inner core area. They sloped in a south-southeasterly direction from a high point along North Avenue to a low point into the downtown at the confluence of the Milwaukee and Menomonee Rivers. Bluff conditions existed along the southeast edge of the neighborhoods where Brown and

Walnut Streets met the Milwaukee River. In some areas, this topography produced hilly conditions, but the built environment had been adapted to the terrain. Green space across these wards was extremely limited. Public parks included Lapham and Kilbourn with the Marquette Academy also having private athletic fields. The commercial and industrial areas were devoid of trees, whereas they were more prevalent in the residential blocks.

Due to the size of the slum wards in the west side inner core, the impacts of zoning in 1920 were far broader because of the neighborhoods' mixed-use character, their larger size, and the density of housing. The "Commercial and Light Manufacturing" district was used effectively to control 182 square blocks from the Milwaukee River to North 16th Street and from St. Paul Avenue to Vine Street – essentially Milwaukee's most economically productive areas. These blocks were the socio-cultural epicenters of the Black, Chinese, Greek, and Jewish communities. Because residential uses effectively became non-conforming under the "Commercial and Light Manufacturing" district, the zoning designation placed further pressure on the local informal housing market already straining from overcrowding and deteriorated conditions. Along the western and northern boundaries of these slum wards, however, the "Local Business" and "Residence" districts were applied in a fairly uniform fashion. "Local Business" designated properties along the major thoroughfares, while "Residence" designated the inner blocks of housing. This juxtaposition in regulatory decision making is almost paradoxical. If the City truly sought to address congestion in and around the central business district, then the zoning pattern should reflect a nuanced approach. Instead, the regulatory pattern for the west side, inner core slum wards is one of expulsion for residential uses.

Table 4.7: Attributes Comparison of Slum Wards, 1910-1920

Attributes	Neighborhoods (Ward)		
	<i>Juneautown - Downtown, East Side (Third Ward)</i>	<i>Kilbourntown - Downtown, West Side (Fourth, Sixth, & Tenth Wards)</i>	<i>Walker's Point - South Side (Fourteenth Ward)</i>
<i>Ethnic & Racial Enclaves</i>	Italian, Greek, Black, German, Anglo-Saxon	Greek, Black, Jewish, Polish, Armenian, Syrian, Austrian, Hungarian, Belgian, Irish, Serbian, Romanian, Dutch, Czechoslovakian, German	Polish
<i>Land & Topography</i> General Conditions Rivers & Lake	On the north, rise in elevation that produced bluffs along the Milwaukee River and Lake Michigan. To the south, lower elevations at-grade with the river and lake.	Sloped in a southeasterly direction from North Avenue down to the confluence. Bluff conditions along the Milwaukee River.	Relatively flat. Transected by the Kinnickinnic River.
<i>Green Space</i> Parks Trees	Kilbourn Park in the northeast. Street trees concentrated in the northeast in the German and Anglo-Saxon blocks.	Public parks included Lapham and Kilbourn Park. Private athletic fields at Marquette Academy. Trees only present in residential blocks.	Regular pattern of street trees as new subdivisions developed. Pulaski and Kosciuszko Parks on the periphery.

Table 4.8: Land Use Comparison of Gateway Districts & Ethnic/Racial Enclaves

<i>Structure's Land Use</i>	<i>Bad Lands Gambling & Prostitution District (1900)</i>	<i>River Street Prostitution District (1900)</i>	<i>Jewish District (1905)</i>	<i>Little Africa (1910)</i>	<i>Little Italy (1915)</i>
<i>Residential</i>	<i>114</i>	<i>91</i>	<i>3,819</i>	<i>1,121</i>	<i>641</i>
Single-Family	69	25	2,505	654	399
Duplex	5	1	102	31	30
Triplex	-	-	2	-	-
Flats	2	-	13	4	-
Tenement	-	-	4	-	14
Boarding	-	-	-	3	-
Female Boarding	-	47	-	-	-
Mixed-Use	7	-	42	16	15
Secondary Structure	31	18	1,151	413	183
<i>Commercial</i>	<i>210</i>	<i>155</i>	<i>1,098</i>	<i>831</i>	<i>260</i>
General Commercial	163	127	685	534	200
Entertainment	3	1	3	4	-
Hotel	4	2	1	7	-
Office	-	1	5	7	4
Secondary Structure	40	24	404	279	56
<i>Government</i>	<i>-</i>	<i>-</i>	<i>43</i>	<i>16</i>	<i>14</i>
Educational	-	-	22	6	4
Municipal	-	-	21	10	10
<i>Industrial</i>	<i>24</i>	<i>16</i>	<i>103</i>	<i>113</i>	<i>128</i>
General Industry	22	16	100	110	88
Railroad	-	-	-	-	38
Secondary Structure	2	-	3	3	2
<i>Warehouse</i>	<i>8</i>	<i>1</i>	<i>11</i>	<i>25</i>	<i>24</i>
<i>Community</i>	<i>1</i>	<i>-</i>	<i>71</i>	<i>20</i>	<i>3</i>
Community General	-	-	1	2	-
Church	1	-	53	15	3
Hospital	-	-	15	2	-
Synagogue	-	-	2	1	-
Total Structures	357	263	5,145	2,126	1,070

Note: The Sanborn Maps (1910) indicate "Female Boarding" as a land use. However, map details do not specify the number of dwelling units available in the boarding house. As a result, the number of female boarding houses can be counted, but not the total number of dwelling units found within them.

Source: Sanborn Fire Insurance Maps (1910).

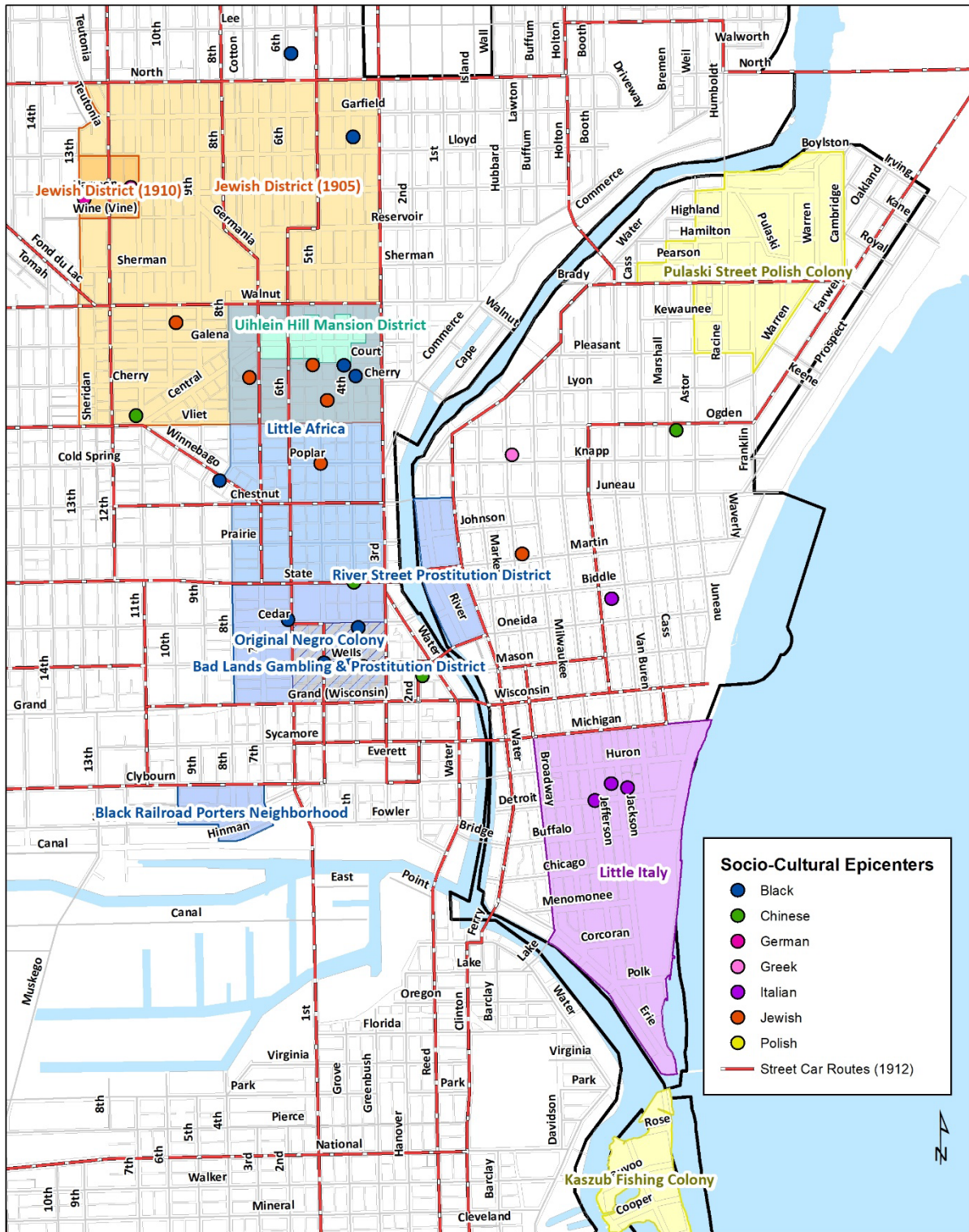


Figure 4.8: Ethnic & Racial Enclaves in Inner Core Neighborhoods, 1910s

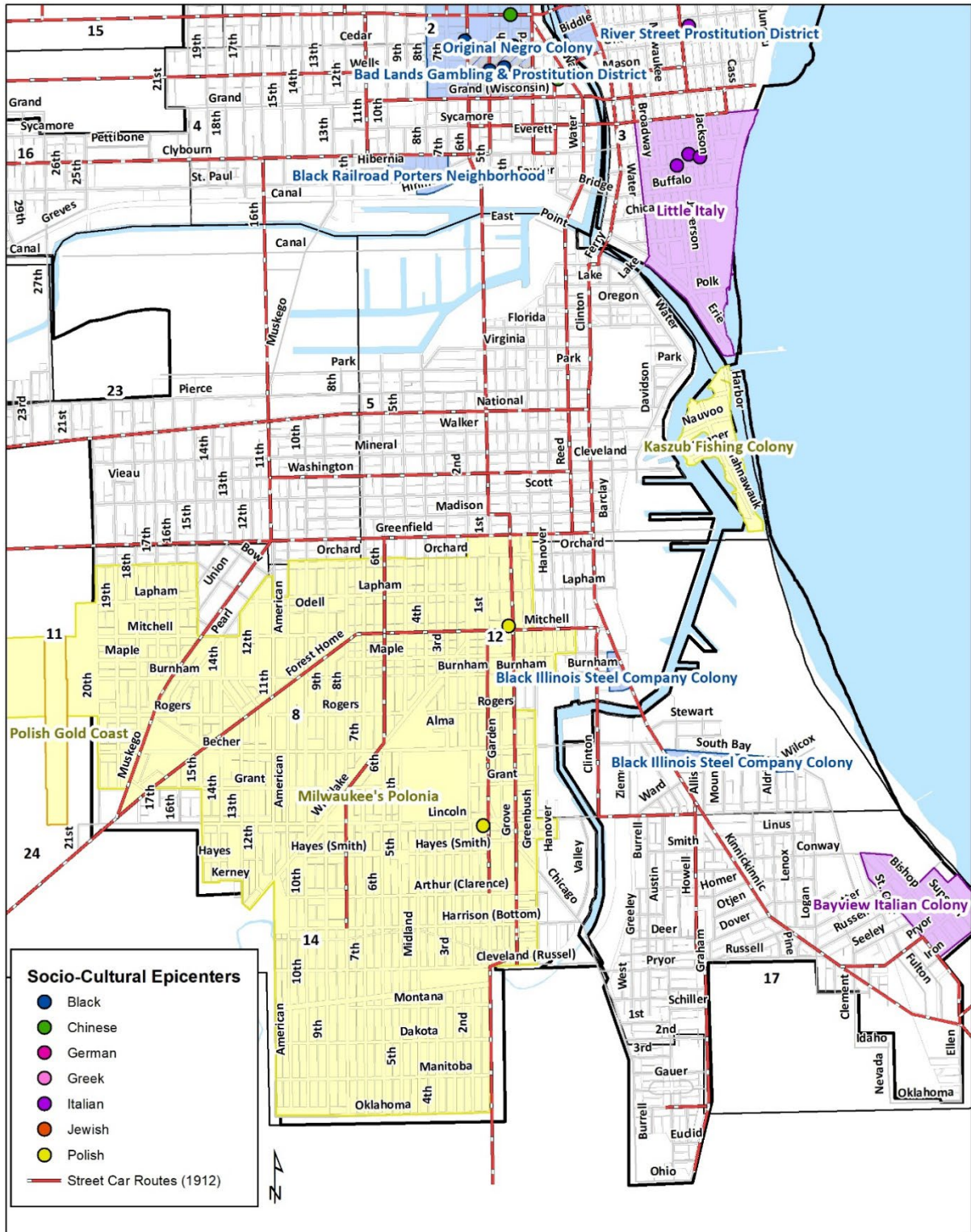


Figure 4.9: Ethnic & Racial Enclaves in South Side Neighborhoods, 1910s

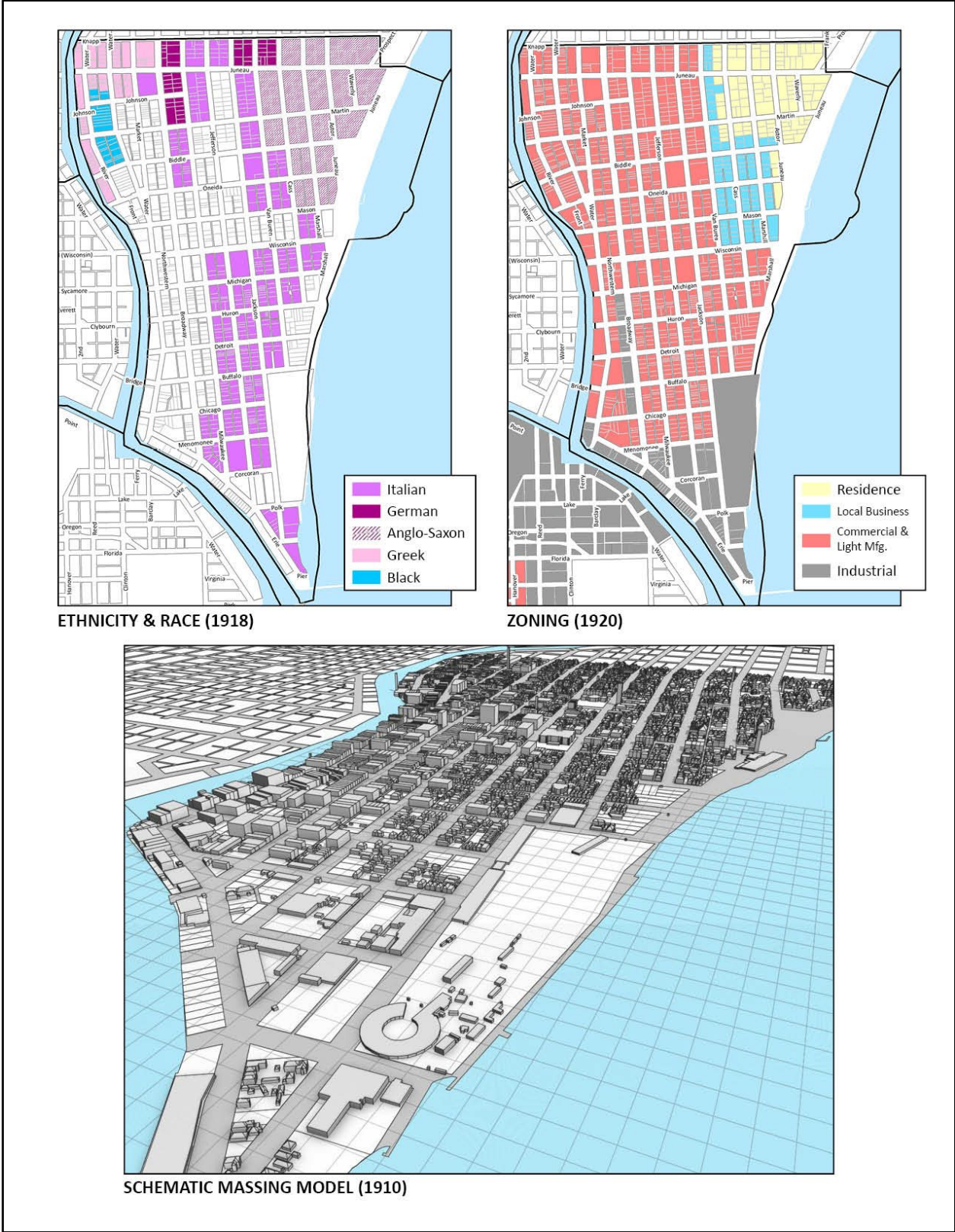


Figure 4.10: Spatial Attributes of Third Ward Slum, 1910-1920



Figure 4.11: Spatial Attributes of Fourteenth Ward Slum, 1910-1920

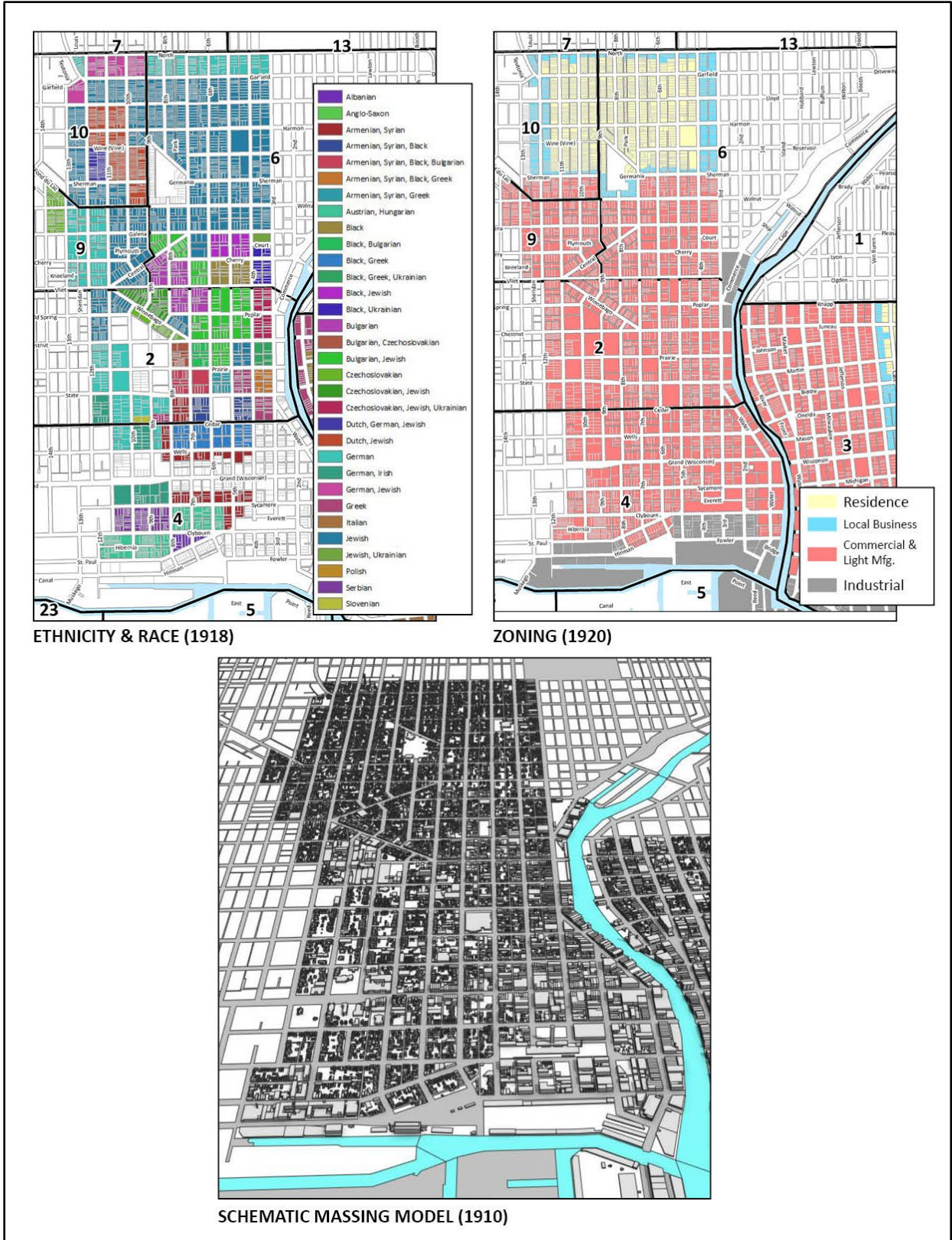


Figure 4.12: Spatial Attributes of Ethnic & Racial Enclaves in Wards 2, 4, 6, 9, & 10, 1910-1920

The residential landscape of the slum wards serves as an important historical marker in delineating the socio-economic hierarchy of Milwaukee. In the early 20th century, Milwaukee was a majority mix of native- and foreign-born Whites with Blacks, Chinese, and Indians comprising a small portion of the total population. The city's neighborhoods were delineated by ethnic and racial make-up with a handful of immigrant quarters in the city's original neighborhoods.¹⁰⁸ This research's historical study of housing – utilizing primary- and secondary-source materials – reveals details about the relationship between housing and the segregation of homogenous communities in the city.

Milwaukee's labor hierarchy correlated strongly to the city's broader socio-economic hierarchy. Because the Germans and Anglo-Saxons established early dominance in the city, they maintained a supremacy in the hierarchy as skilled workers.¹⁰⁹ In contrast, unskilled workers were pushed into subordinate positions, including Russian Poles, Austrian Slavs, and Italians.¹¹⁰ Also noteworthy is the implicit connection made by authorities between unskilled laborers, deteriorated housing conditions, and immoral behavior. Milwaukee's growing Italian community elicited hostility from City leadership due to public perception of the community's illiteracy and low standards of living.¹¹¹ Additionally, as previously discussed in Section C.i.f., the Polish community faced similar criticism about overcrowding and unsanitary housing conditions.

The slum wards provide a spatial genesis in the 1910s for what would more broadly develop as Milwaukee's disinvested housing submarkets. The commonality between the slum wards and what would become the high-risk districts of the Homeowners' Loan Corporation (HOLC) was their shared

¹⁰⁸ Meloni (1969), 16-17.

¹⁰⁹ Gurda (1974), 11. Zukowski (2009), 5.

¹¹⁰ Hubka and Kenny (2000), 44-45. Zukowski (2009), 27.

¹¹¹ Meloni (1969), 12, 22-24.

attribute as being immigrant quarters. The neighborhoods were marked as a clustered, higher-density environment with a number of immigrant groups – whether they had recently immigrated or were second- or third-generation families, but identified as working class or lower income. As a result, they were lower in the socio-economic hierarchy of the city; their housing was of poorer condition than other areas; and, they were predominantly renters. This confluence of factors provides insight as to why they were designated as slum wards, why they were designated as blighted, and the broader idea of being designated as “undesirables” living in Milwaukee’s “second-class city.”

Table 4.9: Socio-Economic Hierarchy of Milwaukee’s Ethnic & Racial Groups, 1910s

Position	Ethnic & Racial Groups	Notes
1	German Austrian Anglo-Saxon Czechoslovakian	Groups in higher position marked by Germanic/Prussian origin. Originally founded the city in Juneautown and Kilbourntown, then moved west and north into periphery neighborhoods. Strong influence of Protestantism.
2	Irish	Established community during the Third Ward’s first housing cycle. Neighborhood known as the “Bloody Third.” Moved west during the second housing cycle when Italians arrived.
3	Polish	Established a semi-autonomous community on the city’s south side. Occupied neighborhoods during multiple housing cycles: 1) original single-family construction, then 2) construction of Polish flats and alley houses. Almost exclusively Roman Catholics.
4	Italian	Arrived in the 1870s during the Third Ward’s second housing cycle. Attempted the adaptive re-use of existing housing stock inherited from the Irish.
5	Jewish Black Greek Chinese	Established shared neighborhoods in the immigrant quarters in the inner core and lower East Side. Community economies built on mutually beneficial premise of shared space and resources. Inherited housing stock from primarily the Germans and Anglo-Saxons.

Sources: Gurda (1974), 9-11. Hubka and Kenny (2000), 44-45. Meloni (1969), 12, 16-17, 22-24. Zukowski (2009), 5, 27.

D. Centralized Planning: Competing Leadership Ideologies & Market Interventions, early 1920s

D.i. Leadership's Ideological Context

The deteriorated housing conditions of 1910s Milwaukee became apparent as the city reached an inflection point on multiple fronts: massive urbanization and industrialization, large-scale immigration and a nascent establishment of Black Milwaukee, and a reformer ideology that was forced to balance an emphasis on the health of the workingman with the capitalist motivations of profitability. From the city's founding in the 1830s,¹¹² it had largely developed in an organic way with a rectilinear street grid that met the needs of residential, commercial, and industrial activity. With Milwaukee's nucleus at the central business district (CBD) along Grand Avenue (now Wisconsin Avenue), the city's original settlements of Kilbourntown, Juneautown, and Walker's Point were the spatial basis for its growth and continued densification. The logical expansion of the city occurred in checkerboard fashion to the north, west, and south. Though a general plan for the platting of the city occurred from the 1830s to the 1850s, it was largely a market-driven process that was laissez-faire in nature: provided that the developers platted new subdivisions in accordance with the existing street grid, then the new housing and commercial development was largely deemed to be acceptable. By the 1910s however, this quasi-structured development pattern encountered significant challenges. The lack of segregation of industrial uses from the neighborhoods and overcrowding in housing produced conditions that were untenable over the long term. As a result, city leadership began making strategic decisions about the city's future.

The push and pull of power in the city were a mix of attitudes, ideologies, and theories that could most notably be witnessed in the contrast between socialist Mayor Daniel Hoan and the capitalist motivations

¹¹² Maps dating from the 1830s to 1850s are mostly attributable to the work of Increase Lapham. On his maps, he platted natural features, blocks, and streets. See also Werner Hegemann, "City Planning for Milwaukee" (1916), 6-7.

of the business community. This was then overlaid with a nativist, anti-immigrant sentiment, Progressive Reformers and public health concerns, and the city conservation movement of City Beautiful and Garden Cities. It is important to note that these intersecting motivations were – to a certain extent – legitimate and well-intentioned. The city leadership expressed a clear desire to continue advancing economic development while protecting the well-being of the workingman and his family. Within these genuine efforts lay the shadows of anti-immigrant, class-based, and race-based prejudice. At times, the historical record clearly identifies this prejudice; while at others, the antagonism manifested itself through disparate impact.

Politically and economically, the approaches developed into a complexity of motivations and manifested themselves in idealized solutions that proved difficult to implement at scale. Additionally, these solutions encountered resistance from the private sector when its interests were undermined or threatened: “Housing, congestion, planning, and zoning remained on Milwaukee's agenda throughout the 1920s. In different forms they bridged the interwar period and were contested on both political and economic grounds. Reform efforts were most successful when they meshed with the interests of the private sector and least successful when they did not.”¹¹³ Importantly in this discussion, McCarthy (2006) argues that Milwaukee presents a unique case study in the role of city planners as facilitators of either the capitalist or socialist urban vision for America. The prevailing argument is that institutionalized planning from the 1920s onward was implicitly motivated to use the free market to influence urban real estate markets and increase profits. McCarthy contrasts this argument with the presentation of the motivations of Daniel Hoan and Charles Whitnall.

Because of its local leftist officeholders, Milwaukee provides a notable exception to the paradigm of planning as a strict product of capitalist elites. Certainly, planners like Whitnall and civic leaders such as Daniel Hoan “detailed and discussed the problems of urbanization” and came up with the same symptoms – population congestion, poor housing, inadequate infrastructure, and other impediments

¹¹³ John McCarthy, “Dreaming of a Decentralized Metropolis: City Planning in Socialist Milwaukee” (2006), 35.

to economic growth – as other civic leaders. However, planning proponents in Milwaukee often blamed capitalism, seeing it as the prime culprit in the creation of inequality and other evils... More to the point for municipal administration, Whitnall believed that in a poorly regulated urban real-estate market the wealthy benefited from congestion at the expense of ordinary city dwellers. Only a fundamental restructuring of the American economy could redress urban inequality.¹¹⁴

Hoan and Whitnall sought to improve Milwaukee through a strategy of decentralization, which they saw as a development model that could democratize the city for workingmen and provide a positive “socializing force.”¹¹⁵ These efforts dovetailed well with the city’s continued industrialization and expansion of its property market, which was a chief concern of the business community.

To note, my discussion of these ideologies and leadership trends is not meant to present a comprehensive urban history of Milwaukee. Rather, the goal is to focus specifically on those historical aspects that impacted the city’s housing markets, place these trends within the appropriate context, and discuss how they manifested in changes to Milwaukee’s neighborhoods. In the footnotes for this research, notations identify other historical research that is more comprehensive and should be consulted as references.

D.ii. Foundation of Institutionalized City Visioning & Planning Documents

The focus of government and civic efforts quickly coalesced around the city’s slum districts and the deteriorated housing conditions of Milwaukee’s working class. Homes and housing units became the chief units of measure for reformers as they sought to improve the city and prepare it for continued growth in the 20th century. Between 1910 and 1920, multiple influential efforts made a statement on slum conditions and charted a future course for the city: “The Housing Awakening” essays of 1910, the 1916 report on “City Planning for Milwaukee,” the 1918 block-level racial mapping of the city, the implementation of the city’s first zoning code in 1920, and the use of the city’s 1924 Platting Guide.¹¹⁶ A

¹¹⁴ McCarthy (2006), 38.

¹¹⁵ McCarthy (2006), 38, 57.

¹¹⁶ McCarthy (2006), 34-35.

sense of morality and “social and civic responsibility” drove these efforts and cemented a higher-minded reformer period in the city that placed great emphasis on housing improvements as a means of eliminating poverty, disease, and immoral behavior.¹¹⁷ This idealism also had the economic motivations of creating the ideal living conditions for workers to improve productivity and efficiency, thereby increasing profits.¹¹⁸ While these regulations exerted greater municipal control over the city’s property markets, the business community ultimately supported the efforts to protect property values in the CBD along Grand Avenue and access new development opportunities on the city’s outskirts.

Milwaukee’s first visioning document, “City Planning for Milwaukee” (1916), established a cohesive approach to the city’s development at the turn of the 20th century. The document emphasized how the city had developed into a “modern star shaped city” that leveraged its waterfront access and rapid transit lines, intended to develop garden suburbs, and further enhance the central business district.¹¹⁹ These attributes were built on the radiating lines of growth established by the city’s major thoroughfares.¹²⁰ The document’s author, Werner Hegemann, emphasized that coordinated planning was critical for the city’s growth to ensure that development occurred in an orderly manner and that wasteful and costly mistakes were not made during new construction.¹²¹ The plan emphasized specific components of future development that required attention and consideration. To effectively grow the city and the larger metropolitan area, Hegemann reinforced the need to consider how these elements were interrelated and why a coordinated approach was required.

- **Transportation Infrastructure:** County highways and city streets were a point of focus due to increased traffic by pedestrians, automobiles, and streetcars. As city industry grew, this

¹¹⁷ Lawrence Veiller, “The Housing Awakening, Part I” (1910), 295.

¹¹⁸ Veiller (1910), 295.

¹¹⁹ Hegemann (1916), 3.

¹²⁰ Hegemann (1916), 5.

¹²¹ Hegemann (1916), 36.

produced large amounts of daily activity on the streets. The focus was on the need to pave these streets, while also accommodating multi-modal roadways that were shared by cars and streetcars. Additionally, Hegemann argued in favor of the interurban railways as a means to expand the metropolitan economy.¹²²

- **Railroads, Harbor, and Industry:** Increases in industrial activity necessitated a reconsideration of the spatial relationships between and access to the industrial harbor, railroad freight yards and warehouses, and factory districts. There was an intent to shift railroad freight yards to the outskirts of the city, and then develop infill industrial users in the newly available space. This served the dual purpose of providing industrial users with ready access to freight transportation and the neighborhoods where employees lived.¹²³
- **Parks:** Though some parks existed in the city, Milwaukee was largely underdeveloped for parkland; and, due to congestion and the intensity of land uses, little land was available for future parks development. As a result, the plan suggested the city acquire land on its periphery that was more affordable and suitable for green space development. The plan notes that for Milwaukee to be competitive with East Coast cities, it needed to purposefully build new parks. Within the city, additional park opportunities were identified as areas along the upper Milwaukee River, the construction of boulevards and parkways, and a strategic effort to build neighborhood parks that included community spaces, playgrounds, public baths, assembly rooms, and libraries.¹²⁴
- **Housing:** With slum conditions a primary concern, the plan focused on chief considerations for the development of new residential districts. However, the suggestions were only related to new construction and did not reference improvements to existing neighborhoods. In the

¹²² Hegemann (1916), 10-14.

¹²³ Hegemann (1916), 14-18.

¹²⁴ Hegemann (1916), 18-20.

development of new neighborhoods on the city's periphery, the goal was to develop "working men districts" that delivered housing at affordable prices, specifically around \$10 per month for families. Standards for new residential districts needed to focus on lot dimensions, street dimensions, paving, landscaping, parks, and neighborhood centers.¹²⁵

- **Specialty Projects:** Two features of the central business district received a special discussion in the plan: the Milwaukee River and the proposed Civic Center. In 1916, the River was considered a component of the harbor, largely because of the warehouse and manufacturing activity along its shores. It was anticipated that the River would eventually no longer be a part of the harbor, and instead it could become a key design feature of the downtown area. The vision suggested that it could be designed similar to the rivers in Venice, Italy, and Paris, France. In a similar grand design scheme, the Civic Center was proposed as a prominent feature of downtown. It was meant to be the city's social center with a new courthouse, auditorium, and series of government and social service buildings. It similarly had a grand design with a distinct monumental scale; one reviewer compared the design to the U.S. Capitol.¹²⁶

While the 1916 city visioning document was largely acceptable to the public and private sectors, the 1920 "Zoning for Milwaukee: Tentative Report of the Board of Public Land Commissioners" was different. Because of its regulatory controls over the city's property market, the code needed to strike a balance between the public good and private markets. This is most notable in the introductory sections of the report that described zoning as a public health and economic development tool. With the goal of developing "an orderly city," the report emphasized that "zoning, [when] properly conceived and carried out, thus constitutes not only definite recognition of equality in ownership, but an important protection

¹²⁵ Hegemann (1916), 20-30.

¹²⁶ Hegemann (1916), 30-35.

of taxable values.”¹²⁷ The report went on to say, “Zoning is simply an extension of the fundamental principles underlying the building code, regulation of individual rights in the common interest. Its purpose is to bring an orderly city out of the present increasingly chaotic development with buildings of all types of use and of all sizes mingled together to their mutual injury.”¹²⁸ Specific to public health, the report explained that zoning had numerous public benefits: reducing congestion, preventing disease, anticipating future needs of the city’s sewerage system, providing adequate light and air, ensuring fire protection, and limiting street congestion.¹²⁹ To accomplish this purpose, the report established three types of regulatory restrictions on land parcels: use, height, and area. The use restrictions established the four districts of residence, local business, commercial and light manufacturing, and industrial as the controlling categories for users of a building on a parcel.¹³⁰ Whereas previously, neighborhood land uses reflected a strong mix of residential, commercial, and industrial users – often in close proximity to one another, the new use districts effectively segregated the different users from another with the purpose of delineating clearly homogenous districts. This had the *de facto* consequence of limiting the economic dynamism inherent in mixed-use districts. The height and area restrictions were focused on the bulkiness of buildings on a parcel, which was a control directly meant to decrease density and congestion.¹³¹ The restrictions were tailored to each district to promote the economic productivity and efficiency in commercial and manufacturing areas, while maintaining the health of families in residential areas.¹³² Thus, when considered collectively, the zoning regulations addressed the users and buildings on a parcel. These stricter controls ultimately decreased the intensity of use of parcels, which required

¹²⁷ Board of Public Land Commissioners (BPLC), “Zoning for Milwaukee” (1920), 5, 6.

¹²⁸ BPLC (1920), 14.

¹²⁹ BPLC (1920), 6.

¹³⁰ BPLC (1920), 21-29.

¹³¹ BPLC (1920), 19-20, 29-44.

¹³² BPLC (1920), 7.

additional land for further development. This future land consumption led to the expansion of Milwaukee beyond its 1920 boundary.

While the zoning code regulated existing and future users and buildings, the “Platting Guide: City of Milwaukee, Wisconsin” (1924) had the expressed purpose of regulating new development on the city’s outskirts. The regulations within the guide addressing parcel dimensions and street layout are substantially similar to those seen in Wisconsin’s modern platting laws. What makes the guide unique is that it was the first of its kind for Milwaukee and clearly communicated design preferences for future residential neighborhoods and major street thoroughfares. For multiple reasons, the guide was a formative regulatory document for Milwaukee:

- Chapter 101 of the Wisconsin Statutes established extraterritorial platting authority for the city. Any new development within 1.5 miles of its municipal boundary was subject to platting review and approval by the city.¹³³
- Thematically, the regulations and design guide explicitly identify parkways, boulevards, garden suburbs, and multi-modal transit as essential elements of future development. The guide made clear that these elements were integral to Milwaukee’s growth and were well-aligned to build a more productive city. With respect to street design, it is important to note that these elements required streets of 100-150 feet in width.¹³⁴
- The design guide advanced the concept of integrating natural resources into future development. The ideas espoused by the urban conservation and Garden City movements were directly reflected in the guide’s reference section of diagrams and photos that emphasize the need for green space, trees, parks, and waterways in new subdivisions.¹³⁵

¹³³ Board of Public Land Commissioners (BPLC), “Platting Guide: City of Milwaukee, Wisconsin” (1924), 3, 9.

¹³⁴ BPLC (1924), 4, 6-15.

¹³⁵ BPLC (1924), 17-31.

While institutionalized planning and land use regulations manifested as market interventions in the city's neighborhoods, they also served the purpose of advancing a lower-density strategy that was meant to improve public health conditions. This reformer mindset for public health was substantially related to managing the various ethnic and racial enclaves across the city and working to strengthen the morality of the family unit in society. The additional work of "The Housing Awakening" essays and the 1918 racial map of the city highlighted this reformer perspective, which was focused on the city's population. In an overarching way, the moral argument was meant to be broadly beneficial; but, the historical evidence shows that there was in fact ethnic and racial prejudice – predominantly focused on immigrants and the Black community.

"The Housing Awakening" essays of 1910 were part of a larger effort by the National Housing Association (NHA) to address slum conditions across the United States. As the title indicates, American elites experienced an epiphany in the first quarter of the 20th century that housing conditions needed to improve in the country's cities if the United States truly sought to realize a strong industrial economy. In his introductory comments, Lawrence Veiller, the NHA Secretary, presented his assessment of the situation by outlining the deteriorated conditions of urban housing, what he considered to be the culpability of immigrants in the situation, and actions needed to improve housing. He regarded the situation as the "travesties of homes" and stated that housing bore responsibility for the majority of "poverty, crime, insanity, disease, industrial inefficiency, [and] political degradation" in American cities.¹³⁶ He provided further detail arguing that the problems were interrelated and specifically included "disease-breeding privies, neglected alleys, filthy out-premises, lack of water supply, room overcrowding, defective drainage, windowless rooms, insufficient ventilation, dilapidation, neglectful

¹³⁶ Veiller (1910), 295.

landlords, and inadequate attention by the health authorities.”¹³⁷ Veiller regarded these problems as “the dangers of our slums” and argued that their appearance could be “associated with the advent of new races of immigrants, and, like most imported articles, they are costing us dear. No tariff wall has been high enough to keep them out. Few cities have been immune from the slum invasion.”¹³⁸ He concludes by regarding the future as “hopeful” and presents a brief list of solutions: “emphasis laid upon housing laws which will control the situation for all time; on efficient and vigilant sanitary inspection; on Garden Cities and model small houses in place of huge tenements; on instructive visitation of our immigrant population, and the teaching of the elements of hygiene in the public schools and in the home.”¹³⁹ Note that he specifically mentions Milwaukee in his arguments and regards the city positively for its intention “to build for its workingmen new homes on the city’s outskirts.”¹⁴⁰

Not solely in Milwaukee but also more broadly across the United States, there was a lack of available data to assess urban issues at a refined scale. While the Department of Commerce had been conducting the Decennial Census for almost 120 years by 1910, data was still not available at the block level. For Milwaukee, the ward-level data of the Census and property information of the Sanborn Fire Insurance Map Company provided the most accurate portrait of the city. For these reasons, the creation of the 1918 Racial Map of Milwaukee by the Women’s Club of Wisconsin served as an important milestone in mapping the ethnic and racial distribution of Milwaukee’s residents at the block scale. Intended as a submission to the Americanization Conference of November 1918, the map documents the approximate location of over 30 ethnicities and races in the city on a per block basis.¹⁴¹ While the map was hand drawn with an unknown survey methodology, it presents the most accurate demographic portrait of

¹³⁷ Veiller (1910), 296.

¹³⁸ Veiller (1910), 295.

¹³⁹ Veiller (1910), 296.

¹⁴⁰ Veiller (1910), 295.

¹⁴¹ Women’s Club of Wisconsin, “Racial Map of Milwaukee,” 1918.

Milwaukee at the turn of the 20th century. When this map is used in conjunction with the conclusions of other researchers, a more complete understanding of leadership attitudes emerges about Milwaukee's ethnic and racial composition. In addition to the observations and field surveys of "The Housing Awakening" essays, McCarthy (2006) adds important observations about a neighborhood tour that occurred in 1918 through the city's poorest and most deteriorated neighborhoods. The tour participants included the women's editor of a Milwaukee newspaper and an official from the city's health department. The subsequent newspaper article resulting from the tour sheds important light on the perspectives of the city's leadership about people living in Milwaukee's slums. There was an undertone of ethnic and racial animus that was apparent in references to how "...'clannish foreigners' were crowding one another out of inner-city ghettos..." and a sense of neighborhood invasions as "...African Americans had replaced Jews in the Sixth Ward neighborhood centered on Seventh and Poplar; [and] Slovaks and Greeks had 'chased' the Irish from Tory Hill adjacent to downtown on the west."¹⁴² There was also a strong defense of the morality and importance of the family unit, which was perceived to be under threat from immoral behavior in the slums – notably that single men were living in boarding houses without the influence of women in the proper making of the home. It was feared by leadership that these conditions "mocked the city's reputation as a center of solid Germanic orderliness."¹⁴³

When assessed collectively, these ideologies, regulations, and market interventions were implemented at a citywide, macro scale; however, their actual impacts manifested on a block-by-block basis in the neighborhoods. Interestingly, the moral arguments and sociocultural agenda of leaders in the city led to

¹⁴² McCarthy (2006), 33. Note that McCarthy's research on this event and these perspectives are sourced from newspaper clippings of the *Milwaukee Sentinel* and the *Milwaukee Leader*, as well as the personal papers of Charles Whitnall. He relied extensively on primary source documents for his research.

¹⁴³ McCarthy (2006), 33-34.

the codification of their beliefs into actual law, which was then used to support their broader agenda. Attributes of their agenda were ostensibly for the betterment of the city and its working class, while others were antagonistic and discriminatory. Within this sense of morality and social conformity, the property markets reacted to the constrictions resulting from the increased regulations as well as new development and economic expansion resulting from increased demand. Thus, this period of time in the 1910s and 1920s was an interplay between socio-cultural norms and free market economics.

E. Containment: Defensible Space & the Emergence of the Iron Ring, late 1920s

E.i. The Decentralization Theory & Model Neighborhoods

In confronting the societal ills of congestion and slum conditions, reformers developed the approach of decentralization to alter the spatial patterns of housing development and urban expansion such that residents would have greater access to green space and clean air. Charles Whitnall was a strong proponent of the spatial dispersion of housing on Milwaukee's outskirts. A student of Fredrick Law Olmsted, Ebenezer Howard, and the Garden City movement, Whitnall advanced an idealized vision of new housing subdivisions in the 1920s.¹⁴⁴ It is important to note that before suburbanization became a defining element of "the American Dream," decentralization was the primary land use strategy that facilitated housing construction further and further from the city center. Thus, suburban construction actually finds its historical etymology in 1920s America, while suburbia and the process of suburbanization did not enter our cultural vernacular until the 1950s and 1960s. Whitnall's purpose in realizing a decentralized housing policy was to counter the industrialized form of urban America and the congestion it produced. He felt strongly that industry and slum conditions were ruining the country and that the solution was to decentralize housing through "a rigid zoning ordinance that promoted the

¹⁴⁴ For a complete history and discussion on Charles Whitnall's influence on Milwaukee, the work of Lorne Platt is highly recommended. See Lorne Platt, "Planning Ideology and Geographic Thought in the Early Twentieth Century" (2010). See also Lorne Platt, "Pastoral and Political Nature: Milwaukee's Urban Parks as Tamed Wilderness" (PhD Dissertation) (2008).

detached, single-family home,” thereby giving residents access to “the regenerative powers of nature.”¹⁴⁵

Whitnall possessed “a socialist’s commitment to an improved quality of life for Milwaukee’s large working-class population,” which operated at a public health nexus including strategies for additional housing, expanded infrastructure, and the construction of new parks.¹⁴⁶ Aligned in many ways with Olmsted, Whitnall shared his “vision to construct a tamed and managed nature that was the physical solution to social corruption, urban degradation, and unsanitary living.”¹⁴⁷ This integration of nature and urban spaces largely included the construction of parkways, rustic preserves, and what was deemed as the New Urban Boundary.¹⁴⁸ Within these elements, the intent was to develop “a decentralized framework of regional, industrial suburbs” built on the Garden City ideal and supported by newly constructed motorways and an expanded streetcar system.¹⁴⁹ Notably, Whitnall believed that the widespread adoption of the automobile by the general public would facilitate the continued expansion of Milwaukee and facilitate easy and efficient transit for workers. Thus, the car was seen as a resource for the average worker; and, the negative consequences of sprawl were not foreseen at the time.¹⁵⁰

This vision required a segregated land use policy that distinctly separated the commercial and residential uses of neighborhoods from larger industrial districts. As land was consumed for development, urban areas would continue to expand into the periphery of farmland to create a decentralized network of residential and industrial nodes of activity. While this theoretical approach

¹⁴⁵ McCarthy (2006), 35.

¹⁴⁶ Lorne Platt, “Planning Ideology and Geographic Thought in the Early Twentieth Century” (2010), 771-772.

¹⁴⁷ Platt (2010), 773, 776.

¹⁴⁸ Platt (2010), 783-786.

¹⁴⁹ Platt (2010), 778-779.

¹⁵⁰ Platt (2010), 783.

appeared attractive on paper, it in fact created spatial relationships that reinforced the *de facto* segregation of a city's form and function, economy, and demographic groups.¹⁵¹ The irony of this strategy was that the spatial segregation of these land use districts created an isolation that effectively removed the attributes and features that made cities urban, thereby eliminating the dynamic social and economic nature of place-based productivity. Importantly, the advancement of this theoretical and idealistic vision for the city occurred with no quantitative basis for analysis. It was not for another 20 years before the quantitative basis for the city's property markets came into focus with the Works Public Administration's 1934 Real Property Inventory, the Homeowners' Loan Corporation Security Maps of 1938, and the housing survey of the 1940 Decennial Census. By that time, however, the city had been embarking on two decades of decentralization, which would subsequently cause a spatial mismatch in its economic growth and patterns. Though well-intentioned, the decentralization strategy was a demonstration of professional ignorance and highly damaging to Milwaukee's spatial structure. Even before urban renewal and highway construction, decentralization was already fragmenting the city. That notwithstanding, the development and construction of model neighborhoods continued into the 1920s and 1930s – though at a limited scale.

E.ii. Analysis of Model Neighborhoods

Whether conceptual or fully constructed, there were numerous examples from around the United States for model neighborhoods in the Garden City tradition. Milwaukee leaders sought to import the designs and adapt them for the local context. The city's 1924 Platting Guide provided the design guidelines and visual references for developers building new subdivisions on Milwaukee's periphery.¹⁵² Each design presented different features and design characteristics; but, when considered collectively, the vision for the city's future neighborhoods was clear.

¹⁵¹ McCarthy (2006), 37.

¹⁵² BPLC (1924), 17-31.

- **Parcel Dimensions:** The parcel platting provided each homeowner with parcels large enough to accommodate a single-family home, a detached garage, and private green space. Further regulated by the 1920 Zoning Code, the parcels were prevented from having more than one home, thus reducing density and congestion.
- **Streets and Circulation:** The circulation within the new subdivision was meant to create a self-contained unit for the neighborhood. The curvilinear streets were designed to evoke the images and sentiments of miniature parkways. At various points, shorter streets terminated in tree-lined vistas that gave the neighborhood a sense of grandeur.
- **Parks and Greenspace:** Each new subdivision was meant to be designed with at least one communal park for all neighborhood residents. The 1924 Platting Guide included a four-page essay titled, “Do Small Parks Pay for Themselves?”, to demonstrate to developers that parks had a positive financial return on investment. If a new subdivision encompassed a river or creek, then it was platted with a larger parkway through the neighborhood to emphasize the waterway.
- **Social Centers:** In addition to the parks, larger subdivisions were meant to have community spaces that acted as social centers for residents. These may have included a community center, auditorium, or pool. Social centers were designed as focal points of the new neighborhoods to build cohesion and provide spatial convenience.
- **Integration with Existing Street Network:** The assemblage of the individual parcels was meant to create a cohesive unit of “high character” within the context of the existing city. The ideal, new subdivision would include entrances along the main thoroughfares of the existing street grid. While the interior circulation network was entirely contained, connections to the existing city were meant to allow easy ingress and egress for residents. Ironically, this platting strategy

also created spatial dislocation from the traditional, rectilinear grid by developing enclaves of private space.

In the aftermath of World War I, American cities were facing acute housing underproduction, large immigration of residents for industrial jobs, and the resulting congestion of people and families in an increasingly limited number of existing dwellings.¹⁵³ However, American cities did not have the comparable legal, financial, and planning tools as their European counterparts to effectively replicate the Garden City model in the United States. As a result, when efforts coalesced to begin developing and constructing Milwaukee's model neighborhoods, the European ideals of the Garden City met the reality of adapting the theoretical framework to Milwaukee's political and economic context. The profiles of Milwaukee County's three Garden City neighborhoods – Garden Homes, Washington Highlands, and Greendale – reflect the American adaptation of the planning paradigm. While the neighborhoods embody some of the qualities of this ideal, they also diverge in distinct ways.

The broad appeal of these model neighborhoods was intended to be an affordable housing solution for Milwaukee's workingmen and their families. While this was partly accomplished, it is important to clarify that the neighborhoods were specifically for *White* workingmen and their *White* family members. Government policies and racially restrictive covenants prevented Blacks and other non-White individuals from renting or purchasing the dwellings.¹⁵⁴ Because the model neighborhoods were built beyond Milwaukee's 1920 municipal boundary, Black families were contained in the inner core neighborhoods while White families were able to access the expanding housing market on the city's periphery. Thus, the irony is evident: Milwaukee's progress in housing reform was made possible for White families in

¹⁵³ Cady, "The Influence of the Garden City Ideal" (1966), 1-4, 30-31, 54, 56.

¹⁵⁴ Quinn, "Racially Restrictive Covenants" (1979), 2. Trotter, *Black Milwaukee* (2007), 71.

new suburban neighborhoods, while non-White families were restricted to the city's existing inner core districts.

To summarize the key attributes of the model neighborhoods, Table 4.7 provides a comparison to understand the scale and characteristics across the three developments. This includes information about development costs, operating costs, and design attributes. Note that the various rows for costs include clarifying footnotes identifying the corresponding date for dollars not adjusted for inflation (e.g., 1921 dollars).

Table 4.10: Model Neighborhood Attributes & Metrics in Original, As-Built Condition

Attribute/Metric	Garden Homes	Washington Highlands	Greendale
Subdivision			
<i>Construction Timeline</i>	1921-1923	1918-1940	1936-1938
<i>Total Area</i>	31.6 acr.	94.4 acr.	1,032.2 acr.
<i>Total Buildable Area (excludes roads and parks)</i>	29.7 acr.	87.7 acr.	158.9 acr.
<i>Total Green Space Area</i>	1.9 acr.	6.7 acr.	873.3 acr.
<i>Land Acquisition Price</i>			
<i>Total Price</i>	\$29,000 [†]	\$119,903 [*]	\$74,400 [^]
<i>Price per Acre</i>	\$1,000 [†]	\$902 [*]	\$372 [^]
<i>Total Construction Cost</i>	\$50,000 [†]	Unknown	\$10,400,000 [°]
<i>Average Home Price</i>	\$4,300-4,700 [†]	Unknown	\$9,500 ^b Monthly Rent: \$19 – 1 bedroom [°] \$32 – 4 bedroom [°]
<i>Distance to CBD</i>	4.7 mi.	4.4 mi.	8.4 mi.
Parcels			
<i>Quantity</i>	128	371	517
<i>Average Size</i>	0.12 acr.	0.23 acr.	0.16 acr.
<i>Average Width</i>	40 ft.	Inner Parcels – 80 ft. Outer Parcels – 50 ft.	50 ft.
<i>Average Length</i>	120 ft.	Inner Parcels – 135 ft. Outer Parcels – 120 ft.	120 ft.
Structures			
<i>Residential</i>	116 structures (129 DUs)	319 structures (363 DUs)	411 structures (572 DUs)
<i>Single-Family</i>	105 str. (105 DUs)	279 str. (279 DUs)	274 str. (274 DUs)
<i>Duplex</i>	10 str. (20 DUs)	38 str. (76 DUs)	45 str. (90 DUs)
<i>Apartment</i>	1 str. (4 DUs)	2 str. (8 DUs)	92 str. (208 DUs)
<i>Commercial</i>	None	None	5
<i>Municipal</i>	None	None	4
Density			
<i>Dwelling Units per Acre (Buildable Area/DUs)</i>	4.3	4.1	3.6
<i>Families per Dwelling</i>	1	1	1

Notes: [†]1921 dollars, ^{*}1918 dollars, [^]1935 dollars, [°]1938 dollars, ^b1952 dollars.

Sources: Cady (1966), Attoe and Latus (1976), National Park Service Historic District Filings (1989, 1990, 2005).

At the time that Milwaukee began its campaign of housing reform and decentralization, new subdivisions were entirely financed by the private sector. Developers would utilize their financial resources in conjunction with bank debt to finance new housing projects. This importantly meant that local governments in Wisconsin were not statutorily enabled to build affordable housing, which is in stark contrast to today. When Washington Highlands was initially conceived and designed in 1916, the

development effort was undertaken by the heirs of brewery magnate Frederick Pabst as the Washington Highlands Company. Once construction was underway, management of the subdivision was transferred to the Washington Highlands Homes Association.¹⁵⁵ Simultaneous to the development of this subdivision, housing reform in Milwaukee was evolving; Mayor Daniel Hoan lobbied the Wisconsin Legislature to pass a law allowing cities and counties to create cooperative housing companies. Passed in 1919, the act became the important first step in allowing Milwaukee to actively develop its own affordable housing.¹⁵⁶ The Garden Homes Company was established in 1920 as a stock corporation. It relied on capital investments from two sources: 1) initial equity investors that would seed construction of the development through the purchase of preferred stock, and then 2) the tenants of the housing units whose purchase of common stock would equal the cost of their homes and monthly rent payments would pay for dividends, repairs, taxes, insurance, and depreciation. Preferred and common stock owners were able to buy stock at a per share par value of \$100 and would receive a 5% annual dividend. To also clarify, “[c]ommon stockholders, or tenants, were to receive dividends only after all cumulative dividends on preferred stock for all previous years had been either paid or provided for by reserving an equal sum for such payment from the corporation’s net profits.”¹⁵⁷ Washington Highlands and Garden Homes were examples of model neighborhoods conceived and executed by local actors with initial construction beginning in the late 1910s and early 1920s. In contrast, the development of Greendale was an entirely Federal effort of the greenbelt towns initiative run by the Resettlement Administration under Franklin Delano Roosevelt’s (FDR) New Deal programs. The entirety of the village was owned, developed, and operated by the Federal government from its construction in the late 1930s until its liquidation in the early 1950s.¹⁵⁸ These model neighborhoods present a juxtaposition in the variety of

¹⁵⁵ National Park Service Filing (NPS), “Historic Places Registration: Washington Highlands” (1989), 8-0-8-2.

¹⁵⁶ Cady (1966), 84.

¹⁵⁷ Cady (1966), 89-91, 101. National Park Service Filing, “Historic Places Registration: Garden Homes” (1990), 8-2.

¹⁵⁸ NPS, “Historic Places Registration: Greendale” (2005), 8-4-8-11, 8-16-8-18.

ways in which affordable housing could be designed, financed, and developed in Milwaukee in the 1920s and 1930s. Washington Highlands is an example of a development fully reliant on private market actors for its successful completion, while Garden Homes and Greendale were heavily influenced by government intervention in local housing submarkets. These differences highlight the variety of ownership and financing structures that facilitated affordable housing delivery in the post-World War I and Great Depression periods.

The targeted owner and tenant demographic for the model neighborhoods was largely uniform in Garden Homes and Greendale, but was noticeably mixed-income for Washington Highlands.

Milwaukee's strategy of building Garden City neighborhoods was primarily intended to develop housing for the city's White working-class population, which was technically achieved. Washington Highlands exists as the interesting exception because its housing inventory provided options on a scale from apartments for working-class renters up to mansions for wealthy individuals.¹⁵⁹ Aside from the mansions in the Highlands, the majority of the working-class housing delivered across the three neighborhoods was smaller apartments and single-family homes of approximately 650-1200 square feet. Of the three neighborhoods, Garden Homes was the smallest delivery of 116 dwellings, or 129 housing units. In attracting prospective tenants, a committee organized by Milwaukee's Mayor conducted a questionnaire and interview process of four hundred people. To be an eligible tenant, the person needed to be working class and "unable to obtain homes through ordinary channels." If selected, tenants secured their housing by signing a lease that subscribed the individual to "common stock amounting to the value of his premises."¹⁶⁰ Note that initially all of these people were tenants and shareholders in the Garden Homes Company and not owners of their properties. The tenant and owner

¹⁵⁹ NPS, "Washington Highlands" (1989), 8-4.

¹⁶⁰ Cady (1966), 89, 103-107. NPS, "Garden Homes" (1990), 8-6.

attraction processes for Greendale were substantially similar – albeit occurring 15-20 years later. A community outreach process distributed a few thousand questionnaires in the Milwaukee community, but only 1,000 were accepted for families of moderate annual income between \$1,000-\$2,000. Market data indicated that families in this income range could afford an average of \$21-\$28 per month in rent. Typically, Greendale attracted younger families with an average age for the heads of household at 37.¹⁶¹ Whereas the previous two neighborhoods had defined tenant attraction processes, Washington Highlands was an entirely market-driven process on a first-come, first-served basis. Essentially, if a White person could afford the home price or rent, then they could rent or purchase the housing. While the Highlands did have the goal of being mixed income, it was also the earliest of the Garden City neighborhoods and did not possess a cooperative housing model; it was developed as a profit-making endeavor. The tenant attraction components (or lack thereof) of Milwaukee’s Garden City development model are an early historical indicator of the level of government control present in affordable housing delivery. To effectively ensure the availability of housing for working-class families, Garden Homes and Greendale demonstrate that a targeted income threshold needed to be identified. The contrast is Washington Highlands, which was the capitalist solution driven by customer demand. However, the dark irony of the three developments is the exclusionary nature of the racial covenants that guaranteed them as White, working-class communities. In hindsight, this discriminatory housing policy effectively nullified any idealized notion that Milwaukee was advancing an equitable housing policy.

The design characteristics of the three model neighborhoods were generally in keeping with the Garden City tradition, but noticeably diverged either because of the preferences of designers and/or the local context required adaptations. Figure 4.8 visualizes the three neighborhoods in their original, as-built condition using a mix of data sources from historical researchers, the National Park Service, and historic

¹⁶¹ NPS, “Greendale” (2005), 8-8-8-9, 8-12.

aerial photography. In an analysis of the neighborhoods, certain characteristics are noteworthy because they either fulfill the Garden City ideal or are a curious contrast:

- **City Context & Platting:** Of the three neighborhoods, Garden Homes integrated into the city in the most efficient way. The neighborhood was built on a rectilinear and diagonal basis between Teutonia Avenue and 27th Street. The lots were fairly small at one-tenth of an acre, but sufficient in size to accommodate a single-family home. By contrast, the platting of Washington Highlands purposefully created a secluded enclave of homes that retained access to the street grid, but intentionally did not provide thru-streets.¹⁶² Its average parcel size was the largest of the three neighborhoods at almost a quarter acre. Greendale is a unique outlier in that it was a master planned town center that was meant to be self-sufficient. As a result, the platting structure is focused inward along Broad Street with the residential areas extending outward from its center.
- **Housing Styles:** Because Garden Homes and Greendale were explicitly built as cooperative housing for working families, the individual homes were designed and delivered to minimize costs and inefficiencies. Both adopted cottage-style dwellings that were built to accommodate growing families. The floor plans were fairly uniform with the different building configurations accommodating two to five rooms with lighting fixtures and appliances. Housing in both neighborhoods were built in the Colonial style with aesthetic variations being limited to types of entryways, porches, and types of siding and shutters. The housing delivery methods in Washington Highlands were entirely different in that each home was designed and built to the specifications of the buyer. Aside from the duplexes and apartment buildings for renters, a

¹⁶² Interestingly, the National Park Service filing for the neighborhood's historic district notes how supporters applauded the fact that the grid structure of Washington Highlands did not conform to the rectilinear platting standards of cities in the early 20th century. The irony in this historical note is that urban reformers specifically developed platting standards to create healthier and more efficient cities. Thus, a dichotomy or contrast is evident in the thinking of the time. See NPS, "Washington Highlands" (1989), 8-7.

central element of pride for residents in the Highlands was the unique exterior and interior design features of their homes. The various housing styles were many: English Tudor Revival, Germanic Cottages, French Eclectic, Colonial Revival, Neoclassical Revival, Dutch Colonial Revival, Italian Renaissance Revival, Spanish Colonial Revival, Mission Style, Monterey Style, Exotic Style, English Arts and Crafts, Prairie Style, and Craftsman Style.

- **Transit Access:** Even though Garden Homes was delivered by the mid-1920s, the neighborhood was centrally located along the 12 and 20 streetcar lines and adjacent to the 30th Street industrial corridor. For workingmen families, this provided ample access to jobs. Garages were built later as more families purchased cars. Washington Highlands was originally designed to accommodate garages for personal vehicles, but also benefited from streetcar and bus lines. The B, 55, and 67A bus lines directly served the neighborhood with other, nearby streetcar lines serving Wauwatosa more broadly. Greendale was never designed for multi-modal transit access. The tenant attraction process specifically targeted families that either presently or one day would own a car.¹⁶³ As a result, garages were built for personal vehicles and extending multi-modal transit was never a serious priority.
- **Community Facilities & Green Space:** Garden Homes and Washington Highlands were not designed to accommodate large-scale community facilities. Garden Homes was designed with its two-acre park as a social and recreational space for residents, while the elementary school across Teutonia Avenue was built for children in multiple surrounding neighborhoods. One of the draws of Washington Highlands was its boulevard and miniature parkway system. The neighborhood benefits tremendously from those Garden City ideals with almost seven acres of green space; but, other community facilities were never built in the neighborhood. As part of Greendale's master planning, designers built the necessary community facilities to

¹⁶³ NPS, "Greendale" (2005), 8-9.

accommodate an entirely enclosed social ecosystem. The village was equipped with the necessary municipal buildings, a school, police and fire/rescue, retail buildings, and parks to service the needs of residents. Similar to Washington Highlands, Greendale was designed with its own parkway system, which ultimately became integrated into Milwaukee County's larger parkway system. Of anything, Greendale's true success lies in its extensive walking trail system and 873 acres of parks that were publicly available to all residents.



GARDEN HOMES



WASHINGTON HIGHLANDS



GREENDALE

Figure 4.13: Spatial Character of Model Neighborhoods in Original, As-Built Condition

The three model neighborhoods each experienced their own successes and struggles. In a sense, Garden Homes and Greendale demonstrated that the government could be an active participant in local housing markets by building affordable housing; but, the financial operation of the cooperative housing proved to be difficult. Washington Highlands was the capitalist solution to Milwaukee's housing problems and suffered its own challenges over its 24-year development period. As summarized below, each neighborhood experienced its own unique challenges:

Garden Homes: Garden Homes was a reasonably successful project in that it delivered its housing units in the Garden City ideal and was a symbol for a novel approach to housing reform, but its underlying financial model as a housing cooperative has been considered by researchers to either be a perpetual struggle or a failure. As a housing cooperative, the Garden Homes Company needed to raise \$500,000 (1920 dollars) of preferred and common stock purchases to initially capitalize the project.¹⁶⁴ In contemporary real estate practice, these stock purchases are analogous with an equity raise from investors. At the outset, capitalizing at this value was a struggle. The Milwaukee business community was skeptical of the socialist nature of the project and the appearance of government's heavy hand in local housing markets; the Milwaukee Association of Commerce attempted to compete with the city and pursue its own market-driven housing fund to only have it fail after a year; and, disagreements between Milwaukee and adjacent municipalities about land annexation and infrastructure construction caused construction delays.¹⁶⁵ Project planners at the city continued in their efforts undeterred and ultimately built the project rather quickly over a two-year period. Once delivered, the project was received as a relative success and a potential model for other cities attempting to address

¹⁶⁴ Cady (1966), 100.

¹⁶⁵ Cady (1966), 96-100, 108. NPS, "Garden Homes" (1990), 8-4, 8-7-8-8.

the post-World War I housing shortage. By 1925, tenants in the neighborhood became frustrated when a special assessment was issued for street improvements. This would have been paid in addition to monthly rent payments and became an example of the disadvantages of being a renter in a housing cooperative. Residents had become steadily more frustrated with their inability to transition from renters to homeowners by buying out the remaining value of their homes. Responding to residents' demands, the Wisconsin Legislature and the Garden Homes Board of Directors made the necessary legal amendments to state law and the housing cooperative bylaws to permit individual ownership, thus allowing residents to exchange their leases for land contracts. This effectively ended the cooperative nature of the Garden Homes experiment. As families bought their homes, the cooperative could no longer continue developing the remaining unimproved land and subsequently sold it to private buyers. The Garden Homes Company continued operations as a legal entity for ten more years until 1936, but was then fully liquidated and dissolved.¹⁶⁶

Greendale: As part of the greenbelt towns program, Greendale was developed by the Resettlement Administration (RA) as a model town center for working-class families. At the time the Milwaukee metro area was selected by the RA for investment in 1935, FDR's New Deal programs dominated the American economic landscape and were receiving significant amounts of Federal funding.¹⁶⁷ While the RA's greenbelt towns were designed to be transferred to local cooperative housing authorities upon completion, the Greendale project began encountering budgeting challenges immediately upon construction in 1936. It was quickly realized that the project's allocated total budget of \$7 million (1936 dollars) would be far exceeded within the

¹⁶⁶ Cady (1966), 108-116.

¹⁶⁷ NPS, "Greendale" (2005), 8-4-8-5.

first seven months of construction. As a result, only one of the three planned, town sections were built; and, the larger greenbelt of collective farms was abandoned. Due to the need to scale back the project, the housing cooperative was not generating sufficient cash flow to be net positive. Despite this financial flaw, the Federal government completed the scaled-back project in 1938.¹⁶⁸ Greendale incorporated as an independent municipality in November 1938, but the Federal government retained control over significant portions of the community as a landowner and landlord of rental properties. Following the conclusion of the New Deal programs and the death of FDR in 1945, the new Presidential administration began the process of selling the handful of greenbelt towns built across the country. Through various separate land sales, Greendale was eventually sold to private landowners, private homeowners, and the Milwaukee Community Development Corporation (MCDC). In total, the Federal government spent \$10.4 million to build Greendale from 1936-1938, but only received \$5.9 million when the village was fully liquidated in 1952-1953.¹⁶⁹

Washington Highlands: The successes and struggles of Washington Highlands primarily relate to developing housing with no government assistance. As an entirely market-driven project, the Highlands was susceptible to a host of economic issues over its thirty-year construction period: World War I, the Great Depression, and World War II.¹⁷⁰ The neighborhood is a case study in how slowly Milwaukee's housing market capitalized to absorb the number of market-rate housing units delivered from the project.

¹⁶⁸ NPS, "Greendale" (2005), 8-10-8-12.

¹⁶⁹ NPS, "Greendale" (2005), 8-15-8-18.

¹⁷⁰ NPS, "Washington Highlands" (1989), 8-3.

In retrospect, the development of Garden City neighborhoods in Milwaukee County were moderately successful. Many commentators and researchers reflect with nostalgia on the design aspects of the neighborhoods, but ignore the impact of the housing itself. In reality, the neighborhoods were an imperfect solution to a large-scale problem. Over a 24-year period, the projects only delivered a total of 1,064 dwelling units. In 1940, these units only accounted for 0.66% of the city's total 159,865 dwelling units. Additionally, the city's total number of units grew from 66,915 in 1920 to 159,865 in 1940 due to annexation and new construction. Of this increase of 92,950, the 1,064 units in the model neighborhoods only accounted for 1.14%. With the significant effort and financial resources invested in the neighborhoods, the inability to effectively scale this housing model makes it noteworthy for historical research, but does not identify it as a feasible solution that could have solved the city's housing shortage. This scaling challenge in conjunction with the divergent political views between city leadership and the business community and the financial challenges of housing cooperatives significantly deadened the impact of the neighborhoods and made them more of a footnote in the housing market than a catalyst.

E.iii. Exclusion & Containment Geographies

The spatial basis for Milwaukee's historical development pattern developed organically into the early 20th century. However, as the previous sections have discussed, new spatial geographies began emerging by the late 1910s that shifted the spatial equilibrium of the city away from the focal point of the inner core neighborhoods and the confluence of Milwaukee's rivers to a more multi-faceted and disparate landscape. Whereas previously, Milwaukee's spatial basis was largely dictated by commerce along the waterways and the rectilinear platting pattern that extended north, west, and south as the city grew; however, by 1930, the cumulative effects – both intentional and *de facto* – of city leaders and private business had created a regulated property market where the segregation of people and land uses became apparent.

The identification of Milwaukee's five slum wards was an inflection point for the city. Prior to that survey, the city had not undertaken a comparable effort to identify or delineate any other neighborhoods for any other purpose – save for the establishment of the ward system at the city's founding. The slum wards served as a catalyst for threat identification by the city and private business, which allowed efforts to be focused on containing undesirable elements in the city and protecting assets deemed valuable. This threat identification catalyzed regulatory efforts to protect the central business district by excluding unwanted elements, delineating a *de facto* containment boundary around the city's inner core neighborhoods, and regulating the city's future growth pattern spatially and demographically.

These new exclusion and containment geographies produced interrelated spatial patterns. From 1916 until 1930, leadership decisions altered Milwaukee's spatial landscape by containing the original, inner core neighborhoods while advancing a growth agenda on the city's periphery. This juxtaposed the unwanted elements of the original city with a more idealistic – yet theoretical – version of the future. The process of realizing these strategies occurred sequentially. Discussed below and presented in Figure 4.9, the leadership decisions, delineated geographies, and their effects produced an accumulation of relationships and consequences.

Threat Identification: Of the city's five slum wards, four were centrally located in the inner core neighborhoods that surrounded and included the central business district. As congestion increased and conditions deteriorated, city leadership became concerned about the potential negative economic consequences to the CBD.

Exclusion Zone: To exclude the unwanted elements of the slum wards, the city utilized the regulatory strategy of zoning and nonconforming uses to create a perimeter around the CBD. As the economic and freight hub of Milwaukee, city leadership sought to defend downtown's economic productivity from slum conditions. The 1920 zoning regulations produced two

primary results: 1) a CBD of homogenous land uses that excluded housing, and 2) a regulatory geography that encompassed the CBD and stretched west through the Menomonee Valley and south through the harbor to Bayview. This regulatory regime effectively protected the city's essential commercial and manufacturing areas from residential slum conditions.

Containment Boundary & Expansion Strategy: While slum conditions were excluded from downtown, city leadership developed the related concern of slum conditions shifting out of the CBD's exclusion zone to other neighborhoods further from the inner core. The 1924 platting regulations were intended to address this concern by regulating the expansion of single-family housing subdivisions on the city's periphery, thereby limiting density and congestion in newly platted neighborhoods. Because the city's municipal boundary remained unchanged from 1920 to 1930, the platting regulations created a *de facto* perimeter around the city's original, mixed-use neighborhoods of the inner core. This demarcation line was further reinforced in newly constructed neighborhoods by racially restrictive covenants that excluded all non-White residents.¹⁷¹ For non-White residents or those too poor to afford new housing, Milwaukee's 1920 municipal boundary eventually became "The Iron Ring," effectively operating as a containment boundary for the city's unwanted elements.¹⁷² For middle- and upper-class White residents, the new neighborhoods expanding beyond the city's periphery were built along the "New Urban Boundary," ostensibly a testament to Milwaukee's focus on decentralization and Garden City ideals.¹⁷³

¹⁷¹ Quinn, "Racially Restrictive Covenants" (1979). Trotter, *Black Milwaukee* (2007), 71.

¹⁷² National Association for the Advancement of Colored People (NAACP), "Iron Ring in Housing" (1940), 205, 210.

¹⁷³ Platt (2010), 783-786.

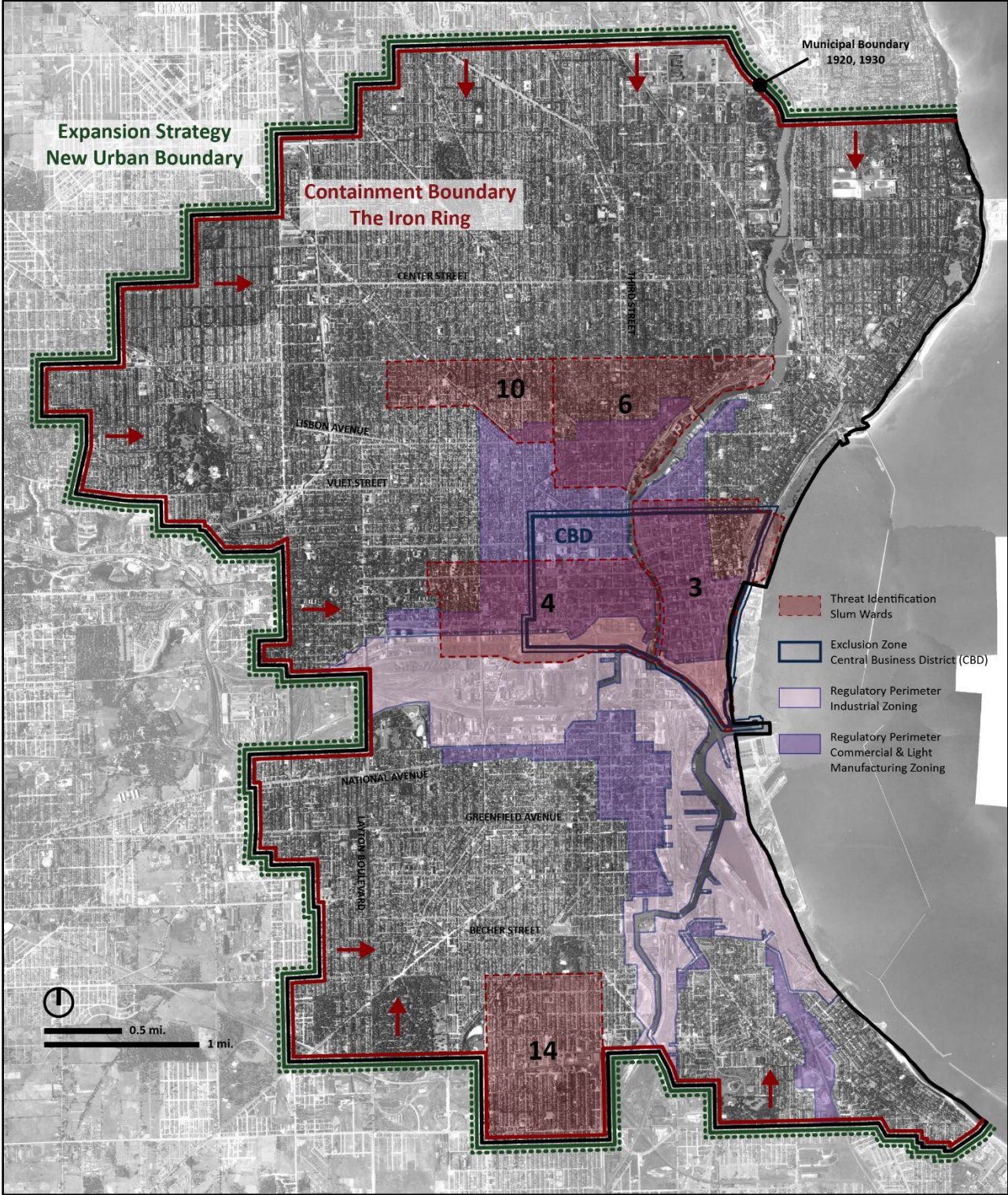


Figure 4.14: Exclusion & Containment Geographies

The period from 1916-1930 marks an important shift in Milwaukee's housing submarkets. In the previous decades, the distinctions between the city's neighborhoods were not official; the majority were either logically demarcated between different land uses or socio-culturally distinct as ethnic enclaves. Importantly, there were no geographies codified by law or institutionalized through business practices and processes. With the identification of slum wards in 1916, the city entered a new period of delineated geographies. While each regulatory action and business practice was intentional, the cumulative effects were not clearly defined. By the early 1940s, The Iron Ring became a blatant boundary in the city, but it evolved situationally and created a *de facto* containment area. This area, as defined by the 1920 municipal boundary, established the spatial basis for Milwaukee's inner core housing submarkets, which would ultimately be identified as high-risk lending markets with deteriorated conditions. While city leadership envisioned their actions in an idealistic and positive light, the ironic consequences resulted in anti-urban property market controls that distorted housing values and rents, eliminated economically productive mixed-use districts around the CBD, and classified thousands of small businesses as non-conforming uses by the late 1930s. Thus, Milwaukee's once concentrated economic activity in and around downtown began a spatial shift of decentralization outward into new neighborhoods.

Part II: Emergence of the Milwaukee Metro Housing Market & Distributed Spatial Economy, 1930-1950

The Great Depression acted as an inflection point in Milwaukee's housing submarkets that fundamentally altered the perspective of Federal and City leadership with respect to urban policy and property market interventions. Whereas previously, the City adopted a minimalist approach to managing neighborhood property markets; by the mid-1930s, however, City leadership was being forced to consider more activist alternatives. This highlights a sharp break from the City's laissez-faire, free market attitude that relied on the limited approach of zoning and platting guides as regulatory controls. Beginning in the 1930s, this approach was no longer sufficient to confront the Great Depression's housing market crisis, resulting in the government adopting market interventions as an additional tool to stabilize neighborhoods.

By the 1930s, the consequences of multi-decadal trends accumulated to shift Milwaukee's housing market into a slowdown. War rationing and restrictions on new construction during and immediately after World War I restricted the supply of new homes for residents. Increasing immigration controls during and after World War I decreased the number of new city residents across the United States, thereby slowing the neighborhood cycles of population filtration. At a local level, the City began a multi-decadal effort to use the demolitions of blighted properties – commercial and residential – as a means to control congestion. The onset of the Great Depression forced an effective collapse of urban property markets due to foreclosures, the lack of creditworthy borrowers, and the unwillingness of banks to lend. The housing supply was then further constricted during World War II as raw materials were restricted for only approved war activities. These historical events created severely constrained economic conditions that persisted from World War I in the late 1910s to the end of World War II in the mid-1940s, thus forcing a housing market contraction at the local level.

The through line from Milwaukee's early urban reform period beginning in the 1910s to the periodic shift in the 1930s was the tools available to control neighborhood property markets, the degree to which they were utilized, and the degree to which they were effective. The various elements of Milwaukee's housing challenges adapted, evolved, and accumulated from the 1910s-1920s into the 1930s-1940s. Urban reform ideologies focused on morality, the family unit, congestion, and public health held firm. The city's neighborhoods continued to be demarcated based on ethnic and racial lines; though, the city became markedly racialized by the early 1940s with these geographies becoming permanent during the Second Great Migration. The City maintained zoning as its primary regulatory control, but the underwriting criteria for New Deal Federal housing agencies significantly influenced mortgage availability and steered capital to select neighborhoods. In conjunction with the City's continued demolition of blighted properties, the 1930s demonstrated government's increasing role in neighborhood property markets that affected supply and demand. Additionally, this indicated a shift in the implementation of urban reforms from a period in which local municipalities self-selected to institute changes to Federal involvement at the local level. Blight conditions and "undesirable" areas persisted into the 1940s, which created unique conditions that shifted the City's containment strategy and more clearly manifested the Iron Ring. With the continuation and persistence of these elements and actions, a study of the city's inner core housing markets into the 1930s-1940s shows how the effects of these actions and events accumulated in select neighborhood property markets.

A. Legislative Landscape: Evolving Housing Policy at the Federal & City Level, 1930s

The Federal legislative landscape during the Great Depression and World War II eras was marked by a search for public policy. Because American urban intellectualism was not prepared for the housing crisis and property market collapse caused by the Great Depression, Federal leaders began looking for

solutions to problems that they had not previously addressed.¹⁷⁴ This search would ultimately produce the Housing Acts of the 1930s, 1949, and the 1950s. Further, the magnitude of problems resulting from the Great Depression overwhelmed governments at every level in the United States. Not only did these problems create new challenges for the country – and for cities in particular, but they exacerbated existing challenges and began to entrench those challenges into the urban fabric.

The New Deal legislation under Franklin Delano Roosevelt was the first time the U.S. Federal government substantively intervened in the nation's housing markets through legislation. Prior to the pieces of legislation in the 1930s, the Federal government had largely chosen to remain absent from local housing markets across the country. However, the Great Depression forced a reckoning. The notion of government's involvement – at any level – in private housing markets was anathema to average Americans. It was generally seen by the public writ large that the government should have no role in private property markets.¹⁷⁵ Despite these reservations, the high unemployment rate and collapse of property markets during the Great Depression galvanized a Federal response in credit markets. When the credit market response was not sufficient at a local level, public housing projects were funded to support the lowest income families.¹⁷⁶ The Home Owners' Loan Corporation (HOLC) at the direction of the Federal Home Loan Bank Board (FHLBB) refinanced the mortgages of homeowners in non-farm owned homes from 1933-1936. It is estimated that the agency backstopped the nation's mortgage market by refinancing approximately 10% of all nonfarm homes. The FHLBB also served a broader purpose of providing credit to the building and loan associations, thus effectively backstopping

¹⁷⁴ Von Hoffman, "A Study in Contradictions" (2000), 303.

¹⁷⁵ Sterner, "The Negro's Share" (1943), 310, 316.

¹⁷⁶ Sterner (1943), 311.

the entirety of the housing credit market. In contrast, the Federal Housing Administration (FHA) served to insure mortgages on newly built single-family homes from 1934-1940.¹⁷⁷

The Home Owners' Loan Act of 1933 and the National Housing Act of 1934 represented the Federal government's effort to intervene in residential lending and mortgage markets. With the collapse of America's housing market in the 1930s, the Federal government needed agencies that could act as a financial conduit to provide security and certainty for home lending. Prior to this period, the Federal government possessed no tools to manage the housing credit markets. The Home Owners' Loan Act of 1933 created the Homeowners' Loan Corporation to act as a national lender for the origination of new single-family mortgages and the purchase of existing mortgages – typically debt that was distressed.¹⁷⁸

The National Housing Act of 1934 created the Federal Housing Administration (FHA) to act as an insurance agent for financial institutions to provide capital liquidity to lenders. This meant that the FHA provided insurance on mortgages to give lenders and homebuilders a greater sense of confidence to continue producing housing.¹⁷⁹ The FHA's role would eventually be broadened to provide mortgage insurance across the country in the post-World War II era.

The Housing Act of 1937 marked a milestone in public housing development in the United States. The Act created the United States Housing Authority (USHA) and apportioned funds to develop public housing projects in communities across the United States.¹⁸⁰ Though the Federal government had pursued other housing projects via the Public Works Administration – like the Greenbelt Towns including Greendale, it had never engaged in large-scale housing deliveries that impacted the macro-level supply

¹⁷⁷ Sterner (1943), 312-313.

¹⁷⁸ United States Congress, "Home Owners' Loan Act of 1933" (1933), Section 4(d & e).

¹⁷⁹ United States Congress, "National Housing Act of 1934" (1934), Titles I & II. Gotham, "Racialization and the State" (2000), 299-300.

¹⁸⁰ Flanagan, "The Housing Act of 1954" (1997), 268.

of housing in America. In conjunction with the Housing Act of 1949, the 5-10 years following both pieces of legislation marked the most productive periods of affordable housing production – arguably – in American history.

Table 4.11: Evolution of Federal Housing Legislation, 1933-1949

<i>Law</i>	Home Owners' Loan Act	National Housing Act	United States Housing Act	Housing Act
<i>Year</i>	1933	1934	1937	1949
<i>General Provisions</i>	Creation of HOLC and provision of mortgage insurance and refinancing to borrowers at default.	Provision of mortgage insurance to financial institutions.	Creation of USHA and development of public housing.	Creation of programs for slum clearance, urban redevelopment, and public housing.
<i>Federal Agency Created</i>	Home Owners' Loan Corporation (HOLC)	Federal Housing Administration (FHA)	United States Housing Authority (USHA)	---
<i>Agency's Role</i>	Underwrite and insure mortgages.	Underwrite and provide additional capital to financial institutions.	Develop and manage public housing projects.	---
<i>Successor Agency</i>	---	Department of Housing & Urban Development	Department of Housing & Urban Development	---
<i>Milwaukee Impact</i>	Provided mortgage insurance from 1933-1936. Completed Residential Security Maps in 1938.	Initially provided mortgage insurance. Broadened its role after Housing Act of 1949 to provide loans directly to consumers.	Developed the Parklawn housing project.	Served as precursor for urban renewal projects and public housing developments in the 1950s-1960s.

Notes: The exact impact of HOLC and FHA lending is difficult to quantify due to a lack of address-level data for loans originated and insured.

Sources: United States Congress, "Home Owners' Loan Act of 1933" (1933). United States Congress, "National Housing Act of 1934" (1934). United States Congress, "United States Housing Act of 1937" (1937). United States Congress, "Housing Act of 1949" (1949).

Despite the inclination of Milwaukee's City leadership to remain as hands-off as possible in neighborhood property markets, the Great Depression demonstrated that a limited approach was no longer feasible. Similar to Federal efforts, the City needed to reconsider its position and contemplate a

more activist role. However, City leadership became acutely aware that transitioning into a more influential role in Milwaukee's real estate economy would be difficult. By the 1930s, the Common Council confronted a challenge of its own making: a regulatory paradigm of zoning and building code enforcement that limited housing supply in the inner core neighborhoods, a campaign of building demolitions to eliminate blight – which subsequently decreased housing supply and removed homes from the tax rolls, and a business community that was highly suspicious of government involvement in real estate.¹⁸¹ The City's original rationale for zoning and building code enforcement was to protect the downtown business district from the contagion of blight. The idea of this containment zone was to reduce the number of housing units, thereby reducing building density, which would subsequently reduce congestion. While this strategy was effective in a limited way, it became a case study in over-zoning and over-inspecting private properties.¹⁸² This regulatory approach began to strangle the downtown housing market by the late 1930s. Simultaneous to these housing market challenges, blight removal came to the forefront in the Federal government as a solution to urban issues. At the State level, the Tehan Law (1943) empowered local municipalities to redevelop blighted areas by acquiring them, preparing them for redevelopment through demolition, and then selling the vacant parcels to private real estate companies.¹⁸³ However, the Milwaukee Common Council was opposed to empowering any department or agency within City government to exercise eminent domain powers. The concern was a department or agency pursuing projects under the auspices of unilateral government authority, condemning private lands, and then re-using that land as the agency saw fit.¹⁸⁴

¹⁸¹ McCarthy, *The Quest for Authority* (1983), 24-25, 30, 31.

¹⁸² McCarthy (1983), 24.

¹⁸³ McCarthy (1983), 29. Note that additional information about the Tehan Law is difficult to find. While numerous authors refer to the law's importance, there is little written record that documents the law in greater detail. The modern version of the law is Wisconsin Statutes §66.1333 "Blight Elimination and Slum Clearance Act."

¹⁸⁴ McCarthy (1983), 30.

A.i. The Risk Management of Neighborhood Harmony, 1938-1939

The analysis of Milwaukee's housing patterns in the 1930s-1940s is informed by a new period of intellectualism in urban studies catalyzed by the Great Depression and focused on improving neighborhood conditions and eliminating blight. Similar to the efforts of the National Housing Association (NHA) in the 1910s, the Federal government and the City began multiple studies of conditions in Milwaukee to better understand its urban structure and the local neighborhood economies. These studies produce a wealth of insights and data that informs a neighborhood- and block-level analysis of housing submarkets. This marks a critical shift in the historical study of Milwaukee and allows for a detailed analysis of the continuing trends in this research's study area.

As the American housing market collapsed in the early 1930s, the Federal government was caught flat footed. Because there had been no previous effort to catalogue the nation's housing, government agencies at all levels were unable to understand the scope of the Great Depression's effects and benchmark the then-current market performance against historical trends. As a result, the NHA, Works Progress Administration (WPA), and National Bureau of Economic Research (NBER) began a large-scale cataloguing effort to document the housing development process, define and describe the U.S. housing market at the city scale, and understand housing as an essential cost of living. These studies included the Real Property Inventories of 1934-1936, a 1937 comparison of cost-of-living analysis across 59 cities, a 1941 assessment of residential real estate as a formal market in the larger American economy, and the National Housing Bulletins of 1944-1946.

In this effort to catalogue America's housing markets, the Federal Housing Administration played a prominent role. As the primary Federal agency responsible for ensuring credit access to home lenders and developing public housing projects, the FHA had a vested interest in managing mortgage risk across the country. To effectively manage its lending portfolio and properly advise financial institutions around

the country, the agency needed to develop a systematic process whereby risk could be assessed and managed in individual housing submarkets across neighborhoods in American cities and at the individual borrower level of mortgage origination for home loans. The FHA produced two pieces of literature to act as guidebooks for public agencies and private financial institutions: Homer Hoyt's *The Structure and Growth of Residential Neighborhoods in American Cities* (1939) and the FHA's *Underwriting Manual: Underwriting and Valuation Procedure Under Title II of the National Housing Act* (1938).

Hoyt's work quickly became a central resource for agencies and individuals working in America's housing markets. Originally developed as something of a research project or treatise, it was elevated in stature when the FHA decided to formally publish it as a book in 1939.¹⁸⁵ At the time, it represented a significant step forward in the development of the professional practice area of the systematic appraisal process. The book was organized into three core areas: 1) a risk assessment methodology to understand the structure of cities, 2) a spatial analysis methodology to manage future growth of urban areas, and 3) multiple appendices that summarize the two methodologies. Strikingly, the book makes clear in the Introduction that the race of neighborhood residents and housing rents are linked: "Because inharmonious racial groups tend to have an influence upon rents in urban residential areas, the composition of American cities with respect to the degree of clustering of racial groups is thoroughly discussed."¹⁸⁶ The book's Part I proposed a process by which the physical attributes of a city can be catalogued. It focused on an understanding of the various components of urban structure – both on an individual basis and as a collective whole. The discussion and various maps produced document land surveys, land coverage, settled areas, land use, and block data.¹⁸⁷ Additionally, a framework was proposed to analyze residential areas in cities that focused on a set of quantitative factors: average rent,

¹⁸⁵ Hillier, "Residential Security Maps and Neighborhood Appraisals" (2005), 212-213.

¹⁸⁶ Hoyt, *The Structure and Growth of Residential Neighborhoods in American Cities* (1939), 5.

¹⁸⁷ Hoyt (1939), 3, 129.

age of housing units, proportion of owner-occupied versus renter-occupied housing units, overcrowding in housing units, housing units needing major repairs or access to bathroom facilities, proximity to commercial and industrial uses, and the racial distribution of residents on the block.¹⁸⁸ A focus of Chapters IV and V, however, was on the relationship between non-White occupancy and rent values on a block. The book states, “There is thus a distinct tendency for blocks occupied by nonwhites to fall into lower rental groups. This is principally reflective of the economic conditions of the nonwhite population. In relation to gradations of rent, therefore, nonwhite occupancy is of significance. But the presence of nonwhite persons influences rent directly only in those blocks partially occupied by nonwhite persons. In some cities, rents in wholly white blocks adjacent to wholly or partially nonwhite blocks may also be affected.”¹⁸⁹ Though the book as a whole does not explicitly advocate for racial segregation, this quote demonstrates a rationale that could be used by certain parties to justify blockbusting and steering in housing submarkets. With this data analysis framework, Part II proposes a spatial analysis to study how cities change, adapt, and evolve over time. The emphasis was on the spatial consequences of pressures exerted by the relationship between demographic and economic trends. It should be noted that Hoyt echoed parts of the work of Ernest Burgess and his concentric zone theory of urban development.¹⁹⁰ Overall, Hoyt’s work proposed an essentially quantitative analysis framework for the urban structure of cities; however, he also concluded that rent values and the race of neighborhood residents were at minimum correlated, if not causative. This is highly suggestive of his role in the development of an impetus for bias and discrimination in home lending as his book was published by the FHA and publicly regarded as an important resource.

¹⁸⁸ Hillier (2005), 27-48.

¹⁸⁹ Hoyt (1939), 54.

¹⁹⁰ Hillier (2005), 212-213. Hoyt (1939), 101-104.

What Hoyt asserted in his book was previously codified by the FHA into its *Underwriting Manual: Underwriting and Valuation Procedure Under Title II of the National Housing Act*. The manual was a comprehensive reference required to be used by all lenders using an FHA product when assessing the risk of a potential borrower, their ability to repay their mortgage, and the quality of the home and its surrounding environment that would be encumbered. The FHA manual impacted capital access for potential homeowners through its place-based underwriting criteria. It stressed the risks associated with adverse influences that could create inharmonious circumstances leading to a decline in desirability and property values. A concern in the rating system was the presence of “inharmonious racial groups.”¹⁹¹ For undeveloped subdivisions, FHA underwriting required that to receive the best consideration for lending the area in question should be controlled by strong zoning and “recorded restrictive covenants.” Of the provisions in the covenants, they should include a “prohibition of the occupancy of properties except by the race for which they are intended.”¹⁹² Additionally, the risk rating considered incompatible land uses as just as significant as the presence of inharmonious racial groups stating, “The infiltration of inharmonious racial groups will produce the same effects as those which follow the introduction of incongruous land uses, when the latter tend to lower the level of land values and lessen the desirability of residential areas.”¹⁹³ It also later states, “The degree of social and racial compatibility of the inhabitants of the neighborhood. The presence of socially or racially inharmonious groups in a neighborhood tends to lessen or destroy owner-occupancy appeal.”¹⁹⁴ While the manual considered a variety of factors that it deemed to be adverse influences, the racial segregation espoused – particularly in the requirement for restrictive covenants – would have profound effects in the coming decades with respect to mortgage access for non-White households. As the FHA expanded its lending to

¹⁹¹ Federal Housing Administration (FHA), *Underwriting Manual* (1938), s. 935.

¹⁹² FHA (1938), s. 980(1) & 980(3g).

¹⁹³ FHA (1938), s. 1360.

¹⁹⁴ FHA (1938), s. 1412(3d).

accommodate returning servicemembers from World War II and households choosing to suburbanize, the FHA requirement created a de facto system of private zoning that segregated White and non-White communities from one another.

While Hoyt proposed an analysis methodology and set of assessment criteria for cities – albeit with a racial undertone related to rent values, the underwriting guidelines for the Federal Housing Administration had tangible impacts in local mortgage markets, particularly considering where lending was permitted and to whom. The scale of the FHA’s impact became clear decades later as its role in mortgage insurance grew from a limited capacity as a backstop measure in the 1930s to a critical component of the home lending economy through the 1950s and 1960s. FHA underwriting served to guide mortgages to communities and households with characteristics it deemed acceptable and low risk, while denying mortgage access to neighborhoods and households that did not meet the criteria. In the post-World War II economy, this meant that single-family mortgages with low down payments of 10% were generally available to White households and helped facilitate the decentralization of urban housing submarkets into suburban communities. In contrast, the FHA deprived inner core neighborhoods and non-White households of capital access to purchase their own homes.¹⁹⁵ In Milwaukee, this manifested itself as the FHA’s blacklisted lending area in the Inner Core-North that was publicly revealed in 1966. Interestingly, in his 1943 book, *The Negro’s Share*, Richard Sterner reflected the beliefs of the time and also naively or presciently commented on residential segregation:

- “Furthermore, the emphasis on ordinary business principles by federal housing agencies has the effect of encouraging segregation. The agencies have been organized for the purpose of assisting private financial institutions to bring about better integration and more stability in the field of housing credit. One of their main interests must be to protect real-property values.

¹⁹⁵ Gotham (2000), 292, 299-300.

Rightly or wrongly, the Negro has always been regarded as a menace to real-estate values. From this approach the housing of Negroes presents a problem against which adequate protection must be organized.”¹⁹⁶

- “The fact that the Federal Housing Administration, as the easiest way out of an otherwise extremely complicated dilemma, has sided with the segregationists may tend to make urban Negroes more restricted in their residential areas than they were before.”¹⁹⁷

A.ii. Mayor Daniel Hoan Confronts the Housing Concern, 1933

Whereas Milwaukee’s slum conditions of the 1910s were the product of economic expansion, the collapse of the city’s housing market during the Great Depression was the opposite. It was the first time in the then-modern era that City leadership and residents experienced an economic depression that physically manifested itself in the neighborhoods. Challenges immediately became acute; and, Mayor Daniel Hoan felt the need to appoint a commission to study the issue stating, “A housing problem of growing proportions is beginning to menace the community. There is a need for devising new means to meet the changing conditions and the proposal of adequate remedies.”¹⁹⁸ The Commission’s report is a primary source document often lost in the Milwaukee urban history literature, but it represents something of a milestone for the City. It is the first document to identify the intersectionality of housing issues in the city and represents a uniquely comprehensive survey that surpassed accepted knowledge about urban issues at the national level. From the perspective of urban intellectualism, the report establishes Milwaukee as a thought leader – despite the fact that it is seldom referenced in the literature. Additionally, the report was the first City document to publicly acknowledge the existence of

¹⁹⁶ Sterner (1943), 314-315.

¹⁹⁷ Sterner (1943), 316.

¹⁹⁸ “Report of the Mayor’s Housing Commission” (1933), 4.

and delineate two impactful types of geographies: “central wards” as inner core neighborhoods, and the existence of a “Negro District” in the inner core.¹⁹⁹

The report frames housing in terms of its supply and demand dynamic: the economics of delivering larger amounts of new housing and migration trends in the city population. This assessment emphasizes that the delivery of affordable housing is not only critical, but so too is its location in the inner core neighborhoods.²⁰⁰ Housing costs were dictated by three factors: land values, construction costs, and financing costs. The City had little control over them, but the report acknowledged that zoning and taxation were directly linked to inflated land values. Because the City was reliant on property taxes for its primary revenue source, it had a vested interest in benefiting from increases in assessed values. However, these increases on real property and improvements frequently priced working-class families out of quality housing. It is noteworthy that this was the first public acknowledgment in a City document that zoning as a regulatory tool caused the inflation of assessed values. Thus, while zoning was seen as a way to control neighborhood conditions to protect public health and quality of life, it had the simultaneous consequence of causing price distortions in neighborhood property markets.²⁰¹ Instead of recommending a de-regulatory approach to zoning, the report recommends the creation of garden cities and satellite towns on the periphery of Milwaukee. To reduce mortgage costs, the report recommends the creation of housing cooperatives, limited dividend corporations, and public housing agencies to develop affordable housing.²⁰² Ironically, as inflated costs were making housing

¹⁹⁹ Mayor’s Housing Commission (1933), 9, 12.

²⁰⁰ The report defined “affordable housing” as a dwelling unit that cost a household no more than 25% of their family income being paid to rent. Mayor’s Housing Commission (1933), 6-7.

²⁰¹ Mayor’s Housing Commission (1933), 5-6.

²⁰² What is little known about housing markets by the 1930s is that some households had secured a second mortgage to finance a home purchase. This debt could carry average interest rates of 18-20%. However, there is no data source to track how prevalent second mortgages were in City wards or Census Tracts. Mayor’s Housing Commission (1933), 5-6.

unaffordable in the inner core areas, the painful effects of the City's decentralization strategy were being felt. Originally conceived as a solution to the societal ills of overcrowding and lower quality of life, decentralization sought to push the city population to periphery neighborhoods with lower density and more green space. This out-migration of people caused the de-population of the inner core neighborhoods, which subsequently caused a collapse in housing submarkets due to high vacancy rates and a loss of demand. To ensure Milwaukee's longevity, the report acknowledges that the central parts of the city must be re-populated to maintain a healthy economy; it also – for the first time – acknowledges the developing metropolitan economy around Milwaukee and that the city is actively engaged in competition with suburban communities for economic resources and strength.²⁰³

The greatest concerns about housing in the report focused on the inner core neighborhoods. Deteriorated conditions had been a persistent issue for the better part of two decades; and, the housing market collapse of the Great Depression greatly exacerbated them. The intersectionality of the challenges emerged by the early 1930s as it became apparent that the cause of blight was multi-faceted. Though the report does not definitively establish a cause-and-effect relationship between housing and various issues, it does present data and a discussion about blight conditions, public health, and residential vacancy rates. Deteriorated housing was identified in multiple blighted locations around the city, though exact geographies were not provided. The report identifies the Negro District as the principal blight district in the city.²⁰⁴ It identifies tuberculosis as one of the leading public health concerns for the city with a geographic focus on the Negro District. The report makes the connection between public health and concerning housing conditions: physical condition of dwelling units, the lack of maintenance and service, and overcrowding of tenants.²⁰⁵ (A follow-up report, "Tuberculosis Among

²⁰³ Mayor's Housing Commission (1933), 6.

²⁰⁴ Mayor's Housing Commission (1933), 12-16.

²⁰⁵ Mayor's Housing Commission (1933), 17-18.

Negros in Milwaukee” (1937), was completed to assess the cause and prevalence of tuberculosis in the principal blight district and its impacts on the Black community.) The previous out-migration of city residents to the rural periphery resulted in the de-population of the central wards, which ultimately caused an increase in vacancy rates. Due to this vacancy and attendant loss of rental income, landlords no longer conducted maintenance and upgrades of properties. The inner core neighborhoods suffered two negative consequences as a result: 1) the loss of economic activity due the de-population of neighborhoods by wealthier White residents, and 2) the confinement of lower-income and working-class households to deteriorated housing due to the financial inability of White households to out-migrate or because of discrimination against Black households that prohibited access to other neighborhoods. This convergence of factors created a degree of complexity in inner core housing submarkets that City leadership had not previously seen. The report represents the first time that a City document acknowledged the realities of deteriorated housing in Milwaukee.

The report concludes with a detailed assessment and recommendations of actions needed to address Milwaukee’s housing challenges. If the proposals had been implemented, they would have represented one of the largest expansions of municipal affordable housing developments in the country at the time. However, the ideas faced opposition and rejection from the Wisconsin State Legislature and the Milwaukee Common Council.²⁰⁶ The proposals included the creation of limited dividend corporations under municipal control to develop affordable housing and the development of public-private partnerships to acquire and clear slum areas to prepare them for redevelopment. These ideas were seen as actions needed to prepare Milwaukee to benefit fully from the series of Federal National Housing Acts passed during the 1930s.²⁰⁷ With respect to urban thought by the early 1930s, these

²⁰⁶ Mayor’s Housing Commission (1933), 21-22.

²⁰⁷ Mayor’s Housing Commission (1933), 21, 24.

proposals were far ahead of their time and previewed guidance and programs ultimately issued by the Federal government. Note that future proposals for innovative housing solutions would again be presented during the debates about the creation of the Housing Authority of the City of Milwaukee. As in 1933 and 1944, the proposals were debated and City leadership ultimately tabled them and failed to act.

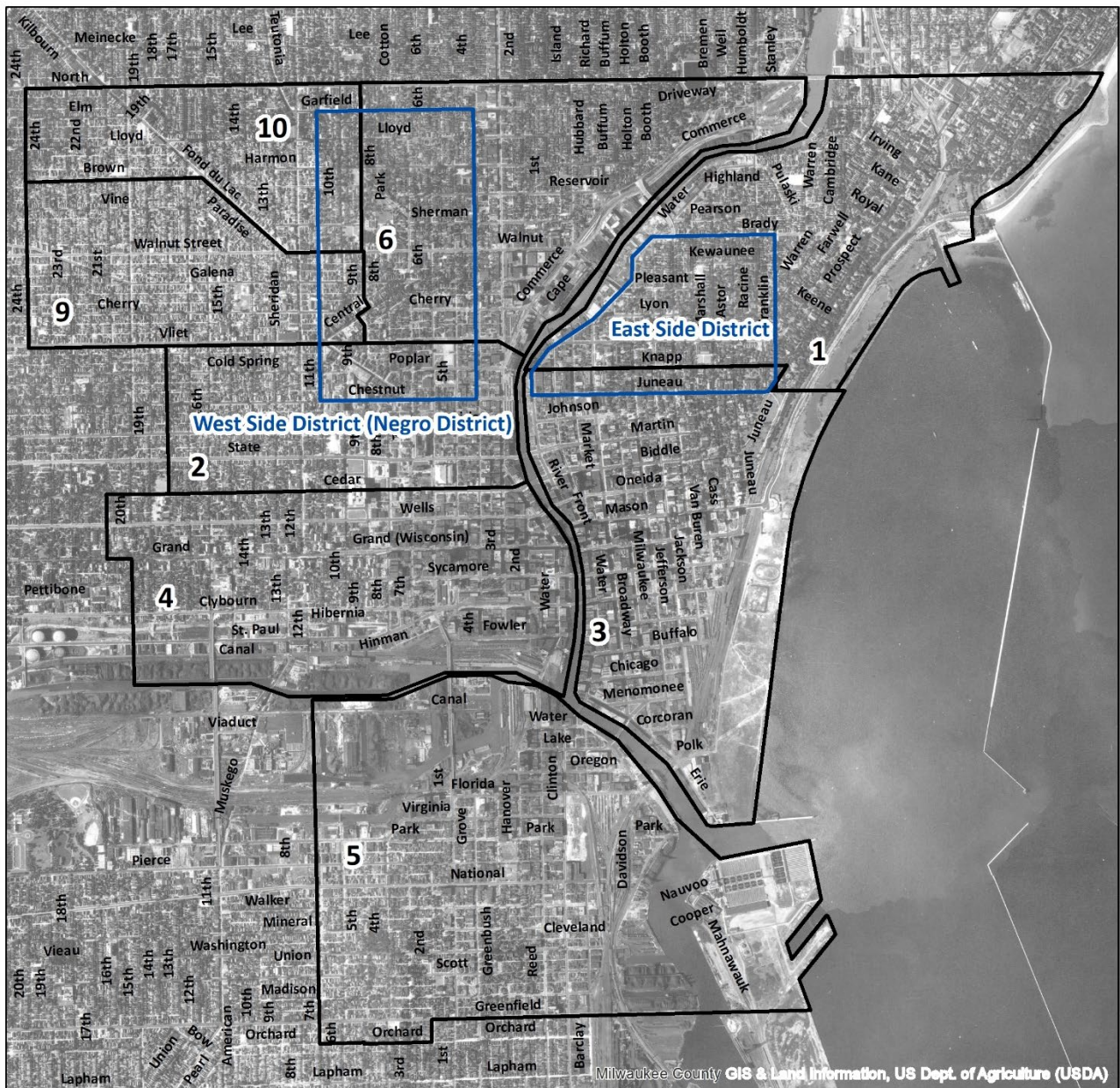


Figure 4.15: Central Wards (Wards 1, 2, 3, 4, 5, 6, 9, & 10), East Side Study District, and West Side Study District (also identified as the Negro District) from the Milwaukee Housing Commission Report, 1933

A.iii. Expansion of Government Control with the Housing Authority of the City of Milwaukee (HACM), 1933-1944

From the 1910s to the 1940s, Milwaukee did not deliver a significant number of affordable housing units. The delivered projects received substantial local and national attention – notably Garden Homes, but the volume of units delivered never reached a sufficient scale to broadly cause a positive impact in the city’s housing market overall. Idealistically, Milwaukee pursued some housing reforms in the 1910s and 1920s – namely instituting zoning and platting codes, but these efforts were limited to regulatory controls.²⁰⁸ Importantly, the reforms did not require the city or other actors to commit money towards their implementation. Essentially, the private sector allowed the city to pursue the reforms so long as they were limited in scope and continued to allow private investors the opportunity to pursue projects in the city. In the late 1920s and onward, affordable housing advocates encountered serious resistance to government involvement in the private market of housing. This all meaning, Milwaukee never developed a broad base of support for affordable housing – both from local leaders or city residents.

Milwaukee’s original intended use for New Deal Federal housing programs sought to conduct slum clearance and then build new housing in its place. Due to various objections – primarily by private property owners and segregationists, slum clearance became an almost insurmountable obstacle. Considerations and proposals for public housing projects served as a catalyst for this opposition – especially none more so than Parklawn. Government intervention in individual neighborhoods stoked suspicion and ultimately served as an opportunity for multiple disparate opponent groups to unite. The opposition was characteristically anti-Socialist and discriminatory against the Black community. This moment in Milwaukee’s history portended a larger political shift and fragmentation that would manifest

²⁰⁸ Lenard, “From Progressivism to Procrastination” (1967), 38.

during the World War II years and the vitriol that accompanied the racialization of the city's housing submarkets that would serve as a preview to the Open Housing Debate in the 1950s-1960s.²⁰⁹

By the early 1940s, the Milwaukee Common Council and private business interests continued their resistance to the creation of any type of additional governmental authority in the city that would have exercised control over property markets. The prevailing position was that the City should not involve itself in private real estate enterprise and should limit the extent of its market controls and interventions to zoning code enforcement, building code enforcement, and the demolition of blighted buildings. The notion that government should take private property through an exercise of eminent domain was adamantly opposed by the Milwaukee Common Council.²¹⁰ However, a number of factors were coalescing to force housing pressures in the city to reach unbearable levels. With historically deteriorated conditions in the Sixth Ward, the City had conducted an approximately 15-year campaign of demolitions to remove slum properties. Simultaneously, the increasing immigration of Black workers from the South created new housing demands that were largely being unmet. As a result, Black families in the inner core were facing a housing shortage due to the direct actions of City demolitions (supply side) and an increasing number of Black families needing housing (demand side). Then in addition, as servicemen returned from World War II, they were seeking housing for their families – the majority of which was unavailable.²¹¹ These conditions finally forced the City to act.

In 1944, the Milwaukee Common Council passed a resolution “declaring a need for a Housing Authority.”²¹² It was ultimately created and staffed thereafter. The important distinction in this

²⁰⁹ Lenard (1967), 98-101.

²¹⁰ McCarthy (1983), 38, 42.

²¹¹ Lenard (1967), 114-115, 124-125,

²¹² Lenard (1967), 125.

situation is that City leadership refused to act and waited until their decision was one of necessity and desperation. This was not a proactive action that sought to ameliorate the challenges of daily living in Milwaukee's inner core neighborhoods. Instead, this was an action that was truly catalyzed by the arrival of servicemen returning from World War II. It cannot go unnoticed that race played a role in this decision. The poor living conditions of Black families in the Sixth Ward had been continuously ignored for over two decades by City leadership. However, when a large number of White servicemen returned home and could not find adequate housing for their families, only then did the City act.

The Milwaukee Common Council's suspicion and obstructionism about housing and redevelopment authorities unfortunately produced an entirely unnecessary delay in the City addressing slum conditions in inner core neighborhoods.²¹³ When the Housing Act of 1949 was passed, Milwaukee was wholly unprepared because it did not have a redevelopment authority that could administer urban renewal projects. Initially, the Housing Authority of the City of Milwaukee was charged with this role, but quickly became overwhelmed.²¹⁴ This intransigence on the part of the City is an example of a persistent complacency and neglect in Milwaukee with respect to deteriorating conditions in the inner core, increasing levels of segregation, and an unwillingness on the part of leadership to address the issues. Ultimately, the lack of action from the onset of the Great Depression through the early 1950s would produce an intractable problem for City leadership as conditions in the inner core would become unmanageable.

²¹³ Note that despite the Milwaukee Common Council's failure to act, there was broad public consciousness about deteriorated housing conditions and the lack of affordable housing because so many of the city's lower-income and working-class families lacked access to it. The irony of the Common Council's failure to provide affordable housing to their constituents, despite the demonstrated need, cannot be understated. See Senior (1938).

²¹⁴ McCarthy (1983), 36-37.

B. Linkages & Nodes: The Expanding & Contracting Spatial Economy of Milwaukee's Neighborhoods, 1920-1941

By the late 1930s and early 1940s, the elements and activity in Milwaukee's contained spatial economy came into focus. As a result of multiple studies documenting residential and commercial activity in the city's inner core neighborhoods, a detailed understanding of daily activity and spatial characteristics was made clear. Despite the growing adoption of the automobile and the continued decentralization of Milwaukee's population away from the city center into the urban periphery, the inner core neighborhoods continued to operate as dynamic and diverse communities. The local market economies identified in the Home Owners' Loan Corporation Residential Security Maps and the "Milwaukee On The Go!" Study showed a nuanced portrait of polycentric economic centers spread throughout the inner core. Despite this inherent strength in these mixed-used districts, the same neighborhoods were also suffering from two decades of land use regulations starting in 1920 that sought to create homogenous areas and deprive the neighborhoods of a diversity of uses. These negative effects directly impacted small business owners and the local housing supply.

B.i. Delineation of Home Owners' Loan Corporation (HOLC) "D"-Graded Submarkets, 1938

Thematically speaking, what was top of mind for the Federal government by the late 1930s was effectively managing foreclosure risk on mortgages moving forward. The mass of foreclosures during the Great Depression coupled with deteriorating blight conditions created legitimate concerns about systemic risk in municipal finance. The foreclosures could have caused a larger pattern of cascading consequences resulting in a contagion risk for blight and the loss of property tax base. This resulted in the development of the systematic appraisal process, in part informed by the work of the Homeowners' Loan Corporation (HOLC) and the Federal Home Loan Bank Board's (FHLBB) City Survey Program.²¹⁵

²¹⁵ Hillier (2005), 207-208, 211-214.

The popular narrative, which is the most public, about HOLC attributes redlining and its accompanying negative effects to the agency. A multitude of research argues that correlative and causative connections can be established between redlining and a variety of challenging conditions in contemporary inner-city neighborhoods. This narrative was initially introduced by Kenneth Jackson in *Crabgrass Frontier* (1985). However, additional research has been conducted that challenges this narrative and provides evidence that the City Survey Program – under which the HOLC Residential Security Maps were developed – was in fact not instituted on a discriminatory basis. Instead, it was a largely investigative effort to further develop the systematic appraisal process. My dissertation research does not seek to address this disagreement in the academic literature. Instead, my work briefly discusses the work of Amy Hillier that challenges the popular narrative about HOLC and then presents data about Milwaukee’s inner core HOLC districts.

Hillier (2001, 2003, 2005) presents an argument that the development of the HOLC Residential Security Maps were part of a broader and ongoing effort at the FHLBB to inform itself of local neighborhood conditions within 239 cities, effectively manage mortgage risk on its long-term loans, and utilize its data to develop solutions that could arrest the decline of central city areas.²¹⁶ HOLC operated from 1933-1936 as a lender of last resort for homeowners who were in default on their mortgages. The agency was created by Federal legislation in a limited capacity to operate for a limited period of time. Nearing the end of its original lending period, HOLC was instructed by the FHLBB, its parent Federal agency, to conduct the study that would result in the Residential Security Maps. This meaning that HOLC did not possess the maps during its primary lending period.²¹⁷ Developed under the City Survey Program, the creation of the maps was overseen by HOLC staff with neighborhood surveys conducted by consultants

²¹⁶ Hillier (2005), 207, 210-211.

²¹⁷ Hillier (2005), 209. Hillier, “Redlining and the Home Owners’ Loan Corporation” (2003), 394.

– typically local real estate brokers. The base data for the studies was likely sourced from the Works Progress Administration’s 1934 Real Property Survey.²¹⁸ That data was then combined with field surveys conducted by the consultants to build the individual surveys for each district. At the completion of the mapmaking and survey processes, the FHLBB largely held the City Survey Program materials in confidence and generally refused to share them. In 1938, some information sharing began with other Federal agencies, but it was strictly controlled. It is estimated that only 50-60 print copies of the Residential Security Maps were ever made. Prior to viewing the maps and neighborhood surveys, the interested party was required to be introduced to the process overall by an FHLBB or HOLC staff member to ensure that the materials were not misused or misinterpreted. The FHLBB was concerned that the materials could be used in harmful ways against certain areas of cities.²¹⁹

The value in studying and using the data and neighborhood surveys from the HOLC Residential Security Maps is the insights provided in understanding the local conditions of Milwaukee’s housing economy. Importantly, the HOLC districts are the first time in the city’s history that market geographies were delineated in the neighborhoods. Previously, areas of the city were identified by their socio-cultural attributes, their aldermanic ward, or by zoning and platting regulations. As a primary source document, the HOLC Residential Security Map for Milwaukee provides a critical understanding about the quantitative attributes and field observations for the city’s inner core neighborhoods.

Milwaukee’s nine “D”-rated districts (i.e., redlined districts) in the inner core were built around the commercial and manufacturing zoning designations of the central business district, Menomonee Valley, and inner harbor. They represent the oldest parts of Milwaukee in Juneautown, Kilbourntown, and

²¹⁸ Hillier (2005), 215.

²¹⁹ Hillier (2003), 398-400.

Walker's Point. In the information collected and presented in the following table and map, there are few discernible traits or commonalities that connect each of the districts and justify their ranking as high-risk lending areas. In fact, the neighborhood surveys reveal diverse and dynamic areas – typically mixed-use – that housed Milwaukee's lower-income and working-class communities. A set of observations about the districts' characteristics are relevant:

- As lower-income and working-class communities, these neighborhoods provided easy access for household members to travel to work each day and access commercial areas for errands and daily trips. Specifically for households that could not afford a car, the walkability of these neighborhoods and the prevalence of street car lines facilitated environments of multi-modal transit.
- In addition to their proximity to industrial areas in the Menomonee Valley and inner harbor, these neighborhoods also had direct access to commercial and manufacturing corridors that radiated from the city center along the railroad lines and rivers. This spatial relationship between mixed-use neighborhoods and industrial areas was mutually beneficial. Ironically, this was one of the chief reasons that these neighborhoods were graded "D" because the reviewers felt the incompatible land uses were undesirable – which was a counterintuitive conclusion. The lower-income and working-class residents of these neighborhoods needed easy access to their jobs.
- The districts were ethnically and racially diverse. District D-5 was identified as the center of the Black and Russian Jewish communities, but the others were a mix of Germans, Polish, Italians, Russians, and Yugoslavians. Thus, a number of predominantly White neighborhoods were classified as high-risk similar to Black and Jewish Milwaukee. To note, the Black community in Milwaukee by 1940 only numbered a total population of 8,821, or 1.5% of Milwaukee's total population of 587,472.

- The general condition of the neighborhoods was indicative of a housing mix of single-family homes, duplexes, and apartments with select areas that had access to good schools and parks. Each of the neighborhoods had full utilities – though their condition was not specified – and access to transit. Some neighborhoods suffered from low-quality housing and pollution from nearby manufacturers. Other neighborhoods included middle-class and upper-income areas directly adjacent to lower-income and working-class areas – indicative of mixed-income communities.

When considering Hillier’s challenge to the commonly accepted narrative about redlining and a detailed assessment of Milwaukee’s “D”-graded districts of the inner core, an inconvenient truth is exposed. There is significant ambiguity in the rationale behind marking these districts as high risk. They were, in fact, economically dynamic, multi-cultural areas that were the home of lower-income and working-class households. Admittedly, there were negative influences – like industrial pollution and slum conditions, but these neighborhoods were also critical to Milwaukee’s economy. It seems paradoxical that these areas were not recognized as essential demographic, economic, and spatial components for the city. Because the underlying data was likely sourced from the 1934 Real Property Survey, there is a reliable quantitative basis for the district ratings. However, an outstanding question with respect to the qualitative remarks made in the neighborhood surveys relates to the biases of the consultants completing the field work. Thus, there is dissonance in the rating system between its quantitative measures and qualitative judgments.

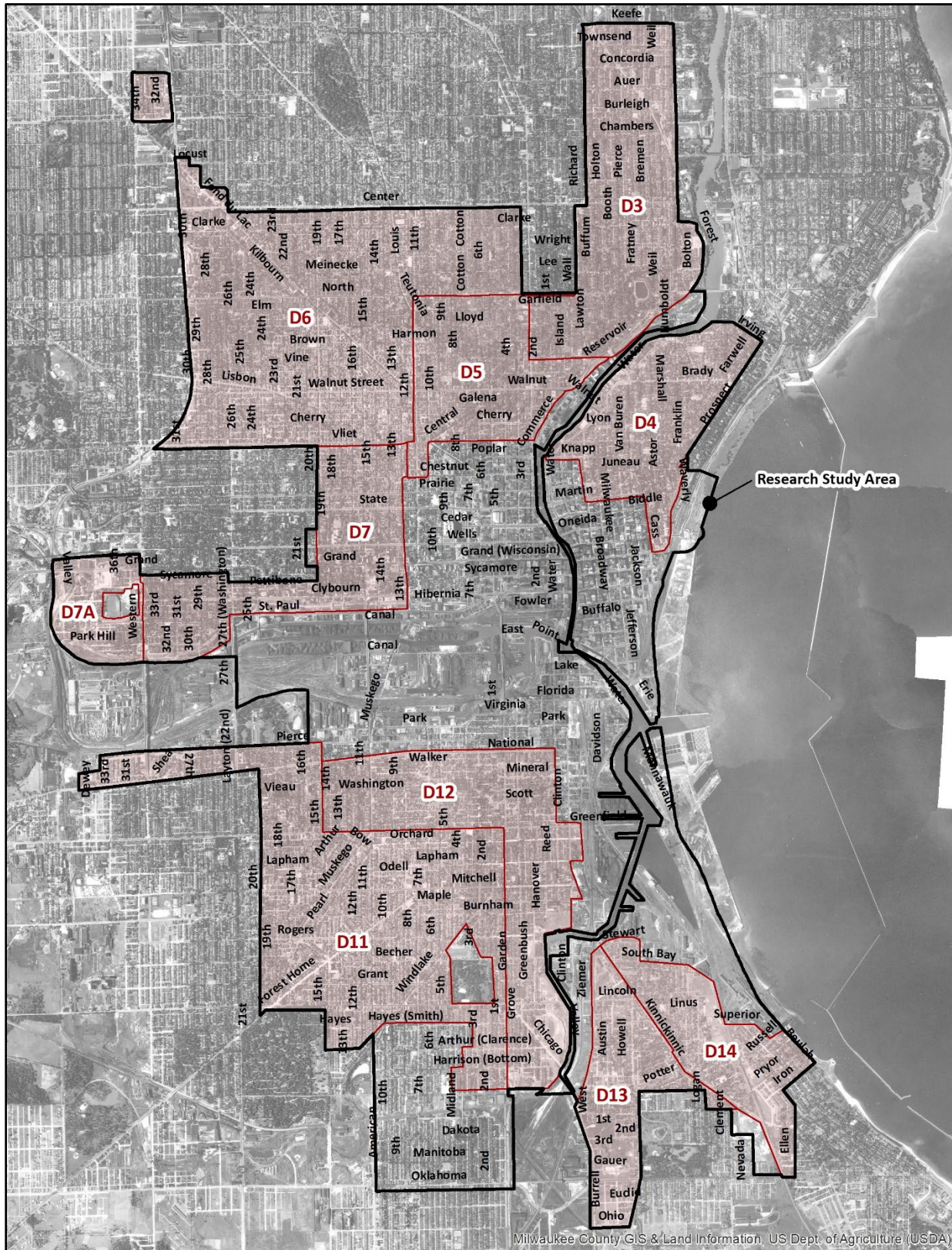
Table 4.12: Attributes of Milwaukee's Inner Core "D"-Graded Districts

<i>District</i>	<i>Favorable Influences</i>	<i>Detrimental Influences</i>	<i>Ethnicity & Race</i>	<i>Family Income</i>	<i>Ave. Home Value</i>	<i>Ave. Mo. Rent</i>	<i>Remarks</i>
<i>D3</i>	All utilities. Schools. Good transportation.	Polish infiltration. Industry on north.	Polish, Russian, German	\$1,200-1,500	\$3,500-6,500	\$18-45	On the down grade. Much repair needed. Typical Polish district. Railroad runs diagonally through section. Many of these people would not live elsewhere.
<i>D4</i>	All utilities. Adjacent to downtown and Lake Michigan. Adequate schools. Good transportation. Proximity to Lake Shore Park.	Part of original city first settled by Juneau. Rooming house and old apartment section. Business district is to south and west. Milwaukee River to northwest.	Italians, Polish, Germans	\$1,200-15,000	\$3,000-25,000	\$25-100	Some of the city's best apartments are located in the eastern part of the area. All single houses are very old. Characterized by age of detached houses and many large apartments, it is a difficult area to grade. Some of the wealthiest people live in apartment houses in the area, some of the poorest in the detached houses. Ground values are the predominant factor in maintaining prices in the higher brackets.
<i>D5</i>	All utilities. Schools. Good transportation.	Negro and slum area – condemnation proceedings going on.	Laborers and Ne'er-do-wells. Russian Jews.	NR	\$1,800-4,800	\$15-35	This is the Negro and slum area of Milwaukee. It is old and very ragged. Besides the colored people, a large number of lower type Jews are moving into the section. This section housed Milwaukee's wealthiest families seventy years ago.
<i>D6</i>	Good transportation. Good shopping districts. Schools. All utilities.	Industry on west and railroad.	Germans, Yugoslavians	\$1,200-3,000	\$4,000-7,000	\$25-50	25 years ago this was a good, middle class section of Milwaukee occupied by the second generation of Germans. Jews began to move in 20 years ago. It is now a wage earners' area with the advantages of being close in. It has a number of small industrial plants, also 5 business districts. A good fourth grade area.
<i>D7 & D7a</i>	All utilities. Ground values are holding and will maintain. Schools. Transportation.	Industry on south.	Germans, Yugoslavians	\$900-2,400	\$3,000-18,000	\$25-100	Marquette University is in the southeastern part of this area and has contributed to its going into a rooming house and light housekeeping district. There are a large number of apartments on Wisconsin Avenue and southeast of 27 th St. The area has more than an average number of small furnished apartments. There are also a number of sorority and fraternity houses in the area. Between 27 th and 35 th ,

							south of Clybourn are the lower income industrial workers. The Vernon section on the west side is the poorest section of area. Ground values are well maintained and are a factor in holding prices up.
D11	All utilities. Good transportation. Schools, including high school.	Mexicans coming into northeast corner.	Polish	\$1,200-5,000	\$2,500-7,500	\$20-50	This is Milwaukee's heaviest Polish concentration. Throughout the area there are many so-called "Polish Flats" wherein basements have been converted into one and two and sometimes three small apartments. Mitchell Street has the largest business section in the southern part of Milwaukee. Many of the institutions are either owned or managed by Polish or cater to Polish trade. Mexicans are encroaching in the northeast.
D12	All utilities. Good schools. Transportation.	Industry and smoke from the east and south. Beet odors from sewerage plant to southeast.	Polish and mixed	\$900-2,400	\$2,500-7,500	\$20-50	This is an old section bordering the commercial and industrial areas. Most of that portion east of 6 th has been zoned for light industry. There are many Polish Flats in the area. Like D-11, it is heavily populated by Poles. The security in this area is sometimes pointed out as being older and inferior to adjoining D-11.
D13	Humboldt Park, a fine park. All public utilities. Good transportation, stores, schools, etc.	Industry and the railroad on the west.	German, Polish	\$900-3,000	\$3,000-7,500	\$20-55	Immediately north of Oklahoma Avenue is Gauer Circle wherein five new homes were recently constructed and more will undoubtedly be built. The area north of Cleveland Avenue is old and much of the property is of the cheaper grade. Industry adjoins on the west. The area is favored by Bay View High School, other good schools, and Humboldt Park. New construction is in southwest portion of area.
D14	All public utilities. Good transportation, schools, stores, etc.	Industry to the east and odors from Jones Island, Sewage Disposal Plant.	Italians, Germans, Polish	\$900-2,400	\$4,000-7,500	\$25-45	This area is older than adjoining D-13. That portion of the area east of Wentworth Avenue to Lake Michigan is a more desirable residential section than other portions of the area, being removed from industry and on the lake shore. The area around the northwest portion of Conway and South Bay was formerly identified with the bootlegging industry. There are many Italians in this section. East of Lincoln Avenue is the old and dilapidated section.

Notes: The data and notes are excerpted verbatim from the original neighborhood surveys. NR – Not reported

Sources: Home Owners' Loan Corporation, Residential Security Maps – Milwaukee, Wisconsin (1938)



Milwaukee County GIS & Land Information, US Dept. of Agriculture (USDA)

Figure 4.16: Inner Core HOLC Districts Rated with the Highest Risk Grade of “D,” 1938

B.ii. Linear Economic Geographies of Transit Corridors in “Milwaukee On The Go!” Study, 1938

In 1920, not only was Milwaukee’s economy largely contained within its municipal boundary, but the city’s neighborhoods were similarly contained - almost semi-autonomous - economies highly localized to certain areas. Because Census data was only available at the ward level through 1930, it was not possible to understand the neighborhoods in more refined detail. By 1940, however, significantly more data had been collected and published that allows for the block level analysis of the neighborhoods.

The demands of urban issues presented by the Great Depression catalyzed not only serious study at the Federal level, but also at the local level. The most extensive study of Milwaukee conducted by the 1930s was work by the National Housing Association and Werner Hegemann that dated from the 1910s. In the interim, few studies had analyzed the development of the city’s neighborhoods. As a result, “Milwaukee On The Go! A Pedestrian & Vehicular Traffic Survey” (1938) marked an important milestone in the study of the city. The survey is a mix of a multi-modal transit analysis and a land use study of 17 business districts throughout the city and 15 landmark buildings in the downtown business district. Of the 17 business districts, 12 fall partially or fully within the research study area for my dissertation. The study is significant because of its detailed assessment of the city’s commercial corridors, the daily activity generated within each (pedestrians, cars, street cars, buses), the locations of garages and vacant lots, and a catalogue of commercial and residential land uses in each business district. Prior to the study, no previous research effort had collected the data necessary to quantify the amount of daily activity seen in Milwaukee’s neighborhoods.

As the city’s first multi-modal transit study, “Milwaukee On The Go!” (1938) revealed nuances in the spatial structure of the neighborhoods and their activity levels. The identification of business districts framed the polycentric form of the city’s neighborhood economies and the interconnectedness of the street grid and street car lines. Previously, the street grid primarily facilitated travel by pedestrians,

horses and wagons, and streetcars. By 1938, streets had evolved into multi-modal environments that began to include automobiles and bus lines. Simultaneously, neighborhood land uses shifted to make parking spaces available on the street, in vacant lots, and in garages.

Local Small Business: The business districts acted as a locus for neighborhood activity by providing the goods and services local residents needed on a daily basis. Before the construction of regional shopping centers, these local business districts served city neighborhoods in a walkable environment. The commercial land uses of the business districts had a mutually beneficial relationship with surrounding residential land uses.

Land Use Transition to Parking Facilities: This study represents the first data collection effort that quantified the land use shift in neighborhoods from active uses to parking facilities. Due to the increase in automobile ownership, this transit mode shift caused new land use consumption patterns.²²⁰ Due to building demolitions, vacant lots became more available in local business districts and served the increased need for parking.

Multi-Modal Traffic Volumes: The business districts generated significant increases in activity from pedestrians, cars, street cars, and buses. This created dynamic local economies that provided easy access for lower-income and working-class families to goods, services, and jobs. This constant vibrancy of traffic flows was a fuel for economic and socio-cultural activity.

²²⁰ By 1941, motor vehicle registrations in Milwaukee County totaled 215,624. This represented one car for every 1 in 4 people in the County. This rapid adoption of the automobile occurred over an approximately 30-year period from 1912-1941. State Highway Commission of Wisconsin, "Origin-Destination Traffic Survey" (1946), 12.

Table 4.13: Parking Facilities in Research Study Area, 1938

	Local Business District										Central Business District	
	1	2	4	5	6	7	8	9	10	13		
Garages												
Locations	7	3	4	2	3	8	2	13	-	4		46
Parking Spaces	73	140	23	30	16	19	76	61	-	55		3,544
Vacant Lots												
Locations	6	8	4	2	1	8	2	7	2	2		163
Parking Spaces	179	78	262	35	10	26	25	61	425	70		8,638
Total												
Locations	13	11	8	4	4	16	4	20	2	6		209
Parking Spaces	252	218	285	65	26	45	101	122	425	125		12,180

Sources: Milwaukee Board of Public Land Commissioners, "Milwaukee On the Go!" (1938).

Table 4.14: Average Daily Multi-Modal Traffic Volumes in Research Study Area, 1938

	Local Business District										Central Business District	
	1	2	4	5	6	7	8	9	10	13		
Pedestrians												
Enter	559	452	592	597	680	467	898	1,187	534	452		681
Exit	575	468	550	602	666	457	919	1,232	530	461		620
Average	567	460	571	599	673	462	909	1,210	532	457		650
Cars												
Enter	1,786	1,917	809	1,667	1,233	1,170	3,634	2,390	1,904	2,185		2,742
Exit	1,731	1,951	793	1,648	1,252	1,128	3,617	2,334	1,819	2,140		2,602
Average	1,758	1,934	801	1,658	1,242	1,149	3,625	2,362	1,862	2,162		2,672
Street Cars & Buses												
Enter	86	755	564	473	612	760	1,018	1,028	561	859		3,153
Exit	79	755	569	476	562	781	1,010	1,027	560	837		3,139
Average	82	755	566	474	587	770	1,014	1,027	560	848		3,146

Note: Data collected on a weekday from 6AM-6PM.

Sources: Milwaukee Board of Public Land Commissioners, "Milwaukee On the Go!" (1938).

Table 4.15: Summary of Land Use Mix in Research Study Area, 1938

<i>Daily Needs</i>	<i>Amenities</i>	<i>Residential</i>
Auto Repair	Bookstore	Single-Family
Auto Supplies	Bowling Alley	Duplex
Bakery	Candy Store	Second-Floor Flats
Bank	Cigar Shop	Apartments
Barbershop	Department Store	
Beauty Shop	Dress Shop	
Butcher (Meat & Fish)	Florist	
Church & Synagogue (Religious)	Furniture	
Dentist	Furs	
Doctor	Jeweler	
Drugstore	Night Club	
Dry Goods	Photographer	
Electrician	Pool Hall	
Filling Station	Restaurant	
Funeral Home	Theater	
Fruit Market	Upholstery	
Grocery Store		
Hardware Store		
Liquor Store		
Optician		
Plumber		
Public & Parochial Schools		
Shoe Store & Cobblers		
Tailor		
Tavern		
Used Car Lot		

Sources: Milwaukee Board of Public Land Commissioners, "Milwaukee On the Go!" (1938).

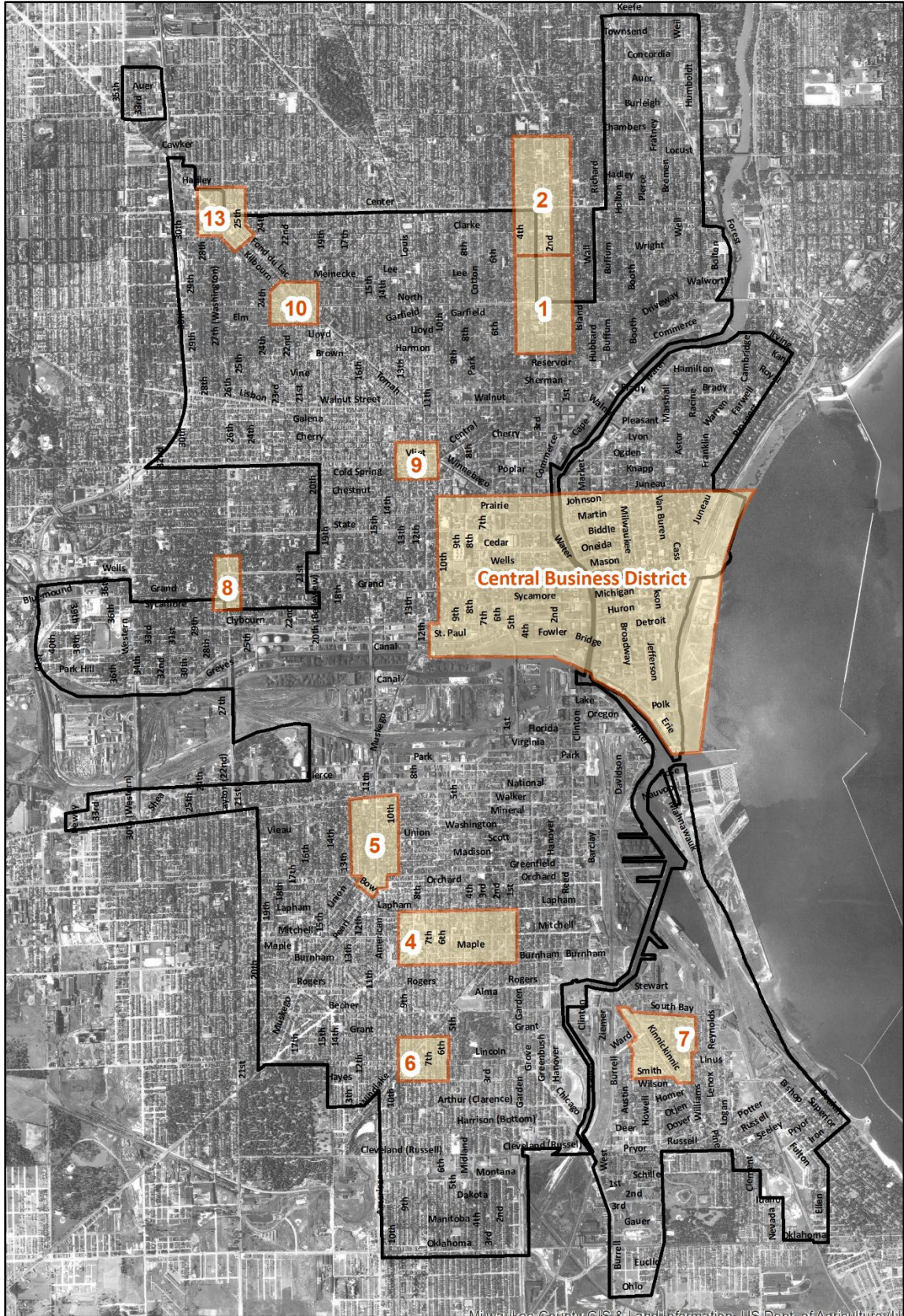


Figure 4.17: Central Business District & Local Business Districts in Research Study Area, 1938

B.iii. Impact of Land Use Regulations on Neighborhood Property Markets, 1920-1941

The codification of the initial 1920 zoning regulations would have unforeseen consequences that Milwaukee's urban reformers had not anticipated. Transitioning the city from a land use environment that had developed organically to one that was strictly regulated would ultimately cause significant shifts in neighborhood property markets, particularly in the central business district. However, the consequences were not immediately understood, nor did the City comprehend that inappropriately regulating the markets could be harmful. It would take over 15 years before the City began to quantify the impact to residential uses and the small business community.

Because Milwaukee's built environment originally developed in direct response to the needs of residents and businesses, mixed-used neighborhoods became the norm in the inner core. When the 1920 zoning code was instituted, City leadership conducted no impact analysis to anticipate potential outcomes – whether positive or negative. Because the zoning code only included four districts and the permitted uses within each were simultaneously limited and ambiguous, there was the potential for an almost extreme segregation of land uses. This became clear in the CBD's housing market. Of its 6,825 structures in 1910, 2,640 (or 38.6%) were for residential uses. The zoning code declared these uses nonconforming and not appropriate for the "Commercial and Light Manufacturing" district that designated the majority of the CBD. The City's regulatory action was – in a de facto sense – expulsive in nature because residential uses were no longer permitted downtown. As a catalyst, landlords were incentivized to disinvest in their properties because the market value of the land dramatically increased for potential commercial and industrial users while residential values decreased. This thus began a cycle of property abandonment, deterioration, and rent profiteering. The irony is twofold: 1) the City's actions encouraged the behavior it sought to eliminate, and 2) zoning as the proposed solution yielded negative distortions in the CBD property market. This highlights the complexities of the distributional effects of land use regulations in neighborhood property markets.

Table 4.16: Residential Uses Declared Non-Conforming due to Codification and Enforcement of 1920 Zoning Code in Milwaukee’s Central Business District

<i>Residential Use Type</i>	<i>Structures</i>	<i>Dwelling Units</i>
Single-Family	2,254	2,254
Boarding House	9	9*
Boarding House – Female	49	49*
Duplex	96	192
Flats	160	160*
Mixed-Use Commercial	56	56
Tenement	15	15*
Triplex	1	3
Total	2,640	2,738

*Notes: *For boarding houses, female boarding houses, flats, and tenements, the Sanborn Maps did not specify the number of dwelling units in each building. As a result, the total number of dwelling units is an undercount. The number is likely higher for the multi-tenanted buildings.*

Sources: Sanborn Maps for Milwaukee (1910). Milwaukee Bureau of Public Land Commissioners, “Milwaukee On The Go!” (1938). Milwaukee Board of Public Land Commissioners, “City of Milwaukee Preliminary Plan for Use Districts” (1920).

In 1936, the Milwaukee Board of Public Land Commissioners conducted a study, “Zoning: Non-Conforming Use Survey, City of Milwaukee,” that quantified the number and type of non-conforming business uses in the city’s “Residence” districts. In total, 3,441 non-conforming business uses were identified across the city’s 27 wards. Of those, 2,495 were located in single-family homes and rented flats or apartments. The report states, “All of these buildings existed at the time the city was zoned in 1920 and are, therefore, legal non-conforming uses.”²²¹ It further states, however, that, “...it is safe to assume that a major share of the...business uses are illegal and are a by-product of the depression.”²²² As a note with these conclusions, it is relevant to state that home-based businesses are a good proxy indicator for households facing financial constraints: that is, to earn additional income but reduce business overhead, members of the household run the business from their home – typically providing essential goods and services to their local neighborhood. As a result, this dataset of non-conforming

²²¹ Board of Public Land Commissioners (BPLC), “Zoning: Non-Conforming Use Survey” (1936), 2.

²²² BPLC (1936), 1.

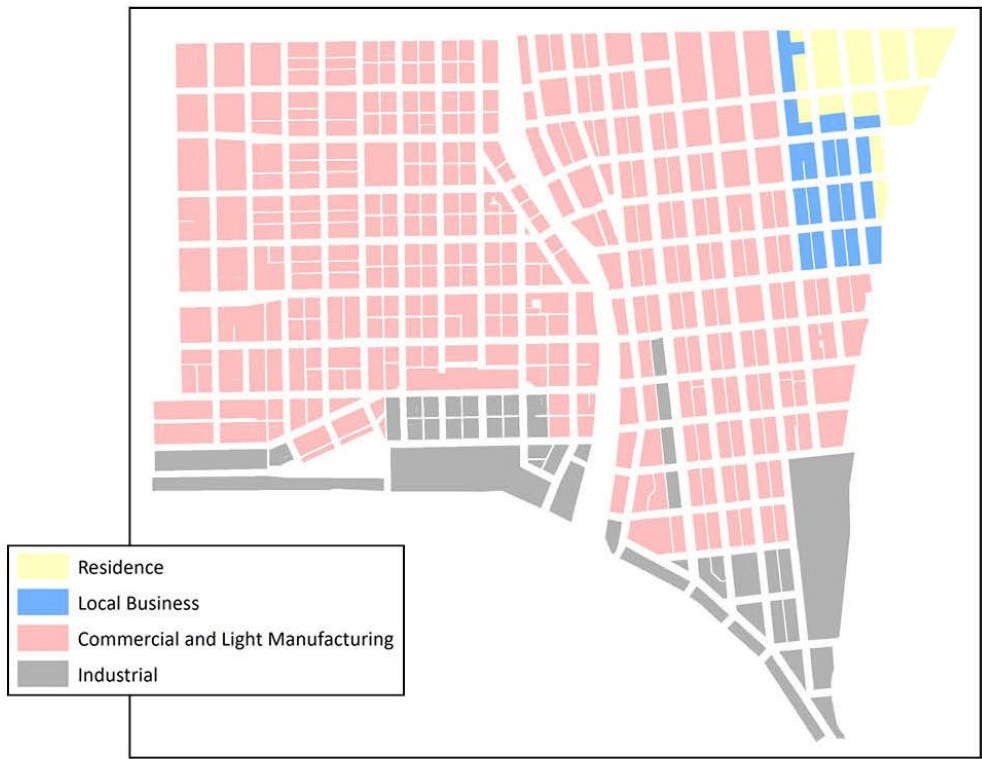
business uses can potentially help to assess patterns of financial struggle among households in city neighborhoods.

Though zoning was seen as a solution to improve deteriorated neighborhood conditions, its indirect consequences damaged the city's economy. By creating homogenous land use districts through regulatory action, City leadership deprived the neighborhoods of economic diversity that was driven by land use diversity. The housing market suffered property deterioration and abandonment of 2,738 dwelling units that were desperately needed during the Great Depression; and, the small business community suffered as their home-based businesses were declared non-conforming. In a 1941 report, the Urban Land Institute criticized Milwaukee for its blunt use of zoning and expressed concerns about the deterioration of housing in the CBD. It regarded the zoning as "ineffective" and stated, "On the basis of this comparison it appears that Milwaukee's present zoning ordinance has zoned an excessive proportion of the total areas of the City for commercial and industrial purposes, and not enough for residential purposes."²²³

²²³ Hyder and Tobin, "Proposals for Downtown Milwaukee" (1941), 56, 60, 64.



SCHEMATIC MASSING MODEL - LAND USE (1910)



ZONING (1920)

Figure 4.18: Comparison of Land Use to Zoning in Milwaukee's Central Business District, 1910-1920

C. Racialized Milwaukee: The Concentration of the Black Community, 1940s

Due to the small size of Milwaukee's Black community, race-based decision making was less impactful until the city began to experience its own Second Great Migration beginning in the 1940s. Prior to that, Blacks in Milwaukee experienced discrimination and segregation, but their small numbers essentially created a dichotomous existence that was simultaneously seen and unseen by City leadership relegating the community to the sidelines. This had both positive and negative consequences. By the late 1940s, however, the race-based decision making was blatantly discriminatory.

As Black Milwaukee began to spatially coalesce in the central city north of Wisconsin Avenue in the 1910s, the community became more discernible and identifiable. Though Milwaukee did not experience blatant racialized politics at the time, discrimination and segregation was still present. Compared to other northern industrial cities, the First Great Migration in Milwaukee was relatively subdued; however, for White Milwaukeeans, it was noticeable. As a result, the first indicators of a racialized society emerged in the post-World War I years of the early 1920s. This is demonstrated by the frequently quoted 1924 Milwaukee Journal article declaring that Milwaukee's Real Estate Board was contemplating the delineation of a "Negro District" as a containment strategy.²²⁴

Though the First Great Migration is widely acknowledged in academic literature, the Second Great Migration occurred on a larger scale. Following World War II, Black Southerners migrated en masse into northern industrial cities; and, Milwaukee was no different. Often cited in housing reports from this period is an argument of the lack of preparedness of new migrants for city living. This was then linked by authorities to immoral behavior. Thus, not only was the Second Great Migration a large-scale economic event, it also developed strong social overtones in the northern cities receiving the migrants.

²²⁴ Milwaukee Journal, "Proposes City Negro District: Real Estate Board to Study Plans for Redistricting Blacks," 16 Sept. 1924.

The Chicago Defender published an op-ed, almost something akin to a community statement, in May 1925 with six points of guidance for Blacks moving northward. The article encouraged migrants to be ready for new circumstances upon their arrival in the North: be prepared to work hard, “try to forget the indignities heaped upon you south of the line,” move into a good neighborhood, wear proper and respectable attire, “try to get along with your white neighbor,” and “learn to conduct yourself quietly in public.”²²⁵

C.i. Socio-cultural Attributes of Little Harlem, 1940

As time progressed through the Great Depression and into World War II, Milwaukee’s Black community continued its growth in a generally northwesterly direction. What was generally regarded as the “Negro District” had grown from its original spatial character as a series of colonies in the 1910s into a defined concentration in the city center by 1939.²²⁶ Bounded by Juneau Avenue, Brown, 3rd, and 12th Streets, the community had grown substantially in the past 30 years and was preparing to do so into the Second Great Migration.

Whereas Black Milwaukee had historically been disparate throughout the city, its evolution into “Little Harlem” by the 1940s clearly showed signs of racial segregation and isolation – despite being located in some of the city’s densest, mixed-use neighborhoods. By this time, Black residents were spread between the Sixth and Tenth Wards, which effectively diluted their political strength and made it difficult for the community to exert its power over City decision making. Additionally, because the Black population count was still relatively small compared to Whites, there were not enough members of the community to build social and economic influence in the city.²²⁷ In 1945, the Milwaukee Human Rights Commission conducted a study to assess the ability of Blacks to access housing in various parts of the

²²⁵ The Chicago Defender, “When You Come North,” 30 May 1925, A12.

²²⁶ Schmitz, *Milwaukee and its Black Community* (1979), 5-8.

²²⁷ Schmitz (1979), 6, 8.

city. In referencing records from the Milwaukee County Register of Deeds Office, the research concluded that 90 percent of plats in the city were controlled by racially restrictive covenants that excluded Blacks from purchasing the property. These exclusions effectively confined Black Milwaukee to Little Harlem for the sale or rent of property.²²⁸

Housing conditions specifically in the Sixth Ward had been poor and deteriorated for an extended period of time – as early as the 1910s. By the mid-1930s, the conditions had acutely worsened. The ward's neighborhoods were originally home to German Milwaukee as the city grew in the 1860s to 1870s, then to the city's Jewish community from the 1880s to the 1910s, then to the Black community moving forward. This thus meaning that the ward's housing stock was the oldest in the city and was on its third cycle of filtration with the Black community.²²⁹ The ward had become a gateway district for new immigrants; what the housing lacked in quality and hygiene, it compensated for in cheap rents.

As previously discussed, the continuous commercial and industrial development of Milwaukee's downtown business district pushed Blacks north and west out of the Bad Lands and Little Africa. This especially became true after the 1920 zoning code was codified by city leadership. Not only was the downtown business district designated as the Commercial and Light Manufacturing zoning district, so too was the majority of the Sixth Ward. This regulatory control shifted the economics of the neighborhood housing market in favor of landlords for two reasons: 1) rent profiteering was rampant because of increased land values due to speculation, and 2) landlords possessed no incentive to maintain the housing to a good standard because it was likely to transition to a more valuable commercial use in the future.²³⁰ Due to the age of the houses, the neighborhoods reflected a version of

²²⁸ Schmitz (1979), 8.

²²⁹ Schmitz (1979), 10-11.

²³⁰ Schmitz (1979), 13-14.

Milwaukee that was almost 60 years old by the 1940s. Originally built for the German community, the homes were fairly large and spaced less than five feet apart. The exteriors had not been maintained and suffered from peeling paint and broken windows. The interior of the homes – the majority of which were built for one family – typically accommodated multiple families, lacked indoor plumbing and central heating, suffered from crumbling walls, and frequently had standing water in the basements.²³¹

C.ii. Emerging Research Focus on “The Negro Community,” 1942, 1946

The contemporary research record about Milwaukee’s original ethnic and racial enclaves is fairly robust with a collection of secondary research articles and books detailing city neighborhoods. However, this research did not emerge until the second half of the 20th century. Save for George La Piana’s 1915 report on Italian Milwaukee, there exist few primary source documents that represent cohesive studies of specific communities. This changed in the 1940s when the focus of leadership and the broader community shifted towards Black Milwaukee.

The historical record is clear that Black Milwaukee became concentrated in the inner core neighborhoods west of the Milwaukee River by the 1940s. The community had already been subject to discrimination and prejudice throughout the city’s history, but it became clearly confined to a geographic area by this time. At the forefront of leadership’s thinking was the need to address Black Milwaukee as a whole: the Negro question, the Negro problem, the Negro community.²³² Under the auspices of deteriorated conditions in the neighborhood and what outside observers deemed questionably immoral behavior, the community became a research topic. Thomas Imse’s 1942 Master’s thesis and the Citizens’ Governmental Research Bureau’s 1946 report are the two first primary source documents that represent this new avenue of studies. While independently conducted of one another,

²³¹ Schmitz (1979), 14-15.

²³² Imse, “The Negro Community in Milwaukee” (1942), 1. Vick, “From Walnut Street to No Street” (1993), 96.

the two studies presented a fairly encompassing portrait of Black Milwaukee. Each documented the history of the community, housing conditions, public health statistics and concerns, religious activities, recreational and cultural activities, educational attainment, employment practices, and crime statistics.

Imse's 1942 thesis is arguably one of the seminal studies about Black Milwaukee. It should not necessarily be lauded for its impartial perspective or unbiased assessment, but for the important insight it lends to understanding the public opinions of Black Milwaukee. The study's purpose was to provide an overview of the conditions of Black Milwaukee and "[give] background material to any individual or group trying to do work among the Negroes of Milwaukee, and in focusing attention on the problems of Negro life most in need of a solution and possible lines of solution."²³³ Imse focuses on housing as a core component or determinant in the broader health of the Black community and then presciently notes the interrelatedness of housing to employment, education, and social acceptance of Blacks. The report is predominantly a narrative about the community supported by data from the 1934 Milwaukee Real Property Survey and the 1940 Decennial Census Housing Survey.

Conversely, the Citizens' Governmental Research Bureau (CGRB) presented a statistical account of Black Milwaukee. Written at the request of the Council of Social Agencies, the report was meant to address the availability of social and leisure time activities in the Sixth Ward. When published, it ultimately was far broader in scope and presented a detailed portrait of Black neighborhoods. The report should be regarded as noteworthy in its own right because the authors were the first to publicly discuss the role of segregation, deteriorated housing conditions, and discriminatory employment practices in two forms of confinement: 1) limiting Black Milwaukee to a lower socio-economic status within the city's power hierarchy, and 2) geographically limiting the community to a specific area in the inner core.

²³³ Imse (1942), 1.

The studies provide an important geographic perspective on the spatial concentration of Black Milwaukee. For his study, Imse delineated a “survey district” bounded by 3rd to 12th Streets and Juneau Avenue to Brown Street. In explaining this decision, he notes that the majority of Black Milwaukee was concentrated “in their segregated section” in low quality housing with few other members of the community outside this centralized area.²³⁴ This geography is also reflected in the CGRB’s study as “the Negro Community.” Later, Schmitz (1979) would identify sources that labelled this area as “the Negro District” and “Little Harlem.” Additionally, the CGRB delineated the Northern Near-Downtown District as a geography that more broadly represented Milwaukee’s greatest concentration of blighted properties. This area was bounded by 3rd to 12th Streets and Kilbourn Avenue to Wright Street.²³⁵ When considering these geographies collectively, it is clear that Black Milwaukee was wholly contained within the city’s blight district by the mid-1940s.

A hallmark of Black Milwaukee is as an academic case study in the invasion-succession cycle of inner core neighborhoods. Originally, Milwaukee’s inner core neighborhoods west of the Milwaukee River were part of Kilbourntown and what became known as the city’s “Gold Coast” in the German community. By the 1870s, the neighborhoods began to transition from German to Jewish; and, by the 1890s, Black immigrants began mixing into the Jewish areas.²³⁶ These three cycles of population migrations and housing filtration were largely driven by steady immigration that forced a natural churn of people through the neighborhoods. However, during and after World War I, Federal limitations and quotas on new foreign immigrants significantly decreased the steady supply of new city residents.²³⁷ As a result, by the time Black Milwaukee was established in the inner core in the 1920s, the neighborhood

²³⁴ Imse (1942), 2.

²³⁵ Citizens’ Governmental Research Bureau (CGRB), “Milwaukee’s Negro Community” (1946), 1-2.

²³⁶ Imse (1942), 8-9.

²³⁷ Imse (1942), 9, 46.

cycle had ceased to function effectively thereby establishing *de facto* ethnic and racial geographies that began to develop permanence.

Both studies recognized the central role housing played in the challenges facing Black Milwaukee. Because the authors identified the interrelatedness between housing and the Black community's economic mobility, they made clear that the overall condition of Black Milwaukee could improve only when the housing improved. Imse cited data from the 1934 Milwaukee Real Property Survey and the 1940 Decennial Census Housing Survey related to housing tenure, household density and crowding, public health, age of the structures, condition of the structures, and rent profiteering.²³⁸ In the historical record, the CGRB study is noteworthy because it is the first report to present a detailed discussion about segregation in Milwaukee and how the concentration of its non-White population compared to other cities. Despite Milwaukee's Black community representing a small fraction of the city's overall population, it was heavily concentrated in the Little Harlem area. As a result, by the 1940s, the degree of segregation in Milwaukee ranked the city close to similar rates in Birmingham (AL), Atlanta (GA), and Washington, D.C.²³⁹ The study discusses the role of racially restrictive covenants and "gentlemen's agreements" as tools that facilitated this segregation. Citing research conducted by George Brawley, a review of plats filed with the Register of Deeds Office of Milwaukee County revealed that 90% of new subdivisions platted from 1910 to the 1940s showed a covenant prohibiting the sale of the property to Blacks. Additionally, Brawley's research showed that "gentlemen's agreements" restricted the sale or renting of property to Blacks to the Little Harlem area bounded by 3rd to 12th Streets and Juneau to Brown Avenues.²⁴⁰ In focusing on this segregation, the CGRB study connects challenges in Black

²³⁸ Imse (1942), 11-16, 21.

²³⁹ CGRB (1946), 17.

²⁴⁰ CGRB (1946), 17-18.

Milwaukee to overcrowding in housing units, age of residential structures, deteriorated housing conditions, and the mixing of incompatible land uses in proximity to one another.²⁴¹

These studies represent the first two instances of the detailed, quantitative measurement of a specific community in Milwaukee. Prior to the 1940s, no public or private research effort had dedicated the resources to understanding a specific group of people or enclave. While the studies used a multitude of data sources, limitations were prevalent. At the time, Imse noted that Census data for the Black community was prone to error and not necessarily accurate. He explained this with three reasons: 1) White Census enumerators were concerned about approaching Black homes directly and instead consulted neighbors or nearby small businesses about specific households, 2) the underreporting of population by households because residents were concerned about consequences from the City Building Inspector if the office learned of overcrowding in a dwelling unit, and 3) newly arrived immigrants from the South – typically Black sharecroppers – were concerned their former landlords would find them to repay previous debts.²⁴² In retrospect, a contemporary challenge in confirming data sources and original reporting – specifically with the CGRB study – is references to multiple housing, public health, and educational datasets from the 1930s that are no longer readily accessible. While these studies may have been placed in an archives collection, their exact whereabouts are currently unknown. These limitations represent a broader challenge in locating primary data sources. While it is known that the City of Milwaukee maintained meticulous records and databases beginning in the 1910s, the precise location of the data at present is not necessarily known. As a result, other sources that referenced the data can be used as a reasonable proxy to inform analyses.

²⁴¹ CGRB (1946), 18, 24-28.

²⁴² Imse (1942), 5-6.

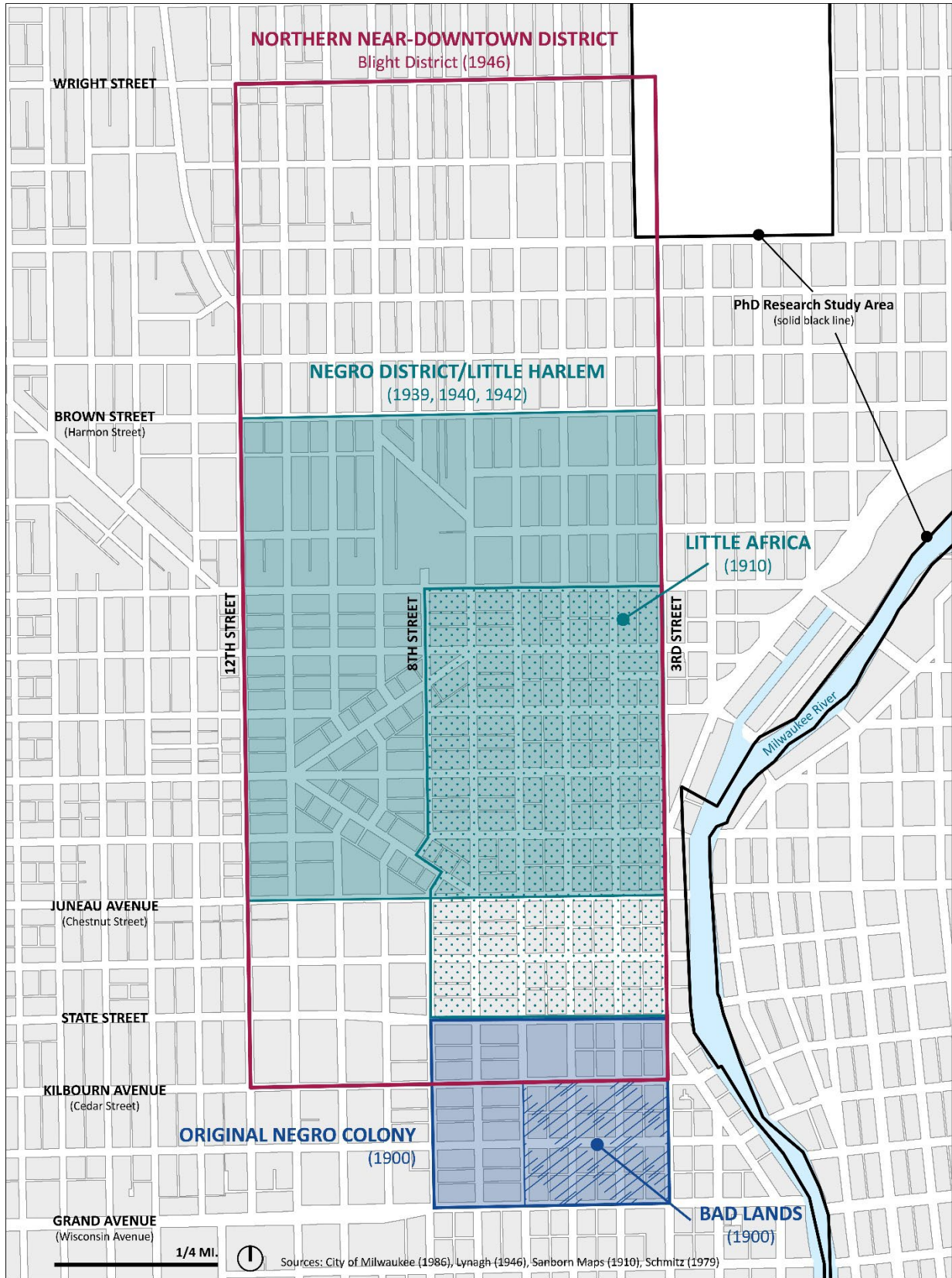


Figure 4.19: Geographic Evolution of Black Milwaukee, 1900-1946

C.iii. Walnut Street as Milwaukee's Chocolate Boulevard, early 1950s

As Milwaukee began to rapidly racialize during the Second Great Migration, the once dynamically mixed overlay of ethnic and racial enclaves from the 1910s became more starkly divided. The residential landscape of the city had been segregated by class, ethnicity, and race well into the late 1930s and early 1940s; but, the continuous arrival of Black migrants from the South changed the racial dynamics of the city. A comment from Kenny and Hubka (2009) is appropriate in considering this shift: "The clustering almost guaranteed exclusive patterns of association as far as personal contacts and influences were concerned. The city's class 'clusters' may have provided both the basis for future levels of segregation and the spark that would ignite racial hyper-segregation, particularly as suburbanization began."²⁴³ While heightened discrimination and clear segregation resulted, the autonomy and strength of Black Milwaukee was quickly reflected in the development of Bronzeville and Walnut Street.

Bronzeville and Walnut Street by the early 1950s were the physical embodiment of Black Milwaukee's solidarity and the autonomous economy developed by community members. This local economy was initially driven by self-help strategies to improve the quality of life and economic prospects of members, but developed more broadly as White residents recognized the appeal of some small businesses.²⁴⁴ While Walnut Street had been a locus of the Jewish and Black communities dating from the early parts of the 20th century, the broader Bronzeville area represented the expanded scale of the Black community in particular.²⁴⁵ As a result, it is possible to understand Black Milwaukee with a greater degree of specificity because its spatial shifts are well documented.

²⁴³ Kenny and Hubka, "Surveying Milwaukee's Residential Landscapes" (2009), 237.

²⁴⁴ Dougherty, "African Americans, Civil Rights, and Race-Making in Milwaukee" (2009), 134-136. Vick, "From Walnut Street to No Street" (1993), 6.

²⁴⁵ Geenen, "Images of America: Milwaukee's Bronzeville" (2006), 7. Vick (1993), 12.

Despite the racialized lines of White and Black in Milwaukee, Walnut Street and the surrounding residential areas are a historic case study in a diverse, mutually beneficial society.²⁴⁶ Following the out-migration of Germans further west and north in the last quarter of the 19th century, the Jewish community established itself in the inner core neighborhoods west of the Milwaukee River. By the 1950s, these neighborhoods had developed as a mix of Russian Orthodox, Jewish Reformed, and Black residents. Known as Chocolate Boulevard, the Walnut Street Business District was the heart of this community.²⁴⁷ The local neighborhood economy had developed as a cooperative enterprise between the Jewish and Black communities. Through their efforts, their economy had become almost autonomous from the broader city.²⁴⁸ Because of the historical permanence of the business district along Walnut Street, the area served as the genesis of Milwaukee's "Black Metropolis," which became most discernible by the 1950s.²⁴⁹

To note, my dissertation research does not address the broader urban history conversation about Milwaukee's ghetto synthesis literature and the discussion about the proletarianization of the city's Black residents. Dougherty (2009) provides a summary of these arguments, themes, and the authors that have previously addressed this discussion. My dissertation research maintains its focus on the analysis of inner core housing submarkets.

²⁴⁶ Vick (1993), 27-34.

²⁴⁷ Geenen (2006), 11. Vick (1993), 6.

²⁴⁸ Geenen (2006), 8.

²⁴⁹ Vick (1993), 12.



AERIAL PHOTO (1950-1951)



SCHEMATIC MASSING MODEL (1910)

Figure 4.20: Visualization of the Walnut Street Business District, 1910, 1950-1951

D. De-densification: Adaptation of Milwaukee's Urban Redevelopment Efforts

The densified and industrialized city that many in Milwaukee had been accustomed to since the 1910s began a shift – demographically, economically, and spatially – by the mid- to late-1930s. Multiple decades of public policy, the Great Depression, and the onset of World War II in the early 1940s all contributed to the emergence of new patterns in the city. City leadership struggled through a period of intransigence and obstructionism that failed to meet the needs of residents with respect to affordable housing and blight control; Milwaukee began to compete in the larger metropolitan market as its own decentralization strategy pushed residents and economic activity into the surrounding suburbs; and, urban redevelopment considerations – which would serve as the precursor to urban renewal – were contemplated as possible solutions to deteriorated neighborhood conditions. This transition period foreshadowed the urban challenges that would materialize in the 1950s and proved to catalyze impactful government intervention in neighborhood property markets.

D.i. Appearance of the Metropolitan Housing Market, 1936-1946

Through the late 1930s into the 1940s, a noted spatial shift occurred in the city of Milwaukee's housing market that drew focus to the larger metropolitan economy. Decentralization as public policy for City leadership had been ongoing for almost 20 years. Data began to indicate that it was working – particularly on the city's rural periphery; but, it also demonstrated the unintended consequence of losing economic activity and housing market participants to surrounding suburban communities. By the mid-1940s, Milwaukee's previously contained economy had broken free of the municipal boundary and was driving a new migratory and economic pattern into the suburbs.

D.i.a. U.S. Census Housing Survey, 1940

Due to the effects of the Great Depression and the resulting damage in the United States' housing market, the Federal government was compelled to respond. However, since the inception of the Census, no Federal agency had undertaken a cohesive and uniform data gathering effort to quantify

housing across the entirety of America's communities. To fill the void in data, the U.S. Congress authorized a national census of housing to be completed in conjunction with the Sixteenth Decennial Census (1940).²⁵⁰ This effort was historically significant for two reasons: 1) it marked the first time the Federal government collected data about and mapped housing submarkets – especially those in cities, and 2) it was the first time the Census used tracts and blocks to collate and publish data. The 1940 Census of Housing – when used in conjunction with the HOLC surveys and maps – provides Milwaukee's first catalogue of housing submarkets that relies on quantitative data analysis and qualitative field surveys.

Housing data had previously been reported at the ward level for Milwaukee with general statistics, typically recording the number of dwelling units and the tenure of residents. The 1940 Census of Housing conversely created a detailed block-level portrait. The statistics reported the number of residential structures and the number of dwelling units, in addition to dwelling unit characteristics including tenure of occupants, age of residential structure, occupancy by non-White occupants, persons per room, condition of dwelling unit and need of repair, mortgage status for owner-occupied dwelling units, and average monthly rent for tenant occupied dwelling units. In addition to the data, the Census established the Milwaukee Metropolitan District as a unit of measure for their data collection efforts. This represents the first time that a government agency acknowledged a larger metropolitan region and economy surrounding the city of Milwaukee. The historical significance of the District is its relationship to the decentralization of Milwaukee's commercial economy and housing market. This District represents an economic milestone indicating that the city's economy was no longer fully contained within its municipal boundary and economic activity had leaked from its borders at sufficient quantities to establish a metropolitan economy. For my dissertation research, the Census of Housing marks a point

²⁵⁰ United States Census Bureau, "Decennial Census Official Publications – 1940 Census of Housing" (2021).

at which block-level data can start to be assessed for neighborhood geographies and highlights the influence of the city's surrounding metropolitan communities.

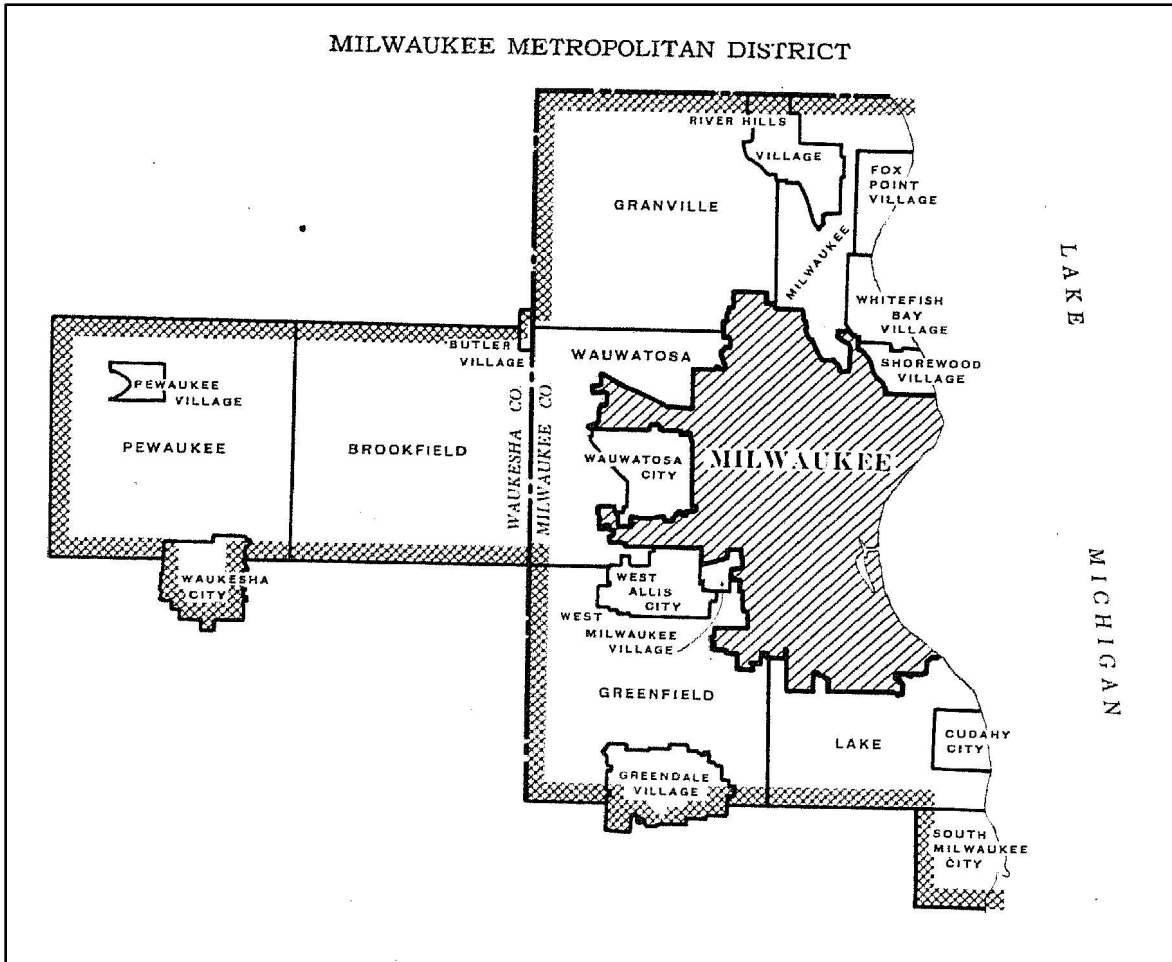


Figure 4.21: Milwaukee Metropolitan District as defined in the 1940 Decennial Census²⁵¹
 (Available in the Public Domain via the U.S. Commerce Department)

D.i.b. Assessment of Vacant Lands for Development, 1936, 1946

Despite being in the throes of the Great Depression and World War II eras, the City maintained its focus on housing development. Attempting to understand its available land capacity for new construction, the City produced two studies: “City of Milwaukee: Vacant Lot Survey” (1936) and “Residential Development in the Unincorporated Areas of Milwaukee County, Wisconsin” (1946). Though the studies

²⁵¹ United States, Department of Commerce, Bureau of the Census, “1940 Census of Population,” Volume 2, Part 7, Chapter 6, 692.

were separated by a decade, the city's housing market largely remained stagnant during that time due to poor economic conditions from the depression and wartime construction limitations. As a result, the studies provide perspective on the contrasts between the new construction market on the periphery of the city and the informal markets of the inner city.

The "Vacant Lot Survey" (1936) assessed the available vacant land in the city for future construction. It adopted a complete perspective of surveying residential, commercial, and industrial lands across the city focusing on the amount of vacant land, the ability of land to accommodate new residents, the need to further subdivide land, and the potential need for future annexation.²⁵²

The survey generally concluded that the city possessed sufficient vacant land – specifically residential – to accommodate new construction and growth. Of the three residential zoning districts, "Residence B" and "Residence C" had relatively high vacancy rates of 20.97% and 37.90%, respectively, indicating that there was an ample supply of new subdivisions to accommodate city residents.²⁵³ Further, the survey concludes, "It can, therefore, be safely assumed that there is an ample number of vacant lots available for development in each of the variously zoned use districts. Especially so, since existing development in each of the districts conforms only in a small degree to the use and capacity permitted under the ordinance."²⁵⁴ Note, however, the change in tone in this concluding statement, which is also present throughout the survey: improved lots with structures are underdeveloped to their *capacity*. Whereas the City previously focused on land use regulations that decentralized neighborhoods through zoning and platting, this survey indicates an emerging focus or concern on fully developing lots to their

²⁵² Bureau of Public Land Commissioners (BPLC), "City of Milwaukee: Vacant Lot Survey" (1936), 1.

²⁵³ BPLC (1936), 2, 3.

²⁵⁴ BPLC (1936), 3.

maximum capacity allowed by regulations. This adds a new dimension to how the City considered building density on lots.

The survey gives additional consideration to the need for future annexation of land into the city and the subdivision of rural lands for residential development. Given the availability of vacant lots within the city's municipal boundary, the survey states, "...there is a sufficient number of building sites within the city limits and that further annexations for this purpose are unnecessary."²⁵⁵ When considering the total number of vacant lots available for residential use, the survey calculated that – with an average of four people per family – the lots could accommodate an additional 200,000 people. At the city's historic annualized growth rate of 9,200 people per year since 1880, it would require 21.7 years to absorb the supply of lots available in 1936.²⁵⁶ However, the survey goes on to give considerations for the need for future annexation of land. It states that the City should not abandon annexation activity, but consider how to appropriately manage land available at its periphery. Whether the rural land would be subdivided into larger acre or half-acre parcels or subdivided per platting regulations for "Residence" zoning districts, the survey recommends that the City monitor the need for future land at the periphery.²⁵⁷

The survey marks a unique moment for City leaders in their assessment of Milwaukee's housing market. Previously, the City adopted a more hands-off approach willing to only intervene in housing market activity through zoning and platting regulations. The "Vacant Lot Survey" demonstrates a shift in strategy and the City's entrance into a dual role of managing regulatory and market controls. The City's considerations for future development and its ability to make additional land available for subdivisions

²⁵⁵ BPLC (1936), 3.

²⁵⁶ BPLC (1936), 3.

²⁵⁷ BPLC (1936), 3, 4.

could have a material impact on housing markets by shifting the supply and demand dynamic in the city. If the City chose to make additional land available at the periphery through annexation, consumer demand would shift away from the city’s inner core neighborhoods to outlying subdivisions. This thus demonstrates an additional layer of nuance between the city’s formal and informal housing markets.

Table 4.17: Vacant Lots and Acreage by Zoning District, 1936

Zoning District	Total Lots	Unplatted Acreage
<i>Residence - Total</i>	22,888	450
<i>B Residence</i>	595	27
<i>C Residence</i>	1,161	124
<i>D Residence</i>	21,132	299
<i>Local Business</i>	5,803	- - -
<i>Light Manufacturing</i>	1,243	37
Total	29,934	487

Source: Excerpted from Milwaukee Board of Public Land Commissioners, “Vacant Lot Survey” (1936), 2.

Table 4.18: Occupied and Vacant Lots Comparison, 1936

Zoning District	Occupied Lots	Vacant Lots	Total Lots	Perc. Occupied	Perc. Vacant
<i>Residence - Total</i>	66,619	22,888	89,507	74.43%	25.57%
<i>B Residence</i>	2,242	595	2,837	79.03%	20.97%
<i>C Residence</i>	29,755	1,161	30,916	96.24%	3.76%
<i>D Residence</i>	34,622	21,132	55,754	62.10%	37.90%
<i>Local Business</i>	14,329	5,803	20,132	71.18%	28.82%
<i>Light Manufacturing</i>	5,913	1,243	7,156	82.63%	17.37%
Total	86,861	29,934	116,795	74.37%	25.63%

Source: Excerpted from Milwaukee Board of Public Land Commissioners, “Vacant Lot Survey” (1936), 2.

Though the survey notes the substantial supply of new lots for residential development, the map of this availability shows a stark spatial contrast. While the “Map of the City of Milwaukee: Vacant Property Available” shows few scattered vacant lots throughout the city’s previously developed neighborhoods, the concentration of available vacant lots is clearly shown on the periphery of the city. Though the survey concludes that there were sufficient lots for future residential development, those lots were not available on an equitable basis for all city residents. Due to racially restrictive covenants, Black renters and home buyers were excluded from participating in new home construction at the periphery of the

city. Additionally, the cost of a new home could be prohibitive for lower-income and working-class White families, thus limiting the new subdivisions to only those who could afford them. This created disparities in the city's housing markets. New subdivisions were highly regarded but exclusive to only White families who could afford the housing, while the informal housing market of existing neighborhoods was the primary means of finding housing for the White working class and Black households.

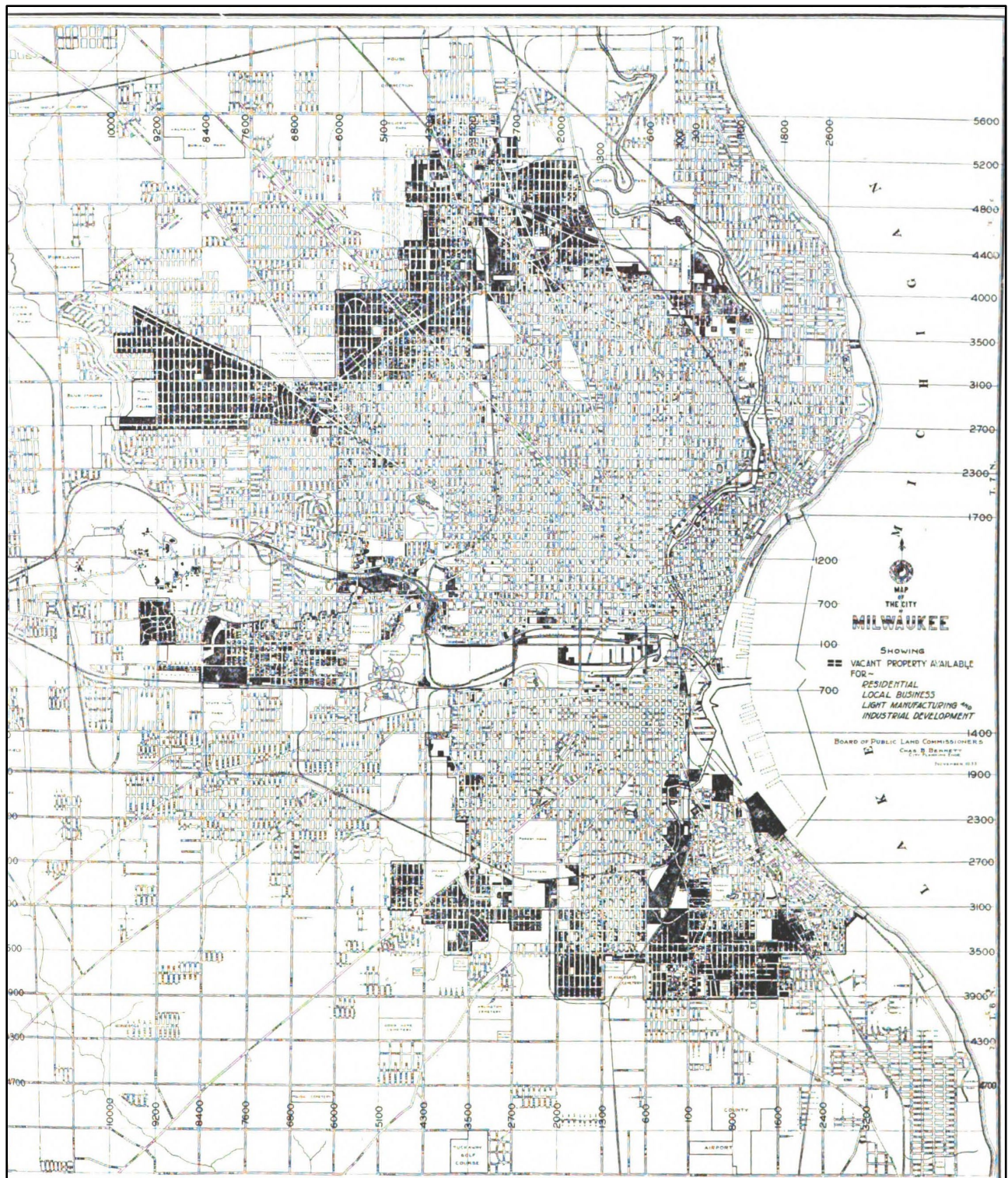


Figure 4.22: Map of Vacant Property (indicated in black) Available for Development, 1936²⁵⁸
 (Available in the Public Domain via HathiTrust and Harvard University)

²⁵⁸ BPLC (1936), 5.

Where the “Vacant Lot Survey” was a supply-side analysis of available lots for future construction, the “Residential Development in Unincorporated Areas of Milwaukee County” (1946) was a consumer preferences survey to understand the needs and desires of homebuyers. Both studies were conducted by governmental agencies, but they examined two, separate dynamics in the city’s property markets. Development in the county’s unincorporated areas by 1946 was relatively similar to historical patterns: continued platting and development of single-family subdivisions for homebuyers. However, the demand profile had shifted; after almost 20 years of poor market activity due to the Great Depression and World War II, homebuyers’ preferences had changed.

The change in consumer preferences by 1946 demonstrated a market shift away from traditional development patterns largely driven by real estate developers to an emerging paradigm dictated by homebuyers. The greater Milwaukee area saw a large volume of lot subdivisions in the 1925-1930 period resulting from real estate speculation. After the U.S. economy stalled in 1929, a significant portion of those lots stood vacant well into the 1940s. In that 20-year interval, the housing submarkets on the periphery of the city changed and the real estate community sought to avoid its previous mistakes.²⁵⁹ The 1946 study results were tabulated from questionnaires distributed in Milwaukee County schools, particularly those on the periphery of the city in rural areas. Of 12,000 questionnaires distributed, 4,000 were returned.²⁶⁰

The 1946 study results show that quality of life factors were driving housing submarket development at the urban periphery, while economic considerations were subordinate. The majority of respondents indicated that they wanted a healthier environment for their family, larger lot sizes, less congestion and

²⁵⁹ Milwaukee County Regional Planning Department (MCRPD), “Residential Development in the Unincorporated Areas of Milwaukee County” (1946), ii.

²⁶⁰ MCRPD (1946), ii, 6.

density, and access to amenities.²⁶¹ The economic considerations of lower taxes and low-cost land were not primary drivers for their decision making.²⁶² Interestingly, the results showed that congestion and blight remained at the forefront of public consciousness about urban issues. The study suggests guarding against these ills by ensuring appropriate lot subdivisions that provide ample space for housing, further advancing the argument in favor of decentralization.²⁶³ The results also mark an important moment in recognizing the emergence of homebuyers' demand for curvilinear streets in subdivisions and an avoidance of the traditional rectilinear grid structure. The study concludes with a striking summation of consumer demands for housing:

The store [sic] told by the foregoing paragraphs is, as outlined above, that the average person who moves into unincorporated parts of Milwaukee County seeks to escape certain disadvantages of the city – small lots, dirt, congestion and so on – and at the same time to take with him the services to which he has been accustomed, such as shopping centers within walking distance, schools close to the home, good public transportation, and other comparable items. In short, the average individual who is city-employed but who lives in the rural areas of Milwaukee County wants a neighborhood something like the following. He wants an attractive subdivision, an equally attractive house set on a lot of approximately seventy-three feet in frontage. He wants to be far enough from industries so that the air he and his family breathe will be clean and his home will not be soot-ridden. He deems essential such services as public transportation, public sewer connections, ash and garbage collection, gas connections, streetlights, public water supply, and prefers not to do without sidewalks and to-the-door mail service. Food markets should be within easy walking distance of home as also should grade schools and drug stores. Within a mile and a half radius he wants beauty parlor, gas station, high school, church, park, and movies. Taverns, airports and places of employment need not be close to home. This community, he is sure, is more friendly than were his former urban communities. He prefers, therefore, to remain on his present site, or if he moves, certainly it will not be back into built-up areas – a determination evidently common to the many throughout the United States who have successfully escaped the present dissatisfactions of urban conditions of living.²⁶⁴

These studies offer a view into the shifting supply and demand dynamic of Milwaukee's formal housing market on the city's urban-rural boundary. Whereas housing development was previously dictated by real estate speculation, the late 1940s show it becoming more responsive to consumer demand. Homeowners began to exert more control over subdivision development through their buying power.

²⁶¹ MCRPD (1946), ii, xv, 12.

²⁶² MCRPD (1946), xv, 16.

²⁶³ MCRPD (1946), ii, 12.

²⁶⁴ MCRPD (1946), 20, 25.

This not only reflects a market shift in housing development, it also indicates the early emergence of a new spatial trend. While decentralization continued to be a consideration for urban policy, these housing studies show that the process was transitioning by the late 1940s into what would become suburbanization by the late 1960s and early 1970s. Thus, these reports serve a unique purpose as early indicators for changes in the city's expanding housing market into the rural parts of Milwaukee County and into the broader metropolitan area.

D.ii. Expansion of Blight Control Efforts

The Great Depression exposed blight as an emerging endemic problem in Milwaukee's inner core neighborhoods. The City's previous policies of zoning code enforcement and building demolitions had not been sufficient to address slum conditions; and, the regulatory actions caused unforeseen consequences in restricting housing supply and depriving neighborhood economies of a diversity of uses. As a result, the City began to shift its approach. Critical studies were undertaken of its demolitions policy, the conditions of inner core neighborhoods, and the identification of blighted areas. These represented cooperative efforts across multiple City departments to address the issue.

D.ii.a. Building Demolitions as a Form of Blight Control, 1928-1947

The depths of the Great Depression by 1933-1934 in Milwaukee caused the worst of the collapse of the city's housing market. Like the rest of the United States, Milwaukee was not immune to the effects of the Depression's damage. As a comparison, from 1910 to 1929, 53,291 housing units were delivered in the city of Milwaukee averaging 2,664 per year. However, from 1930-1937 during the worst of the Great Depression's conditions, only 5,179 housing units were delivered averaging 647 per year.²⁶⁵ In a 1942 City Inspector of Buildings Report, City housing data indicated that from 1930-1939 (inclusive) 6,632 housing units were built while the city's population increased by 11,309 people.²⁶⁶ By 1937,

²⁶⁵ Gurda, "Housing and Homeownership" (1938), 1.

²⁶⁶ Gurda (1942), 7.

however, there were indicators coming from the construction industry and slight increases in housing deliveries that suggested an upswing in the economy may have begun.²⁶⁷

These initial indicators presented an opportunity for the City to re-assess its housing stock and understand the supply and demand dynamics of what dwelling units were available to workers and their families. The initial statistics showed that the Great Depression had substantially cut off new housing construction and that the city was far below projections for meeting existing and future demand. Further, the financial condition of the average Milwaukee family had deteriorated and there was an increased need for low-cost housing.²⁶⁸ Property owners and average Milwaukee families began to resort to buildings that had been altered to accommodate an increased number of dwelling units, which immediately began to create overcrowded conditions. For Milwaukee families most at risk, they could only afford \$7-12 of rent per month.²⁶⁹ These challenges resulted in the City's Inspector of Buildings, Leon Gurda, to issue the following warning:

At this time we sound the warning that the present housing conditions in buildings over 40 years old and the type of housing which is being provided in much buildings which are being altered, approaches the type of housing which was found in the old tenements, and in many instances below the old tenement standard, except for better sanitary facilities. We cannot expect zoning to be a restraining agency in this trend under the present economies.²⁷⁰

To further understand these trends, Milwaukee's Office of Inspector of Buildings built models to understand the city's "actual deficiency of housing units" (i.e., housing shortage) over multiple time periods. During the Great Depression years from 1930-1937, the models calculated a deficiency of 12,686 housing units based on population changes, housing constructed, and housing demolished. When the model was expanded to calculate the longitudinal deficiency trend from 1910-1937, calculations showed a range of deficiency of 19,273-21,585 units based on household creation data from

²⁶⁷ Gurda, "Annual Review of Building Activities in Milwaukee, Wisconsin, for 1936" (1937), 1.

²⁶⁸ Gurda (1937), 2. Gurda (1938), 11. Gurda (1942), 8.

²⁶⁹ Gurda (1937), 3.

²⁷⁰ Gurda (1937), 3.

population changes and new marriages.²⁷¹ Further, the model notes indicated that the City was preparing over the next five years (i.e., 1938-1942, inclusive) to demolish an additional 2,125 dwelling units that were unfit for habitation and were considering action on an additional 4,800 dwelling units that were considered substandard.²⁷² These demolitions would have undoubtedly further constrained the housing supply and pushed the housing unit deficiency higher.

The housing models acknowledged that population increases – primarily from foreign-born immigrants – drove housing demand in Milwaukee in the 1910s and 1920s. However, with immigration quota laws, it was anticipated that the demographic group of foreign-born immigrants would be significantly decreased as a result of Federal legislation. Thus, housing demand would shift; and, the housing models anticipated some household creation through annexation and natural increase.²⁷³ At the time, the data appeared to indicate that there would be a slowdown in the natural churn of Milwaukee’s housing submarkets, as there would be fewer newly-arrived immigrants to stimulate the intracity population migrations of groups from one housing submarket to the next.

In 1928, the City of Milwaukee began what was regarded as “a comprehensive program of demolishing worthless buildings.”²⁷⁴ By 1938, the City’s Office of Inspector of Buildings conducted a 10-year review of housing activities at the request of the Common Council due to increasing concerns about housing issues in the city.²⁷⁵ In an analysis of the totality of factors, the Inspector of Buildings made the realization that financial hardship caused by the Great Depression, the loss of housing units due to

²⁷¹ Gurda (1938), 2-5.

²⁷² Gurda (1938), 4.

²⁷³ Gurda (1938), 5.

²⁷⁴ Gurda (1937), 2.

²⁷⁵ Gurda (1938), 1.

demolitions, and shifts in population trends posed significant risks for Milwaukee's inner core neighborhoods. As a result, the Office issued a change in the demolitions policy:

[D]ue to the influx of defense workers, it would be unwise to continue the demolition of substandard housing because of the existing housing deficiencies, and the curtailment of the construction of new housing. It is our opinion that during this year [1942] greater restrictions will be imposed upon the construction industry in the construction of defense housing, due to the national defense program.²⁷⁶

These studies of building demolitions and the broader conditions in Milwaukee's neighborhoods highlight an important observation made by City staff. The focus on slum conditions and blight – while well-intentioned – had become a myopic City endeavor by the 1930s. Because the demolitions policy was accompanied by no other solutions or programs, the City did not possess a comprehensive housing policy. This caused disparate impact in inner core neighborhoods for lower-income and working-class families who could not access housing further from the city's central areas – whether because of financial hardship or discrimination. Gurda remarked on this:

During the past 10 years, and to May 1st of this year [1938], we have destroyed by condemnation or otherwise 3,190 wretched and insanitary dwelling units. In the next few years in excess of 2,000 additional dwelling units will be destroyed. There need to be no two opinions as to what income group has occupied, or is occupying, this type of dwelling. The destruction of these filthy and unfit dwellings aggravates our housing shortage. It deprives the most unfortunate of our people if not of homes, then at least shelter. By demolition we have deprived our families of the only low-rent housing they can obtain. Yet the benefits which have been secured by the cleaning up of our city probably outweigh the misery and insecurity of the former occupants of these worthless buildings.²⁷⁷

Further, Milwaukee's housing challenges exposed the socio-economic intersectionality between what households could afford and where they needed to live for job access. Interestingly, in his series of annual reports, Gurda became rather prescient about the housing challenges faced by inner core residents; and, the analysis of his City department exposed the lack of affordable housing in Milwaukee. He was also one of the first City leaders to publicly comment on the racial aspects of this shortage:

This survey also discloses the fact that in 30,893 white tenant occupied dwelling units containing but one family, the median annual income was \$1,046, with the median monthly rent paid by these families being \$245 or a percent of rental to income of 23.5. Of the total of 1,847 tenant occupied dwelling units containing one family of a race other than white, the median annual income was \$704, with the median monthly rent being \$198 or a percent of rental to income of 28.2, indicating that white families living in

²⁷⁶ Gurda (1942), 4.

²⁷⁷ Gurda (1938), 18.

substandard dwelling units are paying less of their annual income for rent than is the case with families of a race other than white. The survey in general indicates that families of the negro race are the least able to pay the rentals demanded for decent living conditions and, as a consequence, are required to live in housing which is considered substandard.²⁷⁸

These observations and analysis results represent an acknowledgment in the historical record that Milwaukee's housing market – particularly the inner core submarkets of lower-income and working-class communities – was facing extreme stressors and not able to fulfill demand. This lack of supply would become a persistent issue as an ongoing deficit of affordable housing units was further exacerbated during urban renewal and expressway construction.

²⁷⁸ Gurda (1942), 11.

Table 4.19: Changes in Milwaukee’s Housing Supply, 1930-1947

Year	New Housing Constructed	Housing Gained by Alterations	Housing Demolished	Total Housing Gained	Units Lost
1930	1,730	148	235	1,643	---
1931	932	128	195	865	---
1932	169	82	176	75	---
1933	67	40	263	---	156
1934	95	103	466	---	268
1935	365	285	480	170	---
1936	1,174*	351	459	1,066*	---
1937	647	461	365	743	---
1938	499	428	353	574	---
1939	954	419	206	1,167	---
1940	1,017	540	376	1,181	---
1941	1,272	558	227	1,603	---
1942	1,041	592	134	1,499	---
1943	767	899	88	1,578	---
1944	402	410	97	715	---
1945	1,125	292	168	1,249	---
1946	1,901	538	88	2,351	---
1947	1,725	379	83	2,021	---
Total	15,882	6,653	4,459	18,500	424
<i>Units Lost</i>				424	
<i>Net Gain in Housing</i>				18,076	

Notes: *Includes 518 dwelling units in Parklawn public housing project.

Sources: Gurda, “Annual Review of Building Activities in Milwaukee, Wisconsin, During 1947” (1947), 3.

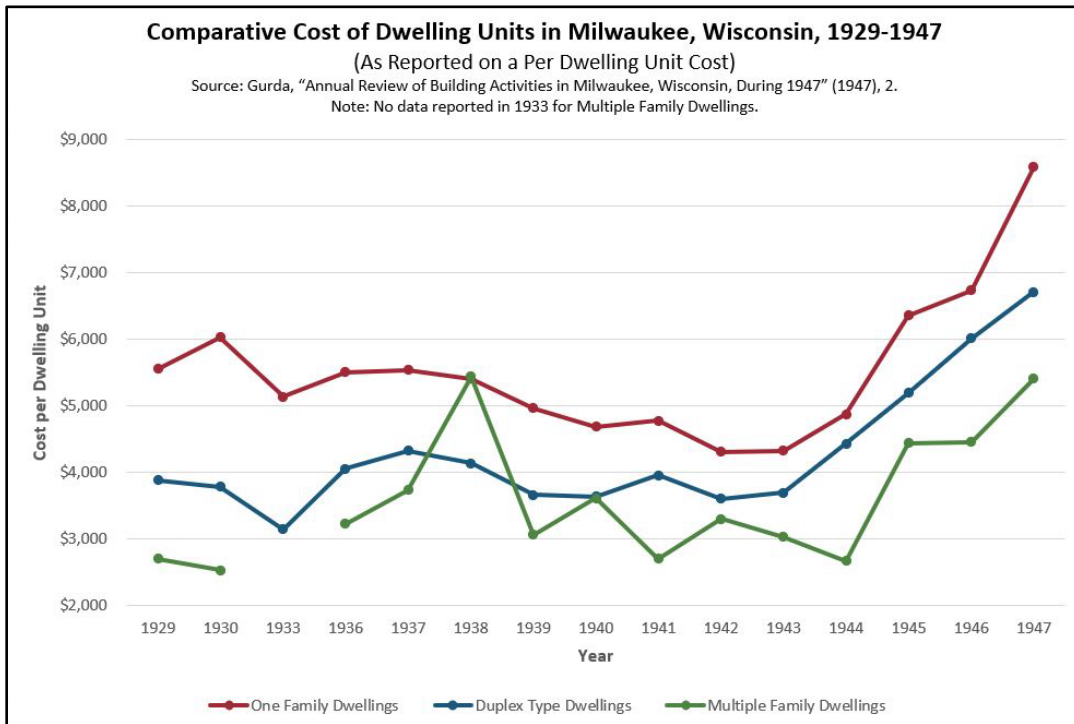


Figure 4.23: Comparative Cost of Dwelling Units in Milwaukee, Wisconsin, 1929-1947

Table 4.20: Ranking of Select American Cities by Foreclosures per 1,000 Persons, 1938

<i>Rank</i>	<i>City or County</i>	<i>Foreclosures per 1,000 Persons</i>	<i>Number of Foreclosures</i>	<i>Population</i>
1	Milwaukee Co., Wis.	32.4	23,517	725,263
2	Shelby Co., Tenn. (Memphis)	29.5	9,033	306,482
3	Wayne Co., Mich. (Detroit)	28.3	53,504	1,888,946
4	Los Angeles Co., Calif.	24.3	53,761	2,208,492
5	Dade Co., Fla.	21.8	3,121	142,955
6	Camden Co., N.J.	20.5	5,168	252,312
7	Hennepin Co., Minn. (Minneapolis, St. Paul)	20.3	10,504	517,785
8	Cuyahoga Co. Ohio (Cleveland)	17.0	20,396	1,201,455
9	Baltimore, Md.	16.9	13,581	804,874
10	Cook Co., Ill. (Chicago)	16.7	66,689	3,982,123
11	Jefferson Co., K.Y. (Louisville)	16.5	5,873	355,350
12	St. Louis, Mo.	15.3	12,599	821,960
13	Erie Co., N.Y. (Buffalo)	15.2	11,619	762,408
14	Polk Co., Iowa	14.8	2,557	172,837
15	King Co., Wash. (Seattle)	14.6	6,760	463,517
16	Harford, Conn.	12.1	1,981	164,702
17	Washington, D.C.	11.6	5,662	486,869
18	Allegheny Co., Pa. (Pittsburgh)	11.4	15,710	1,374,410
19	Richmond, Va.	11.1	2,036	182,929
20	Orleans Co., La. (New Orleans)	10.4	4,787	458,762
21	Denver Co., Colo.	9.4	2,705	287,861
22	Marion Co., Ind. (Indianapolis)	8.4	3,564	422,666
23	Salt Lake Co., Utah	8.4	1,637	194,102
24	San Francisco Co., Calif.	6.9	4,358	634,394
25	Providence Co., R.I.	5.4	2,911	540,016

Sources: Gurda, "Housing and Homeownership" (1938), 9. Data via the Federal Home Loan Bank Board.

D.ii.b. Milwaukee Housing Survey, 1936

Of the variety of primary source materials available in the 1910s and 1920s, no report or maps provided a cohesive portrait of Milwaukee's spatial elements. Instead, the overlay of multiple data sources was necessary to understand the city's structure. The Milwaukee Housing Survey (1936) is a foundational spatial study of the city because it fills this previous gap in data availability and presents 12 maps documenting various characteristics of the city. Utilizing 1930 Census data and information from the City Engineers' Department, the maps present demographic attributes of native- and foreign-born White populations, infrastructure availability, blighted areas, tax delinquency of private property, and land use distribution.

While no report accompanies the maps collection, data analysis is replicable because the Census is known as the original demographic source. However, the maps depicting spatial features are unique and provide important insight into changes at the neighborhood level. Specifically, they reveal an interconnected and expanding distribution of neighborhood centers throughout the city.

Ward Boundary Changes: The shift in ward lines in 1931 shows the Sixth Ward expanding – consuming part of the Second. This shift west in the boundary line accommodated the designation of the Near Downtown blighted area into the Sixth, as opposed to the Second. This change is noteworthy because when the original slum wards were designated the Second Ward contained a core element of Milwaukee's immigrant quarters that acted as a connector from the Fourth to Sixth Wards. The omission of the Second from the slum ward designation is a historical curiosity. Interestingly, the 1931 ward boundaries and the 1936 Housing Survey appear to address this issue by expanding the Sixth Ward further to include a substantial portion of Milwaukee's blighted blocks, thereby continuing to protect the Second.

Expanding Transit Lines: By the mid-1930s, Milwaukee had developed a robust street car network that provided access throughout the city. It was further augmented by the early stages of development of bus lines that provided further coverage to city residents. This expansion of multi-modal transit occurred simultaneous to the adoption of automobiles. Thus, city residents had multiple transit options for commuting and traveling throughout the city.

Blighted Area Designations: In an effort to catalog deteriorated conditions, the maps established six blighted areas in the east side, inner core, south side, and Bayview. No rationale is provided for their designation, nor are any data or rubrics identified to quantify their characteristics. However, four of the six are located in ethnic enclaves that were previously areas of concern in the 1910s as immigrant quarters. Area No. 2 in the Near Downtown was previously identified as a slum ward. However, the blighted areas in Pulaski Street (Polish), Mt. Vernon Avenue (Irish), and Bayview (Italian) were omitted in the 1910s. Ironically, these areas were subsequently identified nearly 20 years later with conditions that were substantially similar to those present when the original slum wards were designated.

Tax Delinquent Property Concentrations: Though the City had been concerned about tax delinquent property in the past, it had not published statistics or a report about the issue. Seven years into the Great Depression, the extent of tax delinquent property became a matter of concern. The address-level data shown in the survey maps provides an important visualization about the concentration of delinquent properties throughout the city. The data acts as a good proxy to understand the financial health of local property markets. It also helps to delineate Milwaukee's inner core informal housing submarkets from its formal submarkets on the city's periphery.

Table 4.21: Street Car & Bus Routes, 1936

Type	Length (miles)
Street Car	89.75
Bus	14.52
Auxiliary Bus	41.92
Total	146.19

Source: "Map 4 – Transportation Facilities," Milwaukee Housing Survey, 1936.

Table 4.22: Tax Delinquent Property, 1936

Type	Quantity
Improved Structure	1,453 (31.44%)
Vacant Land	3,168 (68.56%)
Total	4,621 (100.00%)

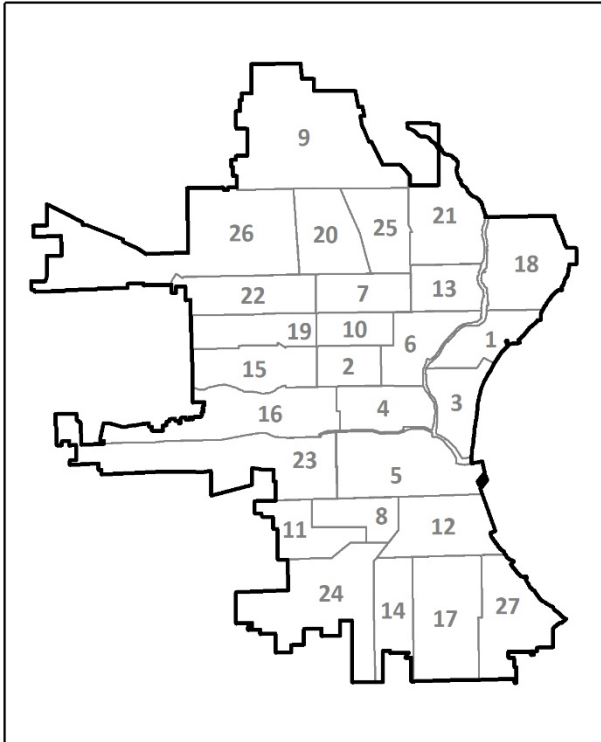
Source: "Map 9 – Tax Delinquent Property," Milwaukee Housing Survey, 1936.

Table 4.23: Blighted Areas, 1936

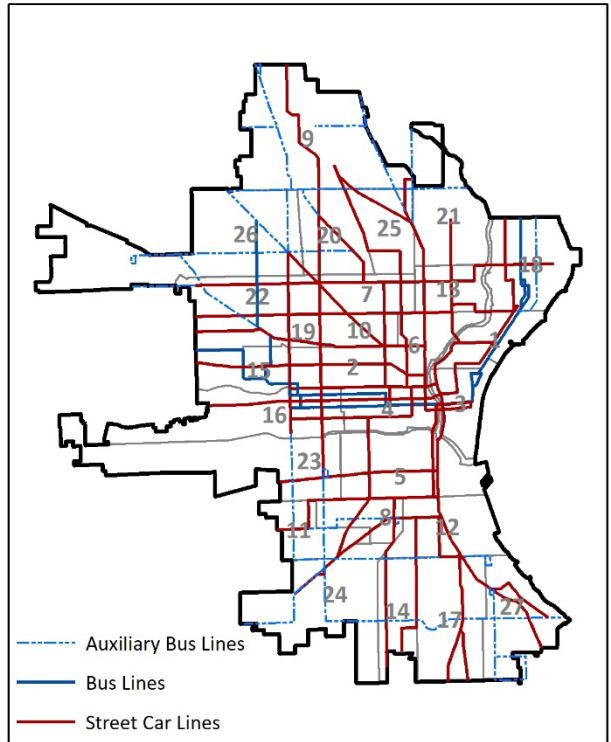
Area No.	Name	Area	
		Sq. Blocks	Sq. Miles
1	Pulaski Street	19	0.09
2	Near Downtown	62	0.41
3	Mt. Vernon Avenue	17	0.08
4	S. 5 th Street – North	6	0.04
5	S. 5 th Street – South	8	0.04
6	Bayview	6	0.02

Note: The 1936 Housing Survey did not assign area numbers or names to the blighted areas. Those identifiers were added for this dissertation research to provide specificity in the analysis.

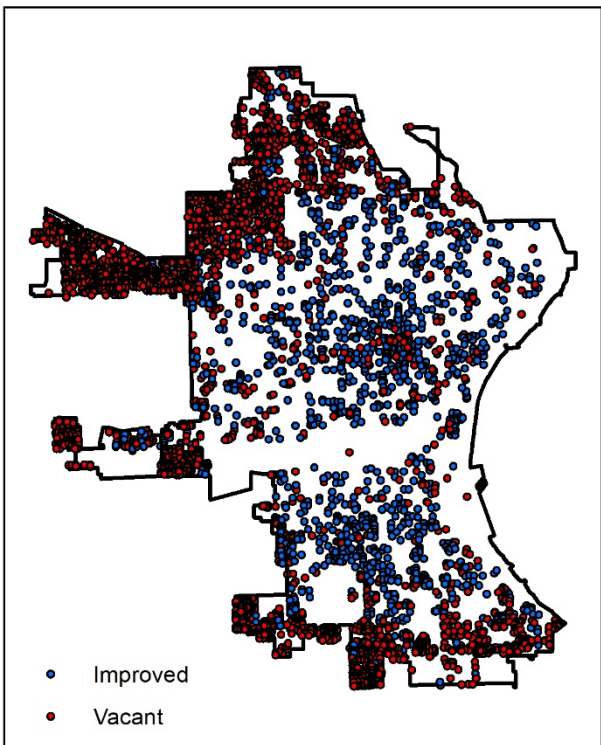
Source: "Map 6 – Blighted Areas," Milwaukee Housing Survey, 1936.



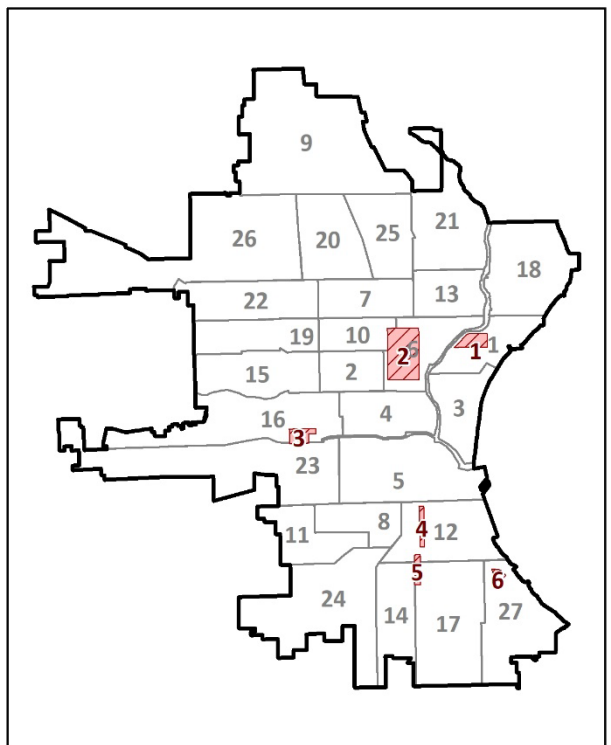
Ward Map



Street Car & Bus Routes



Tax Delinquent Property



Blighted Areas

Figure 4.24: Milwaukee Spatial Features from Ward Map & Housing Survey, 1931, 1936

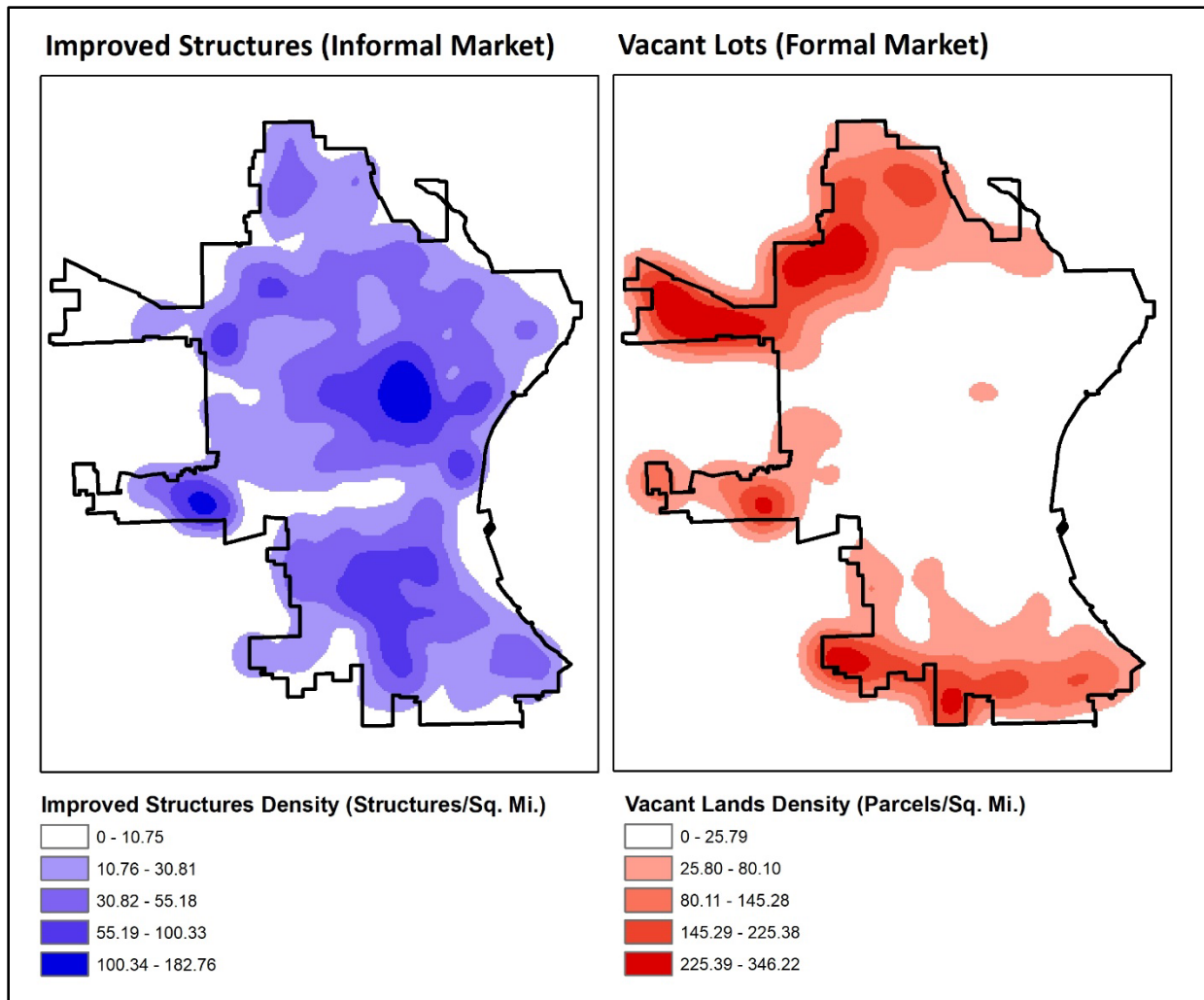


Figure 4.25: Density Maps Delineating Milwaukee’s Informal vs. Formal Housing Markets, 1936

D.ii.c. Design Analysis of Neighborhood Housing Conditions, 1936

The purpose of this analysis is to use multiple data sources to analyze inner core housing conditions in Milwaukee during the Great Depression. The emphasis of this research is on the spatial characteristics and implications of neighborhood housing in the city. The analysis focuses on individual houses or groupings of houses (including their architectural style, structural attributes, massing and lot coverage, and density) and considers them within the context of the surrounding neighborhood. The individual analyses provide an in-depth assessment of properties within a neighborhood that allows for a comparison of multiple housing types and conditions throughout the city.

In contrast to other time periods in Milwaukee's history, this research is made possible by a historic photograph collection at the Library of Congress (LOC) that documented various housing types in the city with high resolution images. This primary source collection is unique from others because it extensively details on-the-ground conditions in Milwaukee. Whereas other studies rely on historical narrative and first-person accounts to describe housing conditions, the LOC collection presents individual pieces of evidence that capture moments in time throughout Milwaukee's neighborhoods.

The LOC image collection is composed of 38 black and white photos. It is available for public viewing and download via the Library's online catalogue. The collection's identifying details include:

Collection Title: "Milwaukee, Wis. April 1936. Housing conditions in crowded parts of Milwaukee"

Photographer: Carl Mydans

Call Number: Lot 1102

LOC Control Number: 2004678092

In conjunction with the LOC image collection, the 1910 Sanborn Maps and 1937 Milwaukee County aerial photography are used to geolocate each image in the city and catalogue the spatial characteristics of the structures and surrounding neighborhood. The Sanborn Maps provide details about block form and dimensions, parcel form and dimensions, and building information. The 1937 aerial photography provides a comparison to the Sanborn Maps to document how the neighborhoods changed over the 27-year period. Importantly, this includes building demolition, which was a component of the City's blight elimination efforts through density reduction. These maps and aerial photography primarily allow for a 2D analysis of housing conditions with limited 3D capabilities for massing. The LOC images fill an important knowledge gap in illustrating the grain and texture of the neighborhoods, including architectural styles of housing.

To properly geolocate the images, only select photographs were used from the LOC collection that could be placed within the inner core neighborhoods with a reasonable level of confidence. Either the collection includes the street address or block number of the housing, or visual evidence in the photograph allows the image to be placed if no address is provided. To confirm addresses, the Milwaukee County Historical Society Street Name Conversion guides were utilized. In the 1920s and 1930s, the city underwent changes in street names and numbering. The LOC image collection is based on these changes, whereas the Sanborn Maps were built on the historic street system. To rectify these differences, the Street Name Conversion guides were used to compare an image's 1936 address to its 1910 address.

Of the collection's 38 images, 8 have been selected for analysis. Primarily, the selection was based on photos that focused on residential housing conditions in the image and contained sufficient information to geolocate the image within the city. The eight images document housing in separate locations throughout various inner core neighborhoods and have been categorized into three types of spatial patterns.

Slum Conditions & Blight

1316 W. Walnut Street
1535 N. 10th Street

Density & Land Use Patterns

912 N. 8th Street
600 Block, East Detroit Street
437 N. Jackson Street
902 W. Hibernia Street
1629 N. 9th Street

Alleys

1012 W. Somers Street

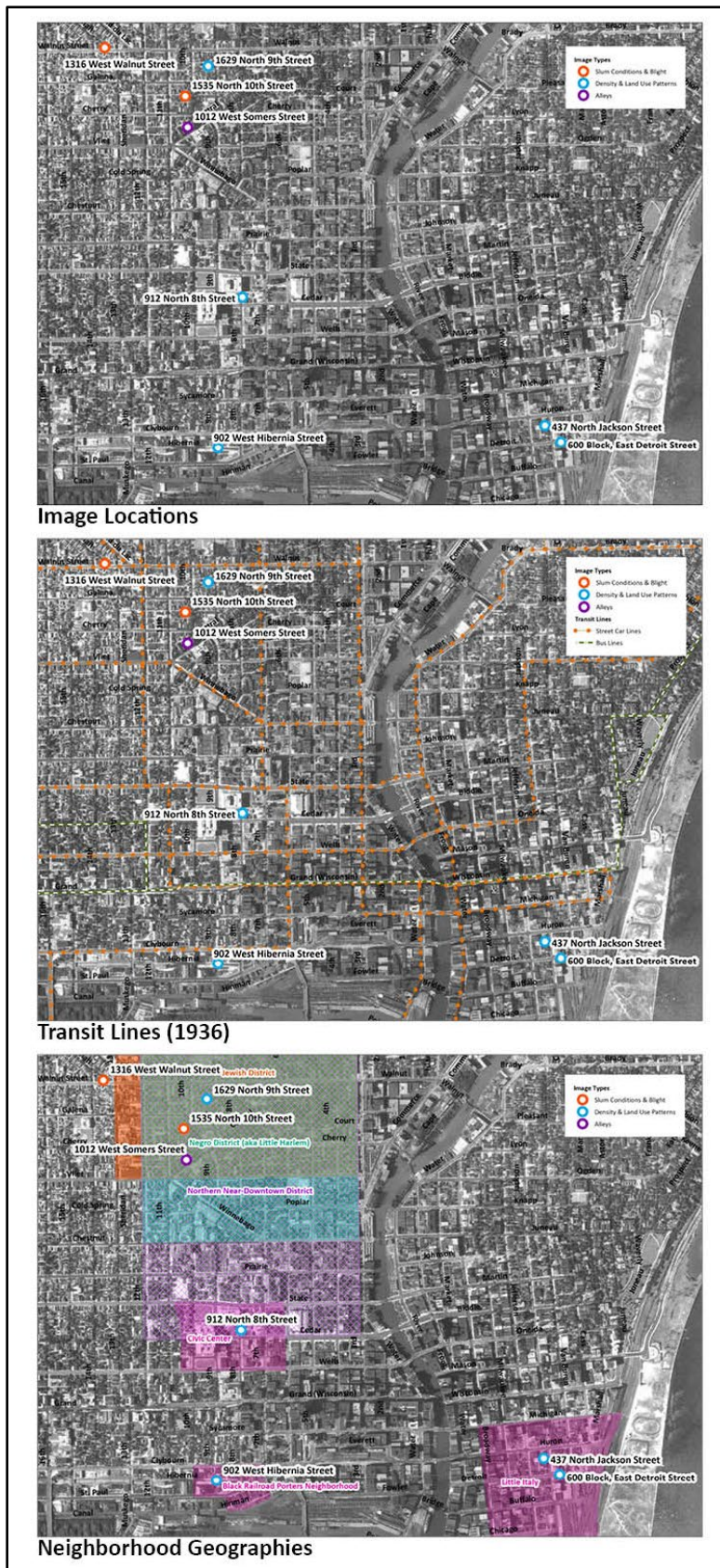


Figure 4.26: Context Map for LOC Image Locations, 1936

Slum Conditions & Blight

The two photographic examples of blight conditions were located in Milwaukee's west side, inner core housing submarkets. Both locations – within blocks of the Vliet Street Triangle at N. 11th Street – were in the heart of one of the city's most dynamic and diverse neighborhoods. Poor housing conditions had persisted in this area for decades. By the time of the photo survey in 1936, the neighborhoods had undergone multiple housing cycles and experienced at least three invasion-succession cycles of new residents. The photo locations were in some of the city's oldest neighborhoods in Kilbourntown and reflected a dense and evolving urban fabric.

The general vicinity of the photos included Milwaukee's Black community in Little Harlem (1939, 1940) and the Northern Near-Downtown Blight District (1946). Despite deteriorated housing conditions, the neighborhoods were vibrant communities and had developed semi-autonomous economies. Thus, the environment was characterized by ironies and juxtapositions of contrast. A general characterization of the conditions would likely reflect a negative connotation, but the realities would show nuanced neighborhoods of working-class families.

1316 W. Walnut Street

Typical of Milwaukee, the homes in this photo are two-story, wood-frame construction with additions at the rear for kitchens. Their style is fairly generic and prototypical with Georgian and Federal elements. This block is a part of one of the city's oldest neighborhoods in Kilbourntown. By 1936, the majority of these homes were at least 50 years old. Their age is reflected in their general condition and initial stages of disrepair.

The photo reflects the evolution and adaptation of housing in Milwaukee and is notable for its various features. The homes sit slightly above street level due to sloping terrain in the area.

Likely originally built in the last quarter of the 19th century, modern features of the 1930s clearly adapted the area for changing conditions. While the alley is a gravel lane, the sidewalks and streets are paved with curbs and gutters. Telephone poles with electrical and communication lines are visible alongside street lights.

1535 N. 10th Street

This photo is a piece of evidence that leaves important clues as to how Milwaukee's different population groups adapted housing to their needs. The parcel and structures were originally located in the German section of Kilbourntown. As the Germans migrated west and north, the Jewish community took up residence in the neighborhood beginning in the 1870s and then the Black community in the 1910s. By 1936, this parcel was located in a blighted area in the Negro District of Milwaukee's Little Harlem.

The parcel's site plan and the design characteristics of the residential structures strongly indicate the wealth of the original property owner. The main house has a traditional shotgun configuration with a front porch, second-story bay window, brick façade, numerous windows, and a metal roof. The alley house and carriage house are of a similar construction, but smaller in size. What appears to be an auto salvage lot in the 1936 photo was previously an ample side yard that afforded the original family green space on their property.

Density & Land Use Patterns

The density and texture of the inner core neighborhoods were dependent upon their mixed-use nature and the proximity of freight infrastructure. Residential and commercial areas typically reflected two- to four-story wood and brick buildings with a number of secondary structures and garages. The built

environment was nuanced and responsive to the residents and local businesses, typically scaled at a smaller level for pedestrian activity. In contrast, the presence of commercial and industrial properties in an area typically increased the scale of buildings and space use. This created unique juxtapositions between the fine textures of predominantly residential and commercial areas with those of a larger scale in and around industrial districts.

The four photos in this category represent this diversity of conditions. The locations are central to multiple ethnic and racial communities, including Little Italy, the Black railroad porters neighborhood along St. Paul Avenue, the broader Black community in the inner core west of the Milwaukee River, and the Jewish community in the same vicinity. These areas were well serviced by street cars and provided easy access to jobs.

912 N. 8th Street

This duplex was one of the few remaining occupied houses in the Civic Center redevelopment area in the late 1930s. Originally within Kilbourntown at the heart of Milwaukee's central business district between State Street and Grand Avenue, this was likely one of the city's original houses dating from the 1860s-1870s. When the Civic Center redevelopment project began in earnest circa the 1920s, an eight-square-block area was razed to make way for the new construction.

The duplex is representative of Milwaukee's original working-class housing. Regarded by City leadership as workingmen's homes, the duplex is prototypical of a wood frame, brick veneer house with some indications of Federalist style – though much of Milwaukee's working-class housing was general and nondescript. Prior to the Civic Center redevelopment, the area was a

dense, mixed-use environment of residential and commercial buildings. In 1900, the area was regarded as Milwaukee's original Negro colony.

600 Block, East Detroit Street

Located within the socio-cultural epicenter of Little Italy, these mixed-used buildings along Detroit Street provide a quintessential view into one of Milwaukee's ethnic enclaves. Locally owned shops and a variety of housing types anchor this commercial corridor within the broader residential district of the Lower Third Ward. These buildings shared the block with the Detroit Street School and were within a short walking distance of the Madonna Dei Pompei Catholic Church.

The wood frame construction of the buildings was typical of Milwaukee. What distinguishes these buildings is the Victorian-style flourishes of the fan brackets, decorative milled panels, and decorative window surrounds. Similar to other neighborhoods, Milwaukee's shotgun houses served as the template for residents who then adapted them to various design styles. This scene is also representative of typical complaints about Milwaukee's blighted areas. The street trash and alley cats were regularly cited as evidence of unsanitary conditions.

437 N. Jackson Street

Located in the heart of Little Italy near the intersection of Jackson and Detroit Streets, this block is prototypical of Milwaukee's mixed-use areas: highly functional, highly adaptable, responsive to community needs. However, in contrast to the buildings along the 600 block of East Detroit Street, the buildings in this photo lack a defined architectural character and distinction. This meaning that the block and building forms of Milwaukee's ethnic and racial enclaves were not

necessarily textbook examples of high design; but, what they lacked in architectural character, they made up for in functionality and productivity.

The mixed-use buildings in this photo represent the original form of Milwaukee. Residential homes interspersed with commercial buildings with storefronts on the first floor and second-floor apartments. The buildings are either wood frame construction or a mix of wood frame and brick. Uniquely, Jackson Street retained its cobblestone paving and curb adding to the character of the scene. The two vehicles indicate the shift in traffic behavior in the inner core neighborhoods.

902 W. Hibernia Street

This photo documents a mixed-use transition area near St. Paul Avenue that existed as a type of interstitial space between the central business district and Menomonee Valley. At the turn of the 20th century, this was the neighborhood of Black railroad porters that worked at the Chicago, Milwaukee, & St. Paul Railway Depot. From the perspective of the average working-class family, this area represented an ideal location for housing because of its proximity to jobs and street car routes. Ironically, it also represented a case study example in incompatible land uses.

The two single-family homes visible in this photo are typical examples of Milwaukee's workers' cottages. Approximately one-and-a-half stories tall, the wood-frame homes accommodated an average family with the potential for a boarder. The brick commercial structures epitomize the typical small business in neighborhoods at an average of 1-2 stories tall. The utility pole, electrical lines, and fire hydrant indicate the neighborhood had infrastructure installed, but the street lacked a curb and gutter.

1629 N. 9th Street

This house is a striking example and evidence of Milwaukee's inner core invasion-succession patterns and historic housing adaptation. Located simultaneously in the Jewish District (1910), Little Harlem (1939, 1940), and the Near-Downtown Blight District (1946), this was one of Milwaukee's original homes. Due to its size and spacious side yard, it was likely the home of a wealthier German family by the 1860s. As different populations migrated through the neighborhood, it became a duplex in the Jewish and Black communities by the end of the 19th century.

Located conveniently between Walnut and Galena Streets, residents could easily access the street car lines on Walnut and green space at Lapham Park. Similarly, the B'Nei Israel Anshe Hunjuran Synagogue shared a rear lot line with the property. The house is a unique example of a mixed-use duplex with a single-story shop in the front yard. Few of these structures exist in Milwaukee's historical record. At the time of the 1920 and 1936 zoning codes, this house became a non-conforming use due to overcrowding and the presence of a storefront.

Alleys

Historically, alleys were an integral component in Milwaukee's urban fabric. Prior to the widespread adoption of the automobile, pedestrian activity and street car access were the primary modes of transportation in the city. As a result, pedestrian circulation networks in neighborhoods were fully developed and nuanced. Alleys played a central role in facilitating access within a neighborhood's interior block structure. Whether for residents accessing their alley houses or small business owners accessing their shops and manufacturing spaces, alleys were secondary streets that acted as semi-

private space for the users of those blocks. When assessing neighborhood activity, alleys represent a highly localized form of inward-facing activity corridors.

The Somers Street alley photographic is a quintessential example of the dynamic nature of intra-block activity. It includes various housing types, electrical and wastewater infrastructure, limited routes for deliveries and some commercial activity, and inward facing community building between neighborhood residents. Located half a block from N. 11th and Vliet Streets, the Somers Street alley lay at the heart of an inner core commercial area and the home of the Jewish and Black communities.

1012 W. Somers Street

This photo documents the multi-purpose role that alleys played in Milwaukee's neighborhood economies. Because of the dense, mixed-use nature of Central Avenue in the Vliet Street Triangle, alleys were an integral component in commercial activities and residential housing. Similar to other homes documented in this area of the design analysis, these blocks comprised the inner core areas of the Jewish and Black communities – which ultimately would become the focus of blight removal efforts during urban renewal.

The homes in this photo are characteristic of Milwaukee's wood frame workers' cottages. Comprising a mix of housing types including single-family homes, rear houses, and duplexes, this alley epitomizes the varied and textured nature of low-cost housing available to the city's working-class families. This alley supported primary functions in the neighborhood including residential access, off-street pedestrian circulation, and the delivery of goods.

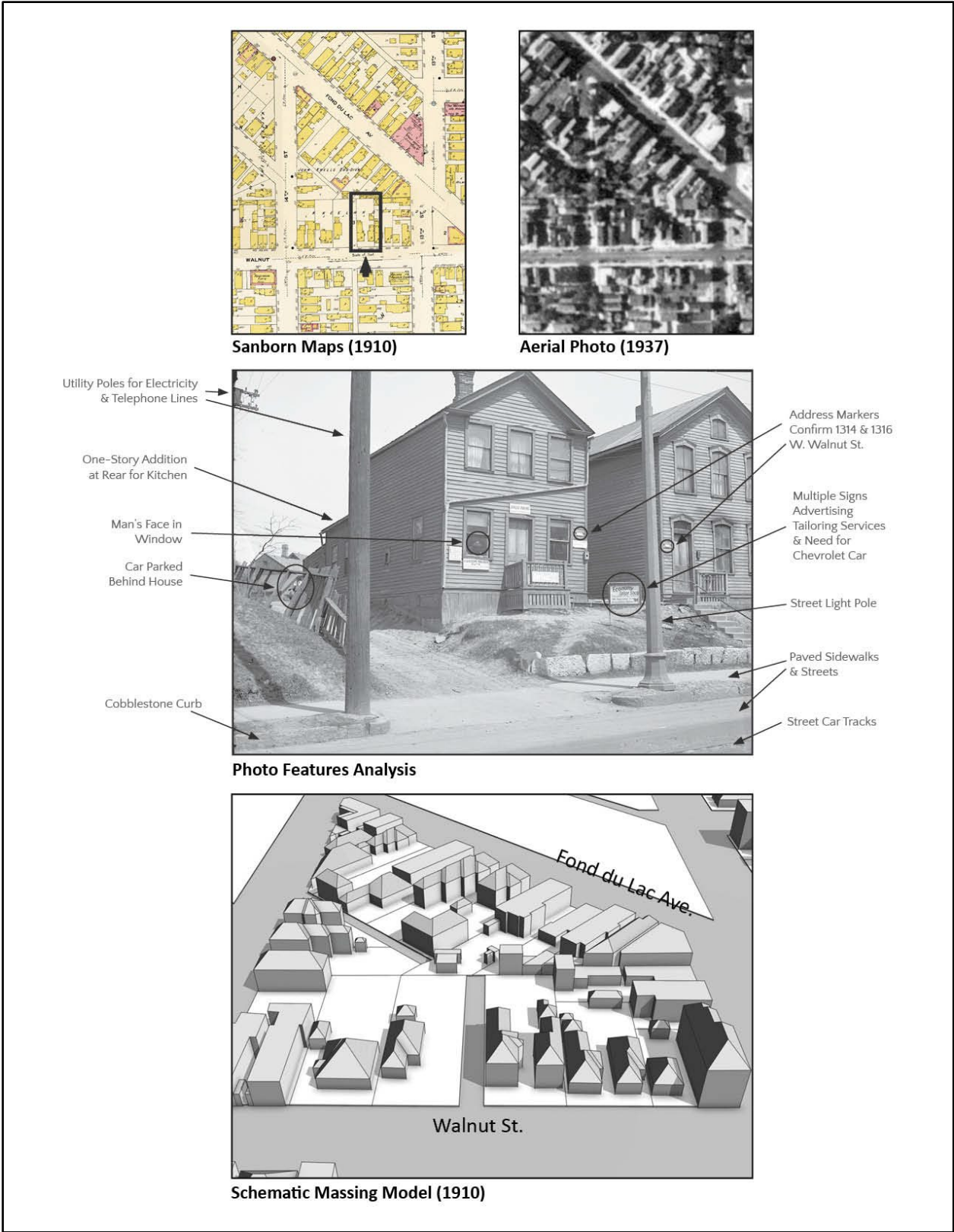


Figure 4.27: Design Analysis for 1316 W. Walnut Street

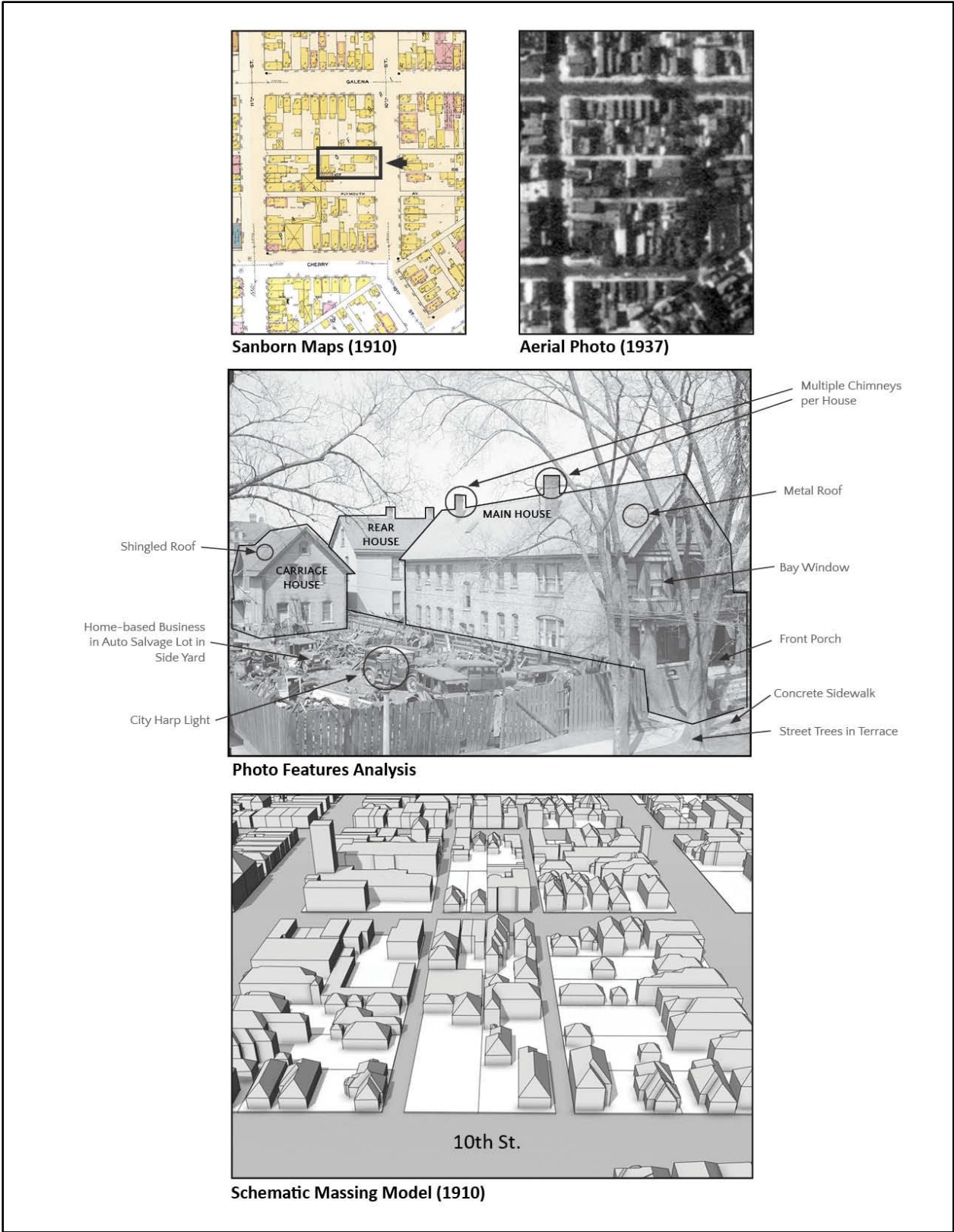


Figure 4.28: Design Analysis for 1535 N. 10th Street

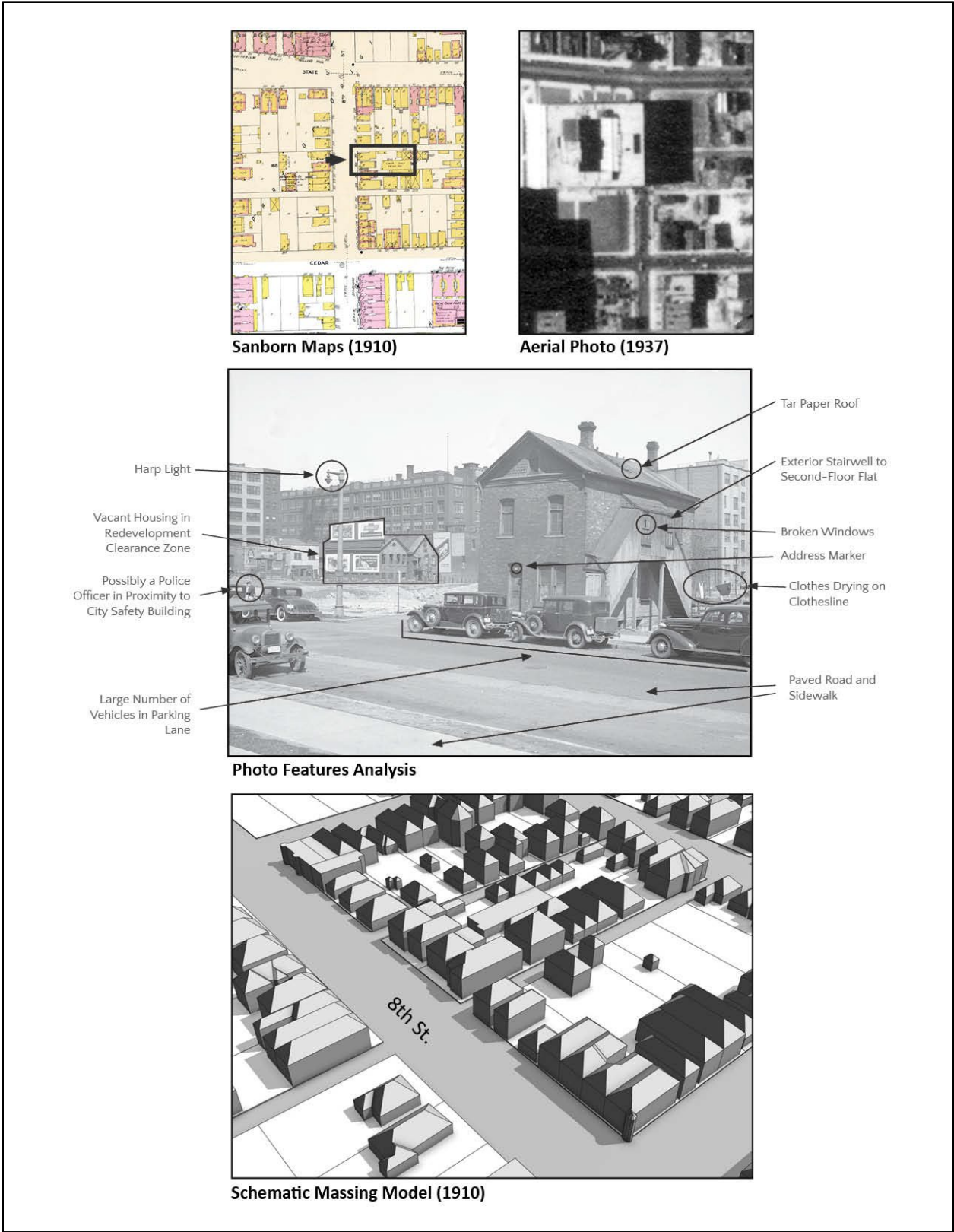


Figure 4.29: Design Analysis for 912 N. 8th Street

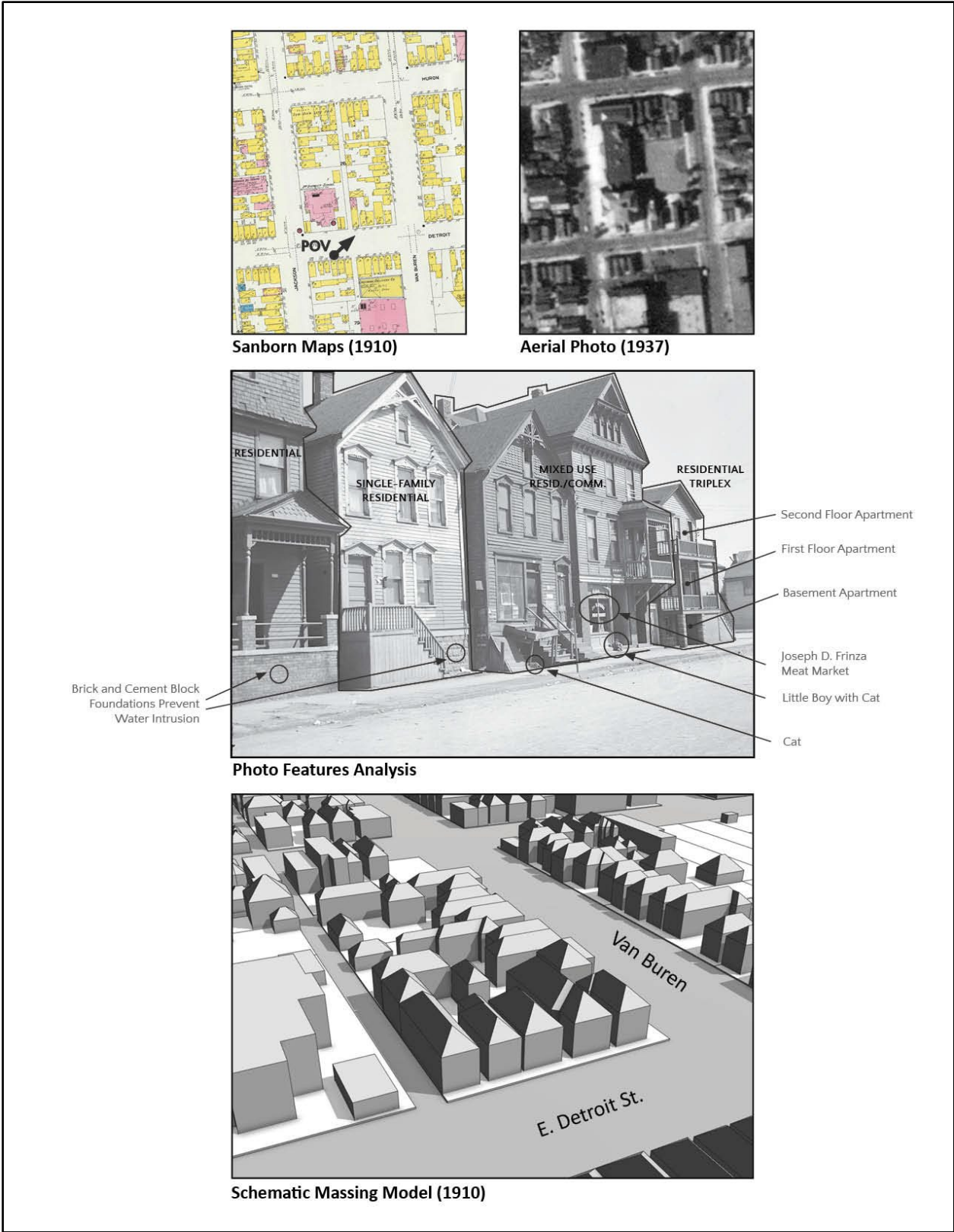


Figure 4.30: Design Analysis for 600 Block, E. Detroit Street

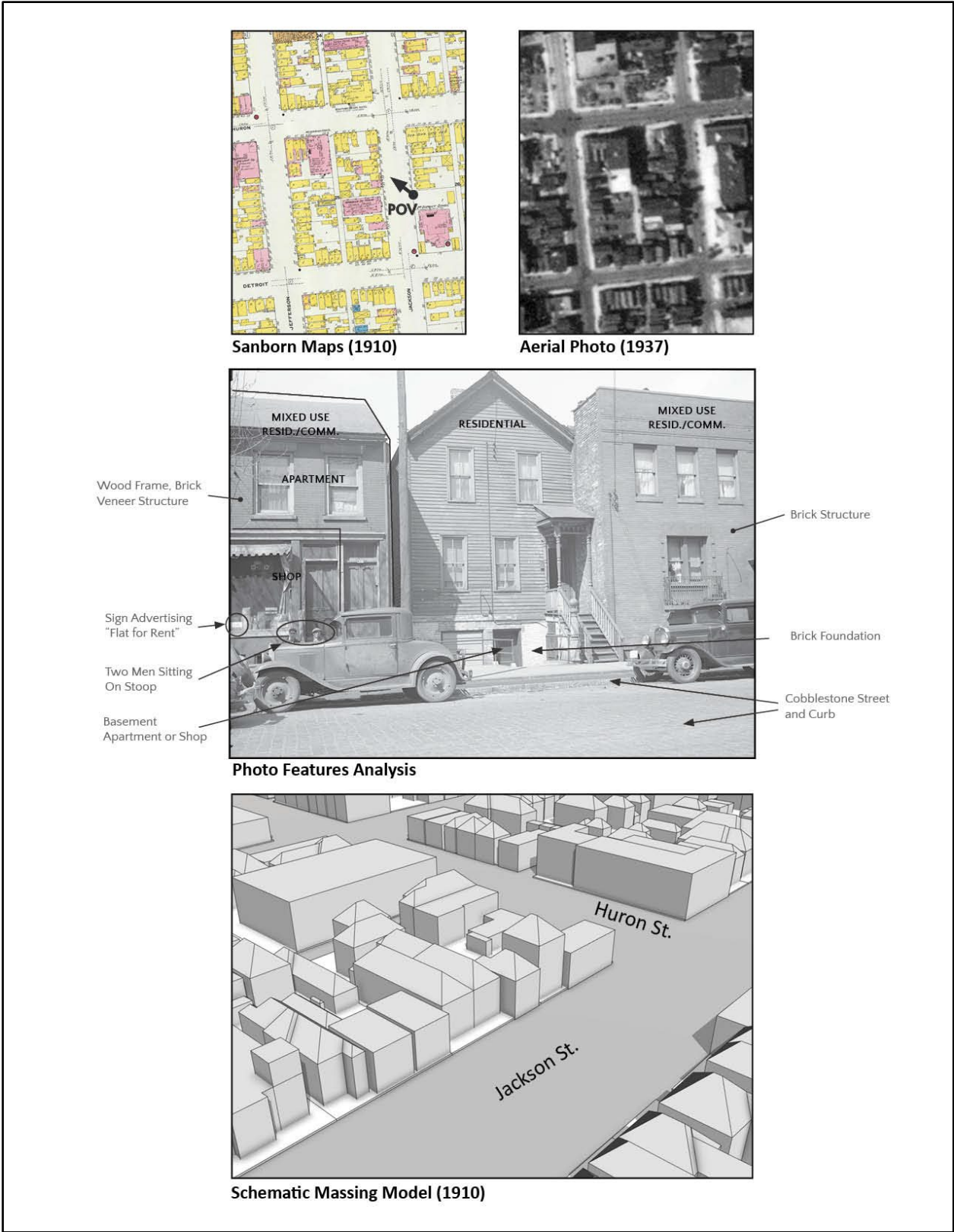


Figure 4.31: Design Analysis for 437 N. Jackson Street

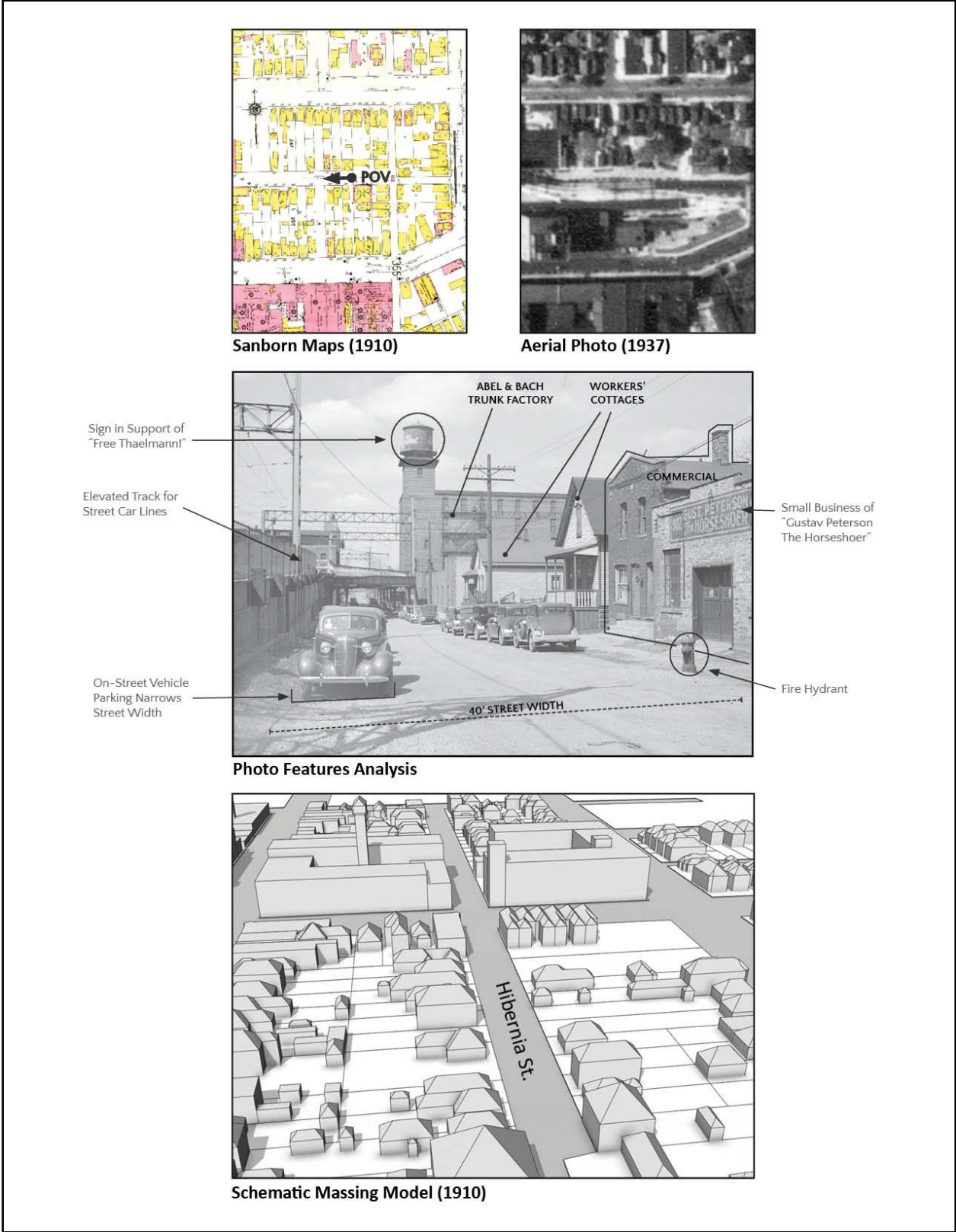


Figure 4.32: Design Analysis for 902 W. Hibernia Street

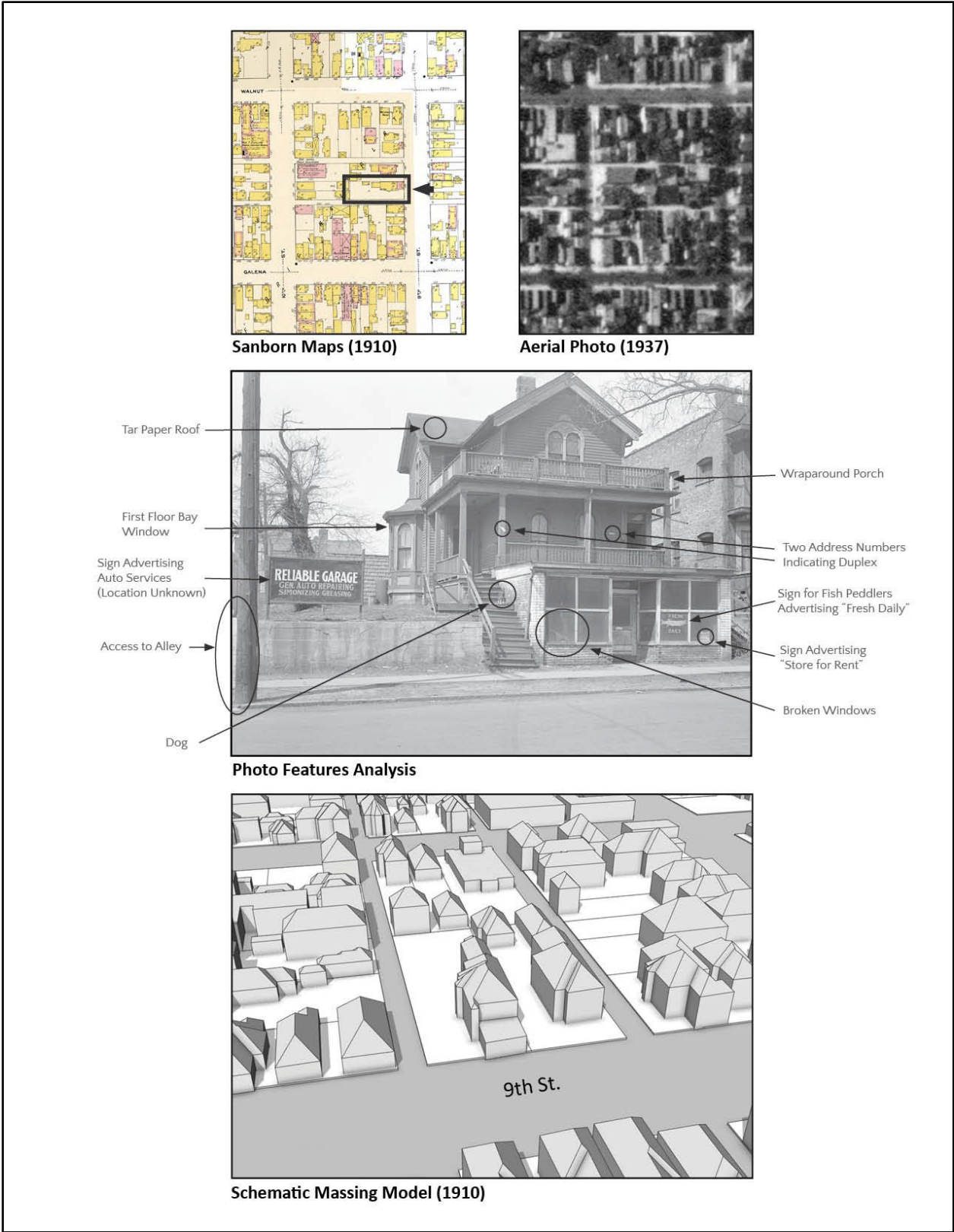


Figure 4.33: Design Analysis for 1629 N. 9th Street

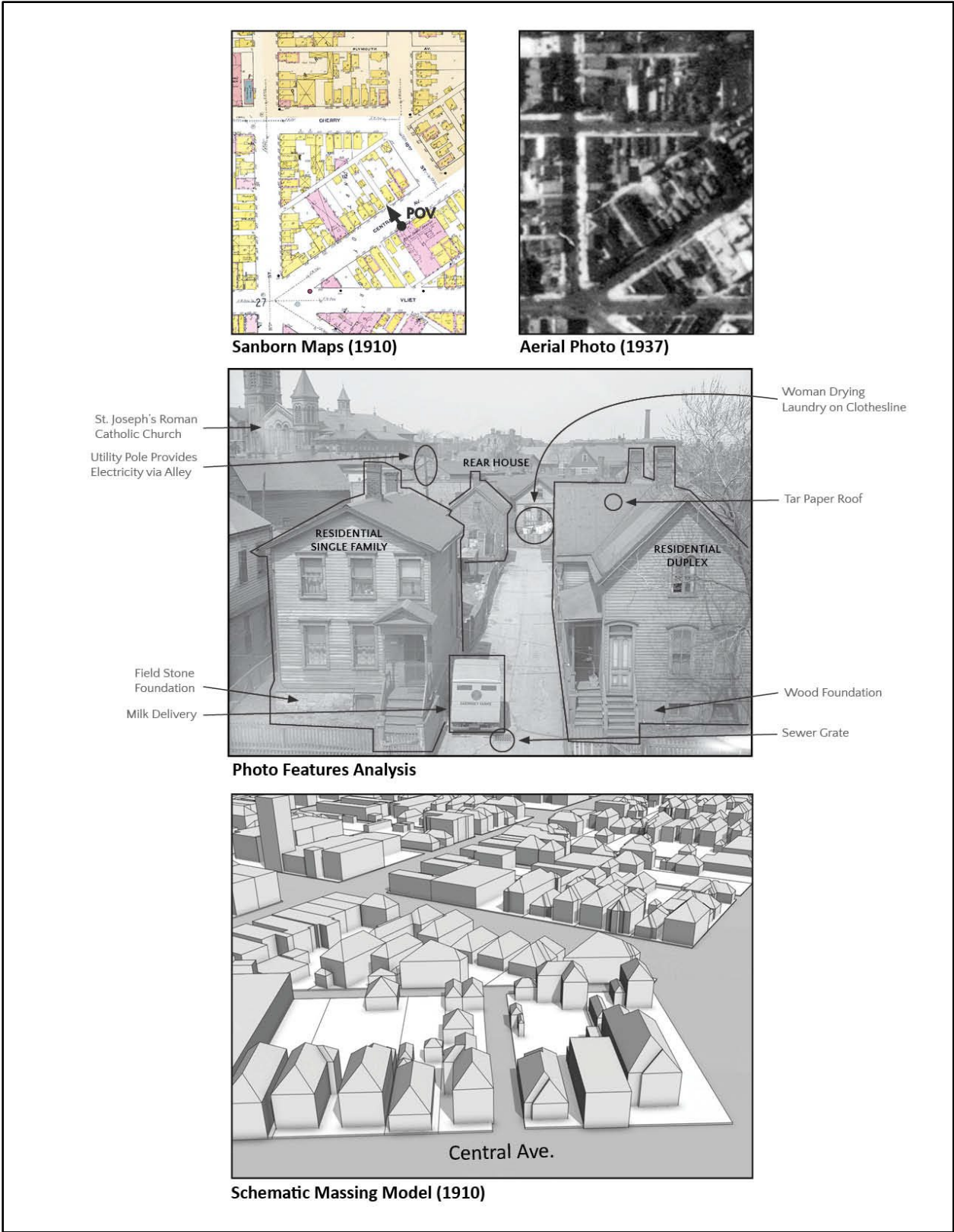


Figure 4.34: Design Analysis for 1012 W. Somers Street

D.ii.d. City of Milwaukee Blight Analyses, 1946, 1948

In the immediate post-World War II years, the Milwaukee Board of Public Land Commissioners (BPLC) conducted a blight assessment to analyze neighborhood conditions and prepare for redevelopment projects. In accordance with Wisconsin's 1945 Blighted Areas Law, the survey developed the most detailed portrait of deteriorated conditions to date.²⁷⁹ The Survey of Housing contained within the 1940 U.S. Census largely operationalized a study of this detail because housing data was reported at the Census tract level. Utilizing this newly available data source, the BPLC developed a list of ten factors to rank Milwaukee's 153 Census tracts on a blight scale. Those factors included:²⁸⁰

- Fifty percent or more dwelling units over 45 years old;
- Twenty percent or more dwelling units without bathroom or needing major repairs;
- Average value of owner-occupied dwelling units under \$4,000;
- Assessed real property values decreasing;
- Average monthly rentals under \$25 per dwelling unit;
- Population density per net acre over 30 persons;
- 3.55 percent or more of dwelling units with 1.51 or more persons per room;
- Average rate of tuberculosis hospital admissions 0.70 or over per 1,000 population;
- Rate of juvenile delinquency 20 or over per 1,000 population 19 years of age or younger; and,
- Rate of relief cases 40 or over per 1,000 population.

Ultimately, 36 tracts were identified as having seven or more indicators of blight. These tracts, when considered collectively, represented Milwaukee's inner core neighborhoods, including "approximately 2,910 net acres, or 14.51 percent of the city's total net acres. Residents of these areas comprise[d] 144,980 persons, or 24.67 percent of the city's total population."²⁸¹

²⁷⁹ Milwaukee Board of Public Land Commissioners (BPLC), "Evidences of Blight" (1946), 1.

²⁸⁰ BPLC (1946), 2.

²⁸¹ BPLC (1946), 2-3.

With the BPLC study in hand, the Milwaukee Common Council reconsidered its position on a more activist approach to blight conditions in the city. As the United States began its domestic recovery from World War II, blight and slums entered the public consciousness in urban areas. Though the chief concern was the threat of blight conditions to a city's economy, other concerns arose: the physical deterioration of buildings, the resulting decline of the municipal tax base, public health concerns and infectious disease, criminal activity, and delinquency.²⁸² In response, the Milwaukee Common Council created the Redevelopment Coordinating Committee in November 1946 to study blight in three inner core districts and prepare recommendations for redevelopment. The report focused on potential rehabilitation and redevelopment efforts, the possible need for additional municipal regulations, and the establishment of acceptable standards of measure that could be used in future studies.²⁸³

The Redevelopment Coordinating Committee's study and planning document represents a unique milestone in Milwaukee's management of slum and blight conditions. It was the first time the City conducted a detailed study and assessment of blight conditions, delineated specific areas and identified them as areas of concern, and proposed rehabilitation and redevelopment strategies at the block level. A document of this detail and significance had never previously been produced in Milwaukee's history. Thus, conclusions from a historical assessment of the document are noteworthy because they reveal detailed nuances about Milwaukee's inner core housing submarkets.

- Of the 36 total tracts identified as blighted, the 11 that served as areas of focus were in the densest neighborhoods of the original city in Kilbourntown, Juneautown, and Walker's Point. This meaning that the structures – regardless of use type – were the oldest in the city and the most likely to be technologically obsolete.

²⁸² Milwaukee Redevelopment Coordinating Committee (MRCC), "Blight Elimination & Urban Redevelopment in Milwaukee" (1948), 1.

²⁸³ MRCC (1948), 1-2

- Based on the assessment of conditions, the majority of the blight districts needed significant rehabilitation for all structures, dwelling units, and the general neighborhood condition. However, the designation of substandard or slum in the report's rating system was only used on select blocks. Pervasive slum conditions and the need for wholesale redevelopment is not reflected in the report. This thus juxtaposes the public narrative at the time that blight was overwhelming the city when this report indicates that true slum conditions were only isolated to select blocks.
- The three blight districts shared common characteristics: a majority of households were rental tenants, the housing supply was limited with extremely low vacancy rates, overcrowding was not necessarily prevalent, a significant portion of dwelling units needed major repairs, and the average monthly rent for all of the tracts – save one – were far below the city average.
- Blight District 1 reflected the greatest concentration of non-White households. For the city overall, 76% of non-White households were located in Census Tracts 20, 21, 29, 30, and 31. And yet, Blight District 1 was still an almost 50-50 mix of White and non-White households. The district is thus an example of one of Milwaukee's historic mixed-income, ethnically and racially diverse neighborhoods.

Table 4.24: Comparison of Assessed versus Proposed Blight District Conditions, 1948

<i>Blight District</i>	<i>Assessment of Conditions</i>	<i>Proposed Redevelopment</i>
<p><i>District 1</i> Inner core west of Milwaukee River. Concentrated in and around Sixth Ward.</p>	<p>Generally moderate quality of structures needing rehabilitation. Some areas requiring demolition and redevelopment. Poor maintenance and deteriorating housing units around the Vliet Street triangle area requiring redevelopment. Majority of neighborhood condition characterized as substandard or slum.</p>	<p>Need to manage a mixed-use district of residential, commercial, and industrial properties. Need for maintenance of major thoroughfares, neighborhood schools, and parks. Residential areas predominantly of duplexes and multi-family buildings. Mix of rehabilitation and redevelopment needed for residential areas. Need for industrial and commercial redevelopment.</p>
<p><i>District 2</i> Inner core east of the Milwaukee River. Located in lower East Side and Pulaski St. Polish community.</p>	<p>Majority of structures showing moderate quality needing rehabilitation. Very limited need for demolition and redevelopment. Generally good maintenance overall. Generally moderate rehabilitation needed of dwelling units with some need for demolition. Generally good, acceptable, and intermediate quality of the neighborhood environment.</p>	<p>Maintain residential character of the neighborhood with primary focus on multi-family buildings. Need for maintenance of major thoroughfares, neighborhood schools, and parks. Generally a single-use district of apartment buildings. Focus on rehabilitation of existing residential properties.</p>
<p><i>District 3</i> Walker's Point industrial area. Located in a multi-ethnic, mixed-use district.</p>	<p>Generally moderate quality of structures needing rehabilitation. Limited areas requiring demolition and redevelopment. Generally good maintenance overall. Generally moderate rehabilitation needed of dwelling units with some need for demolition. Substandard and slum area around National Avenue and 5th Street. Southern portions of neighborhood in generally acceptable condition.</p>	<p>Need to manage a mixed-use district of residential, commercial, and industrial properties. Residential areas primarily composed of duplexes. Linear industrial corridors developed along Florida and 1st Streets. Need to maintain traffic thoroughfares for freight traffic and street cars. Need to maintain neighborhood schools and parks. Focus on rehabilitation of mixed-use areas with limited need for redevelopment.</p>

Source: Milwaukee Redevelopment Coordinating Committee (MRCC), "Blight Elimination & Urban Redevelopment in Milwaukee" (1948), 12-14, 16-18, 20-22, 24-26, 40-42, 45-47, 50-52, 63-65.

Table 4.25: Comparison of Housing in Blight Districts Using 1940 Census Data

Census Tract	Total Structures	Dwelling Units							
		Total	Owner Occupied	Rental	Vacant	Occupied by Non-White	Overcrowded (>1.51 ppl per room)	Needing Major Repairs	Ave. Monthly Rent
City	95,931	169,865	52,917	111,418	5,530	2,650	5,795	35,692	\$33.26
Blight District 1									
20	195	390	30	338	22	325	8	122	\$22.20
21	496	1,012	84	887	41	494	46	514	\$19.62
29	604	1,261	117	1,100	44	666	46	566	\$22.19
30	422	932	97	805	30	520	70	431	\$22.54
31	314	639	92	511	36	24	56	200	\$24.53
Blight District 2									
6	309	1,542	124	1,350	68	3	254	372	\$32.97
7	456	1,402	170	1,127	105	18	129	577	\$24.49
8	548	1,048	262	750	36	0	46	509	\$21.84
Blight District 3									
113	694	1,191	273	882	36	2	53	476	\$24.71
114	423	719	169	527	23	7	36	254	\$24.81
116	1,052	1,602	407	1,152	43	4	58	727	\$24.32

Note: Census data describing the condition of dwelling units was based upon the subjective judgment of Census takers conducting neighborhood canvases. The Census did not adopt a uniform set of criteria to assess dwelling unit condition. As a result, the data should be interpreted with some caution and skepticism.

Source: United States Decennial Census Survey of Housing, 1940.

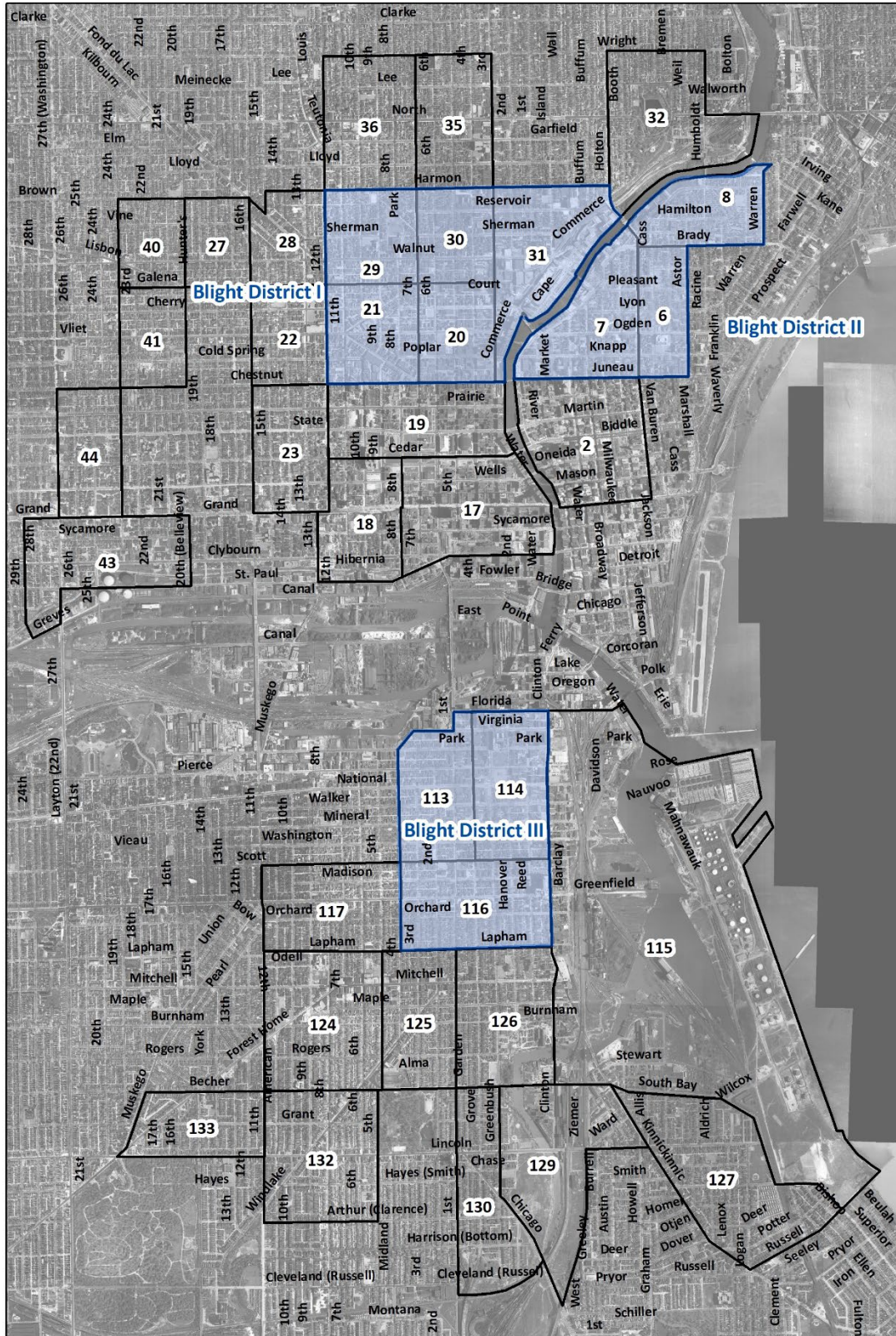


Figure 4.35: Principal Blight Census Tracts & Blight Districts in Milwaukee’s Inner Core, 1948

D.ii.e. Reconsideration of Inner Core Definitions

In the primary source documents and secondary-source literature discussing Milwaukee's inner-city neighborhoods, there is a lack of commonly accepted terminology to appropriately describe them.

Across the sources, a variety of terms are used: original villages (Kilbourntown, Juneautown, Walker's Point), central city, central business district, and inner core. The commonality amongst these terms is that they all reference the lower-income and working-class communities of the neighborhoods closest to the city center. This issue persisted into the 1960s when Charles O'Reilly coined the term "the Inner Core-North" to describe the inner core neighborhoods west of the Milwaukee River, specifically the Black community. In his report, he suggested a similar Inner Core-South be established in Walker's Point.²⁸⁴ As a note of clarity, the forthcoming sections of my dissertation research adopt this term and create a new one for the Inner Core-East. These three terms – Inner Core-North, Inner Core-East, and Inner Core-South – generally relate to the areas west of the Milwaukee River, the neighborhoods of the lower East Side and lower Third Ward, and Walker's Point and its general vicinity. My research adopts these terms for the purpose of clarity to use common terminology to describe the neighborhoods.

D.iii. Development of Housing Projects, 1937-1952

Though the City of Milwaukee had been an early innovator in the development of public housing with Garden Homes, it did not diligently pursue any other projects until the late 1940s. Despite the warnings of a housing shortage and deteriorating neighborhood conditions in the Milwaukee Housing Commission Report of 1933 and the annual reports of the Building Inspector beginning in 1937, City leadership refused to act.²⁸⁵ As a result, Milwaukee's housing markets were determined by the supply and demand of free markets. In the 1930s and 1940s, this essentially meant that no housing was built in the city due to the Great Depression and war rationing.

²⁸⁴ O'Reilly, et al., *The People of the Inner Core-North* (1965), 4.

²⁸⁵ University of Wisconsin, "Public Housing in Milwaukee" (1970), 9. Milwaukee Department of City Development (DCD), "Public Housing in Milwaukee" (1966), 3-4.

When the Federal government adopted an interventionist approach to housing markets in New Deal legislation, significant amounts of funding became available for local municipalities to develop housing. The Housing Act of 1937 created the U.S. Housing Authority (USHA) and made money available to local governments to develop public housing projects provided that their government's structure included a housing authority and that it could meet the cost sharing minimum. Because Milwaukee's leadership refused to create a housing authority and would not apportion funds for public housing, the City did not qualify for funding under the Housing Act of 1937. When the Milwaukee Housing Authority (MHA) (later renamed the Housing Authority of the City of Milwaukee (HACM)) was created in 1944, City leadership refused to allocate sufficient funding to meet the Federal minimum. It was not until housing conditions worsened to such an extent – particularly with respect to veterans housing – that the MHA proposed a bond referendum in 1948 of \$6 million (\$75.6 million in 2023 dollars) to finance public housing projects.²⁸⁶ With the citizens' voting to approve the referendum, the City and MHA under the Housing Act of 1949 built five public housing projects in rapid succession from 1950-1952: Hillside Terrace, Northlawn, Southlawn, Berryland, and Westlawn.

Though the obstructionism of City leadership delayed public housing projects unnecessarily through the 1930s and 1940s, a variety of stop-gap measures were pursued. As large numbers of World War II veterans began returning home in 1945, Milwaukee's housing shortage worsened substantially. To provide units for veterans and their families, the City developed temporary housing in the form of trailer homes, barracks, pre-fabricated homes, and Quonset huts at various locations in Milwaukee.²⁸⁷ For Black veterans, the MHA began planning for a public housing project as early as 1944 in the Sixth Ward. What would become Hillside Terrace by 1948 was regarded later by Milwaukee's Department of City

²⁸⁶ University of Wisconsin (1970), 9-10. DCD (1966), 5-8.

²⁸⁷ University of Wisconsin (1970), 10. DCD (1966), 5.

Development as a “project for in-migrant Negro war workers.”²⁸⁸ The MHA originally intended to finance the project through funds available in the Housing Act of 1937, but struggled to meet Federal requirements. Later, when the Housing Act of 1949 was passed, Hillside Terrace was financed using funding in that legislation.

The spatial and design characteristics of the projects thematically were similar to previous public housing developed in and around Milwaukee, including Garden Homes, Washington Highlands, and Greendale. The design of the projects fits within the Garden City ideal and Greenbelt styles. The buildings were either townhomes or multi-family units in low-rise buildings with ample green space. The designs emphasized housing nestled in essentially private park space with landscaping and trees. Ample parking was provided for families. Spatially, however, the locations of the projects in Milwaukee made a clear statement. Hillside Terrace was the only project in an inner core neighborhood; and, it was specifically designed for the Black community, though the inner core west of the Milwaukee River was a mix of White and Black families. The remaining developments – Parklawn, Northlawn, Southlawn, Berryland, and Westlawn – were developed on the city’s periphery in existing formal markets that had historically demonstrated strength for single-family homes. Though the projects were eventually racially integrated, hindsight affords a perspective that demonstrates that the vast majority of affordable units were delivered in White neighborhoods. Despite overwhelming demand by Black households to leave the inner core and move to other neighborhoods for better housing, the social pressure of discrimination inhibited their ability to do so.

Despite the deliveries of six public housing projects, they never kept pace with demand and were unable to adequately close the gap on Milwaukee’s housing shortage. The persistent lack of sufficient

²⁸⁸ DCD (1966), 4-5.

deliveries of affordable housing for Milwaukee's lower-income and working-class households had become an entrenched issue by the early 1950s. Data show this to be true. In 1919 at the end of World War I, Milwaukee's housing shortage was estimated at 7,000 units. In 1933, the gap was slightly closed due to large amounts of single-family development on the city's periphery during the 1930s, but the shortage was still estimated at 3,699 units. By 1937, it had grown to approximately 12,000 units.²⁸⁹ To be clear, the impetus for the 1948 bond referendum on public housing was truly for returning veterans. It was not a sweeping referendum to facilitate large-scale construction of public housing across the city. This was proven true in 1951 when two dualling referenda were proposed simultaneously by advocates and opponents of public housing in the city. The results were mixed at the time, but showed a conflicted public that was uncertain about the place of public housing in Milwaukee and a broader agenda of slum clearance. Fure-Slocum (2013) and Smith (2003) document the referenda fight in detail and identify a number of themes that had coalesced by the early 1950s: the national politics of the Red Scare and anti-Socialist sentiment, concerns about the role of government in housing, concerns about increasing pressures on Milwaukee's tax base and the deterioration of infrastructure, skepticism of large-scale government spending on anything other than infrastructure, and the racialization of housing and public animosity towards integrated neighborhoods.²⁹⁰ Thus, Milwaukee never achieved consensus on supporting public housing. The historical record seems to show that public action was only taken when the housing markets were in crisis and never as a proactive measure.

²⁸⁹ Housing Authority of the City of Milwaukee (HACM), "Public Housing in Milwaukee" (1952), 6. Milwaukee Housing Commission (1933), 10.

²⁹⁰ See Eric Fure-Slocum, *Contesting the Postwar City* (2013). In its entirety, Fure-Slocum's book encapsulates the varying power dynamics present in Milwaukee in the post-World War II era and the pressures they exerted on City decision making. See also Smith, "From Socialism to Racism" (2003), 79.

Table 4.26: Public Housing Developed in Milwaukee, 1937-1952

Project	Year Built	Unit Type	No. of Units	Total Occupants	Total Development Costs		Source of Funds
					1952 Dollars	2023 Dollars	
Parklawn*	1937	Low Income	518	1,668	\$2,327,900	\$22.82 mil	PWA via Housing Act of 1937
Hillside Terrace	1950	Low Income	232	778	\$3,050,845	\$34.23 mil	Housing Act of 1949
Northlawn	1950	Veterans	247	1,040	\$2,827,459	\$22.82 mil	Housing Act of 1949
Southlawn	1950	Veterans	331	1,358	\$3,805,856	\$34.23 mil	Housing Act of 1949
Berryland	1951	Veterans	391	1,638	\$3,500,000	\$34.23 mil	Housing Act of 1949
Westlawn	1952	Low Income	726	2,670	\$8,483,000	\$91.28 mil	Housing Act of 1949
Total			2,445	9,152	\$23,995,060	\$239.61 mil	

Notes: *Parklawn was originally developed as a Public Works Administration (PWA) project. It was then leased back to the MHA by the early 1940s. Ownership of the project was formally transferred to the MHA in 1953.

Sources: Housing Authority of the City of Milwaukee (1952), City of Milwaukee Department of City Development (1966), University of Wisconsin-Milwaukee School of Architecture (1970).

D.iii.a. The Parklawn Case Study

As an early indicator of the racialization of Milwaukee’s housing submarkets, the development of the Parklawn public housing project was indicative of the Black community’s need for quality, affordable housing and the White community’s antagonism towards housing deliveries in the inner core. Overall, Milwaukee’s intended use for New Deal Federal housing programs sought to conduct slum clearance and then build new housing in its place – primarily in the inner core neighborhoods. Due to objections over eminent domain and racial mixing in neighborhoods, slum clearance became an almost insurmountable obstacle. As a result, the City shifted its focus to new affordable housing construction on greenfield sites on Milwaukee’s periphery. Parklawn represents a historical case study and precedent in how and why the City ultimately built the majority of public housing projects outside the Black community of the inner core.

Parklawn was originally envisioned as a centrally located project in Little Harlem (aka the Negro District), the Jewish District, and the Northern Near-Downtown Blight District at what was labeled Site “A”, which was bounded by West Vine Street, West Reservoir Avenue, North 8th Street, West Brown Street, and

North 6th Street. If Parklawn Site “A” would have been chosen as proposed, the project would have delivered approximately 800 housing units immediately northeast and adjacent to the Walnut Street Business District.²⁹¹ Because the project site was owned by a variety of private property owners, the City intended to exercise eminent domain to acquire the three blocks needed. Opposition to the project developed quickly when property owners in the project area objected. Lenard (1967) reported, “A group of home owners protested against the municipal project because they felt it would create a ‘race problem.’ They pointed out that there were not enough Negroes to fill the proposed number of apartments and this would lead to mixing of the races.”²⁹² Ironically, despite the vast majority of the Black community being concentrated in the area around the Walnut Street Business District, the surrounding neighborhoods were also home to the Jewish community and a variety of other ethnic working-class White communities. Despite the demonstrated need for housing due to deteriorated conditions in the Sixth Ward, the property owners rejected the much-needed new housing on racial grounds.

When the City realized that Site “A” was no longer feasible, the focus shifted to alternative locations. Site “C” was ultimately chosen in 1935 as the preferred location. Located on the far northern, rural periphery of the City, it was developed along N. Sherman Boulevard on what had been a former farm field.²⁹³ The site was primarily accessible by car with no easy access to street car or bus routes. When Parklawn was delivered in 1937, the housing units were available to qualifying White residents only.²⁹⁴ Initially, the U.S. Housing Authority (USHA) was operating the development from 1937-1939. The 1938

²⁹¹ Lenard, “From Progressivism to Procrastination” (1967), 51-54.

²⁹² Lenard (1967), 56.

²⁹³ Lenard (1967), 57, 66-71.

²⁹⁴ United States House of Representatives, Committee on Appropriations, “Hearings on the Proposed Bill to Extend Until June 30, 1939, the Funds and Authority of the Public Works Administration” (1937), 92-93, 130.

annual reporting of the USHA showed that the project had been integrated for Whites and Blacks.²⁹⁵

Then, by 1941, a similar annual report shows that the City of Milwaukee had leased the project from the USHA and was operating it as a municipal public housing project.²⁹⁶

The greatest need for modernized housing by the mid-1930s was in the inner core neighborhoods.

Much of the housing stock was becoming technologically obsolete due to old age, disrepair, and neglect.

Particularly in the Sixth Ward, the Milwaukee Urban League and the Milwaukee chapter of the NAACP had continuously expressed concerns about deteriorated conditions and the City's demolition campaign

to manage blight.²⁹⁷ The housing supply in these neighborhoods was becoming increasingly

constrained, which severely limited the options of Black families that had little to no access to housing

outside the Negro District. Among government leadership, there was a contrast of opinions about the

inner core neighborhoods. Leon Gurda, the City Building Inspector, echoed the concerns of the

Milwaukee Urban League and NAACP going so far as to recommend the suspension of the demolition

campaign to preserve existing housing stock.²⁹⁸ In contrast, other leaders expressed a general disregard

for the poor housing conditions of the Black community. At a Federal level, Secretary of the Interior

Ickes regarded Milwaukee's slum conditions as a minimal concern by 1935 due to the City's demolition

campaign of blighted properties; while at a City level, Charles Bennett, the City Planning Engineer,

remarked that, "I do not believe we can support too large a project for negroes."²⁹⁹ This created a push-

and-pull between government leadership that left the Black community in a figurative and literal "no

²⁹⁵ United States Housing Authority, "Annual Report of the United States Housing Authority for the Fiscal Year 1938: Letter from the Administrator of the United States Housing Authority Transmitting Its Report for the Fiscal Year Ending June 30, 1938, with Supplementary Data on Activities to December 31, 1938" (1939), 49, 51-52.

United States Housing Authority, "Annual Report of the United States Housing Authority for the Fiscal Year 1939: Letter from the Administrator of the United States Housing Authority Transmitting Its Report for the Fiscal Year Ending June 30, 1939, with Supplementary Data on Activities to December 31, 1939" (1940), 44, 47-48.

²⁹⁶ United States Federal Works Agency, "Second Annual Report, Federal Works Agency, 1941" (1941), 411, 416.

²⁹⁷ Lenard (1967), 66, 95-96.

²⁹⁸ Lenard (1967), 84.

²⁹⁹ Lenard (1967), 66.

man's land." Thus, despite the demonstrated need due to blight conditions and a constrained housing supply, the Black community in the inner core would effectively be denied modernized housing until urban renewal.

This dissonance in government perspectives and decision making – particularly at the City level – is indicative of a delay tactic during this period. Milwaukee suffered mightily in the 1930s and 1940s due to the inaction of City leadership. Despite deteriorating conditions and a demonstrated need among many ethnic and racial communities for improved housing, City departments and the Common Council did not respond in a meaningful way. Because the Common Council refused to create a separate housing authority, the City was unable to fully benefit from the programs and funding opportunities in the Housing Act of 1937.³⁰⁰ This time delay from 1937-1944 allowed conditions to worsen and the housing shortage to grow more acute. By 1945, City leadership decided to seriously consider the full-scale redevelopment of the Sixth Ward. Despite this area having been the focus of slum concerns for multiple decades, it was only when conditions had become most acute that leadership decided to act. A 1944 housing survey conducted by the Milwaukee Public Land Commission and Milwaukee Housing Authority identified Slum Area "A" in the Sixth Ward. Though the area bounded by W. Walnut Street, N. 6th Street, N. 5th Street, W. Juneau Avenue, W. Winnebago Street, and N. 11th Street was designated for its blight conditions, the City took no further action beyond conducting the study.³⁰¹ Despite the time, attention, and demonstrated need, the communities of the Sixth Ward suffered malign neglect by City leadership.

³⁰⁰ Lenard (1967), 132-133.

³⁰¹ Lenard (1967), 128-130.



Figure 4.36: Location of Parklawn Site "A" in relation to the Walnut Street Business District & 6th Ward, 1935

D.iv. End of the Stagnant Years, 1930-1950

The 1930s and 1940s in Milwaukee were marked by a housing market collapse, the stoppage of all infrastructure spending, political obstructionism, stagnation in inner core neighborhoods, and initial indications of a racialized city. What could be called the "Lost Years" or "Stagnant Years" were unproductive and harmful. By the mid- to late-1940s, however, urban issues were quickly developing as a critical concern. These years would produce a new urban policy of a scale previously unimagined. What was initially called "urban redevelopment" would become "urban renewal." The idea started as a proposal in 1941 and was codified as law with a Federal appropriation of funds in 1949. It would come

to transform American cities and represent one of the most consequential periods in Milwaukee's urban history.

D.iv.a. Emergence of the Greer-Hansen Proposal, 1941

As America continued to languish in the Great Depression and the prospects of war imminent, Federal policymakers and private business interests were in search of an idea, program, or project to address urban conditions and the growing concern about slums and the lack of affordable housing. While the various pieces of housing legislation in the 1930s were impactful, they did not address the large-scale urban planning and redevelopment challenges that had begun to manifest by the late 1930s and early 1940s. Two Federal Reserve economists, Guy Greer and Alvin Hansen, developed a white paper to propose a new program. Published in 1941 by the National Planning Association as a planning pamphlet, "Urban Redevelopment and Housing: A Program for Post-War" proposed a coordinated effort by multiple levels of government to improve America's cities.

As the genesis for what would become Federal urban renewal legislation, it may be assumed that the Greer-Hansen proposal was anti-urban. In fact, it was the expressed purpose of the proposal to rebuild American cities. The authors summarized the challenges to America's cities as daunting: the lack of centralized planning led to haphazard and piecemeal development, over-zoning of land that created a speculative property market, depopulation of central areas to the suburbs, loss of property tax revenue due to blight and depopulation, a tax revenue structure that overemphasized assessed property values, and heavy indebtedness driving cities into bankruptcy.³⁰² To address these issues, the authors proposed a Federal response whereby large-scale urban redevelopment would be facilitated that cleared and redeveloped blighted areas, built additional affordable housing, and stabilized the fiscal conditions of America's municipalities. The proposal was a multi-pronged effort that sought to leverage the power

³⁰² Greer and Hansen, "Urban Redevelopment and Housing" (1941), 3-5.

and authority of the Federal government to encourage integrated and modernized municipal management and a coordinated strategy of urban redevelopment to remove blight and build housing.

In the proposal, the Federal government would act as a central actor empowering State and local units of government with legislative authority to take action and funding a cost-sharing program to finance the projects. Local control was emphasized as a hallmark of the effort to ensure that projects were responsive to local needs. Funding from the Federal government would be conditioned upon State enabling legislation that authorized local governments to create centralized planning agencies, the modernization of municipal management to coordinate the activities of multiple city departments, comprehensive local planning to address redevelopment projects, and the legal authority to pursue the projects through condemnation proceedings. These efforts were meant to envision planning at a city and metropolitan level.³⁰³ The proposal encouraged a broader vision to overcome parochial municipal interests and develop coordination among metropolitan communities.

The redevelopment projects envisioned by the proposal would produce a net-benefit for the cities and neighborhoods undertaking them. The slum clearance would create developable land for modern infrastructure and buildings, notably the construction of housing.³⁰⁴ Due to low vacancy rates and a lack of developable land in central areas of cities, the acquisition and clearance of private properties could potentially create a large number of acres available for new construction. The proposal regarded “housing as a national problem” requiring further study of how to boost production, overcome barriers, and finance affordable units. The Federal government could act as a capital provider through a new program implemented by the FHA or USHA. Utilizing Federal financial power, the authors envisioned a

³⁰³ Greer and Hansen (1941), 7-11.

³⁰⁴ Greer and Hansen (1941), 11-12.

new flow of funding to build housing.³⁰⁵ Thus, slum clearance and housing were seen as a combined effort. It was a mutually beneficial proposition to include the two elements together.

The Greer-Hansen proposal would ultimately serve as the template for the Housing Act of 1949. The core sections and components of the proposal would manifest themselves almost verbatim in the Act. Of any piece of urban intellectualism from the 1930s-1940s, the proposal is one of the few that can be traced directly from concept to legislation.

D.iv.b. Transition to Urban Renewal via the Housing Act of 1949

For a multitude of reasons, the Housing Act of 1949 was a watershed moment in the evolution of American urban policy – at both the Federal and local levels. The Act included multiple provisions that fundamentally altered, empowered, and funded government at varying levels to directly intervene in local property markets with an emphasis on housing. It is commonly remarked that the most compelling aspect of the Act is in its Declaration: “...the realization as soon as feasible of the goal of a decent home and suitable living environment for every American family.”³⁰⁶ The historical significance of this passage is interpreted as a Federal guarantee of housing for Americans. However, the nuances of the Act make it a more compelling piece of legislation.

The core focus of the Housing Act of 1949 was the development and delivery of affordable housing for lower-income and working-class Americans. While the Act did establish the Federal program of slum clearance and urban redevelopment, the primary vehicle for the program was housing projects – which was commonly identified in the “predominantly residential” requirement.³⁰⁷ Urban renewal as a Federal program would not be established until the Housing Act of 1954 after the debates and realization in

³⁰⁵ Greer and Hansen (1941), 12-22.

³⁰⁶ United States Congress, “Housing Act of 1949” (1949), Section 2.

³⁰⁷ Foard and Fefferman, “Federal Urban Renewal Legislation” (1960), 662.

multiple levels of government that the revitalization of American cities needed to also be considered from commercial and industrial perspectives, as well as residential ones. Title I of the Housing Act of 1949 established the overarching Federal program of urban redevelopment through housing construction that required local units of government to engage in the modernization of code enforcement, the creation and operation of local housing authorities, comprehensive planning for cities and neighborhoods, slum clearance of blighted conditions, and the delivery of housing. This was to be conducted from the municipal and metropolitan perspectives.³⁰⁸ Additionally, planning and housing programs were required to maintain consistency with other infrastructure investments, notably highway development and construction.³⁰⁹ Title II of the Act was an amendment to the Housing Act of 1937 that provided a large increase in funding for the FHA, thereby continuing the agency's lending operations. Title III utilized those newly appropriated funds to engage in the planning and construction of public housing projects. The Title established the goal of constructing 810,000 dwelling units – approximately 10% of units needed nationally – over the next six years to ameliorate America's housing shortage for lower-income and working-class households.³¹⁰ The cost-sharing structure for these developments was 70% Federal and 30% local.³¹¹ Because the Housing Act of 1949 focused on residential projects, the Federal government did not address commercial and industrial conditions in cities. Historically, the significance of the Act lies in its establishment of Federal urban redevelopment policy, the connection between slum clearance and public housing projects, and the continuation of FHA operations.

Historical assessments of the Housing Act of 1949 show a mix of opinions about its impact and legacy.

While my dissertation research does not provide a comprehensive history of the development of

³⁰⁸ Congress (1949), Title I, Section 101.

³⁰⁹ Congress (1949), Title I, Section 110(b)(2).

³¹⁰ Staff Review at *Monthly Labor Review*, "Provisions of the Housing Act of 1949" (1949), 156. Von Hoffman (2000), 310.

³¹¹ Foard and Fefferman (1960), 653-654.

Federal urban policy, a macro-level perspective on the issue is illuminating for Milwaukee's circumstances. Though the Act was ambitious in its desire to deliver a large volume of units in a short period of time, the achievement of the goal was delayed. It ultimately took ten years to deliver the full amount of units with significant delays caused by political obstructionism, the racialization of housing, and debates about housing design – all of which occurred at multiple levels of government and between different citizens' groups.³¹² Though the Act is fairly straightforward in the text of the legislation, it represented an idealism in post-World War II America that sought to energize the modernization of the country. This idealism has been criticized as naivety that sought to use real estate as a solution for broader and more entrenched societal issues. It has also been criticized as the impetus for large-scale, government-orchestrated class and race conflict within cities, which ultimately materialized with the codification of urban renewal as Federal policy in the Housing Act of 1954.³¹³

Milwaukee appeared to take something of an initial step to prepare to engage with Federal housing programs in 1949. Previously, the City had either squandered or obstructed any opportunity to meaningfully advance a housing agenda; but, by the late 1940s, housing challenges had become so acute in Milwaukee that City leadership was forced to act. The "Milwaukee Housing Survey of 1949" (1949) was a symbolic gesture of minimal effort. While the title of the survey sounds momentous, the document itself is underwhelming. In January 1949, the Common Council directed HACM to conduct a housing survey that would provide sufficient data and justification to allow the City to apply for Federal funds for low-rent housing.³¹⁴ The 17-page survey relied on previous blight studies – though they were never identified or referenced by name – to identify 294 blocks as blighted in the inner core. The sole map included in the survey was hand drawn and identified a rough survey area bounded by Lake

³¹² Von Hoffman (2000), 310.

³¹³ Von Hoffman (2000), 312, 318.

³¹⁴ Agency of Economic Research, "Milwaukee Housing Survey" (1949), 1.

Michigan on the east, Burleigh Street on the north, Sherman Boulevard and 40th Street on the west, and Oklahoma Avenue on the south.³¹⁵ Little is known about the effects of the survey due to its general nature and lack of specificity. Though it is a document in the historical record, it appears to have served a limited purpose beyond identifying and quantifying blighted blocks for Federal funding. It is not known, however, if the survey was ever accepted by the Federal government as sufficient to certify a project area for reimbursement.

³¹⁵ Agency of Economic Research (1949), frontispiece, 1.

Part III: Milwaukee's Post-War Urban Renewal & Highway Construction Period, 1950-1970

By the early 1950s, Milwaukee had emerged from two decades of increasingly difficult conditions. What could be regarded as the city's Lost Years, the time from 1930-1950 was marked by the Great Depression and World War II. These years produced a series of challenges: continued deterioration of neighborhoods with a resulting entrenchment of blight conditions, the continued exodus of White residents into the urban periphery and suburban communities, the concurrent loss of business activity that followed the out-migrating White residents, and the continued erosion of Milwaukee's property tax base. Mayor Frank Zeidler sought to confront these challenges through slum clearance, the construction of new replacement housing, and the annexation of available land in Milwaukee County.³¹⁶ The goal of slum clearance and housing construction in the inner core was to improve conditions – thereby revitalizing the neighborhoods, while the goal of the annexation campaign was to increase the City's tax base by opening up new greenfield sites for residential and industrial development. Thus, Zeidler's strategy was dual-focused and meant to simultaneously capture the economic benefits of an inner core revitalization and the White diaspora to the fringes of the city. This was meant to serve as a multi-faceted economic development strategy to build Milwaukee's economic strength and help it effectively compete with the suburbs.

To achieve the goals of Zeidler and other City leaders, additional assistance was needed as Milwaukee did not possess sufficient resources to achieve its goals. The Housing Acts of 1949 and 1954 provided the necessary Federal enabling legislation, planning framework, and cost sharing funds to help realize Milwaukee's vision. Upon entering this transition period of rapid change, the city would find itself enmeshed in a set of intersectional processes and historical events related to urban renewal,

³¹⁶ Rast, "Critical Junctures, Long-Term Processes" (2009), 406, 408. *See also* Rast, "Annexation Policy in Milwaukee" (2007).

expressway development, the racialization of housing submarkets, and the civil rights movement. This approximately 20-year period would be pivotal in Milwaukee's urban history and act as an inflection point in two critical spatial trends. The reality of urban renewal and expressway development in Milwaukee was that the efforts focused on and impacted the city's inner core housing submarkets the most. The formal markets on the periphery of the city were developing based on the market forces of supply and demand. In the post-World War II era, there was overwhelming demand for market-rate housing. Thus, the City had no interest in intervening in these markets other than to continuously expand infrastructure capacity and expressway access to facilitate new construction. Instead, the City focused its urban renewal and expressway development efforts on the informal markets of the inner core. The real issue was housing quality and availability in these neighborhoods, which was relied upon by lower-income and working-class families. Additionally, City leadership maintained its defensive posture around the central business district and used expressway development and urban renewal planning as an expulsive tool to protect business interests.

While discrimination and segregation had been elements of urban policy in Milwaukee for multiple decades, the racialization of the city became blatant at the onset of the Second Great Migration in the 1940s. As an intersectional issue, housing played a central role as a containment mechanism against the Black community enabled by government policy and social behavior. However, in conjunction with the substantial in-migration of new Black households, Black Milwaukee's community organizing capabilities grew rapidly and were used effectively to assert itself as a new power structure in the city. Whereas previous racial conflict in Milwaukee had been more implicit, it quickly became explicit and public. This conflict, in conjunction with class conflict against lower-income and working-class households regardless of ethnicity or race – is an important moment in the historical record to demonstrate the targeted intent and disparate impact suffered by Milwaukee's inner core neighborhoods.

Milwaukee’s urban redevelopment timeline developed over approximately 25 years. It was a series of events, public policy actions, and funding opportunities that shaped city planning, block clearance, rehabilitation, and redevelopment. The hallmark of the timeline is its accumulative effect: no single action acted as a defining moment; instead, the real consequence was their collective impact.

Table 4.27: Timeline of Post-World War II Urban Redevelopment Actions

<i>Date/Year</i>	<i>Action</i>	<i>Notes</i>
1945	Wisconsin’s Urban Redevelopment and Blighted Area Laws	Wisconsin State Legislature passes early versions of urban renewal legislation to comply with Federal requirements and empower local governments to respond to slums and blight.
1946	Milwaukee Metropolitan Area Origin-Destination Traffic Survey	Conducted by Federal, State, and local authorities to assess traffic volumes and congestion on Milwaukee’s streets.
1948	Shelley v. Kraemer 334 U.S. 1	U.S. Supreme Court decision declaring restrictive covenants to be unconstitutional.
1948	Milwaukee Expressway Bond Issuance Approved	A \$5,000,000 bond issuance was approved by referendum by City voters to fund expressway development.
1949	Housing Act of 1949	Title I of the Act authorized Federal funding for urban redevelopment projects focusing on slum clearance and redevelopment for housing.
1949	Milwaukee Housing Survey	Commissioned by the City of Milwaukee as preparation to apply for Federal assistance.
1950	Housing Authority of the City of Milwaukee (HACM) leads redevelopment efforts.	Authority is formally transferred to HACM to lead redevelopment efforts as an agent of the City.
1951	Dueling pro- and anti-public housing referenda approved.	Milwaukee voters split on referenda supporting and opposing additional public housing funding and construction in the city.
1953	Milwaukee County Expressway Commission (MCEC)	MCEC created to take control of expressway development on a metropolitan basis in Milwaukee County.
1954	Housing Act of 1954	Expanded Federal aid for urban renewal projects to include residential rehabilitation and the Workable Program.
1954	Milwaukee County formally accepts responsibility for expressway development.	City of Milwaukee transfers authority to Milwaukee County for expressway system design, construction funding, and management of displaced people.
1955	Milwaukee County Expressway Commission approves system design for expressways.	Based on nine years of planning, MCEC approves system design to secure funding and begin construction.

1955	Milwaukee's first "Workable Program" accepted.	Housing and Home Finance Agency approves Milwaukee's Workable Program for urban renewal.
1956	Housing Act of 1956	Authorized the expansion of urban renewal funding to include General Neighborhood Renewal Plans (GNRP) and Feasibility Surveys. Waived the "predominantly residential" requirement.
1956	Interstate Highway Act and Highway Revenue Act	Passed by U.S. Congress to fund and build nationwide system of expressways.
1957	Milwaukee expressways designated as interstates.	State and County authorities re-designate Milwaukee County expressway routes as interstates to receive 90-10 cost sharing structure under the Interstate Highway Act.
1957	Milwaukee's General Report No. 1 completed under the GNRP program.	Report develops a comprehensive approach to urban renewal efforts in Milwaukee's three major renewal areas: Juneautown, Kilbourntown, and Walker's Point.
1958	Wisconsin's Blight Elimination and Slum Clearance Act	Wisconsin State Legislature empowers local municipalities to create and operate redevelopment authorities.
1958	Redevelopment Authority of the City of Milwaukee (RACM) created.	Milwaukee Common Council authorizes the creation of RACM under Wisconsin's Blight Elimination and Slum Clearance Act.
1959	Housing Act of 1959	Authorized Federal funding for Community Renewal Programs (CRP).
1959	Amendments to Wisconsin's Blight Elimination and Slum Clearance Act	Wisconsin State Legislature amends condemnation procedures in original legislation to streamline jury verdicts for property takings.
1960	RACM leads Milwaukee's urban renewal efforts.	RACM is officially designated as the local public agency (LPA) for urban renewal projects.
1961	Milwaukee Department of City Development (DCD) created.	Multiple City planning agencies consolidated under DCD including the Plan Commission, Housing Authority, and Redevelopment Authority.
1962	U.S. Presidential Executive Order 11063 "Equal Opportunity in Housing"	President John F. Kennedy de-segregates U.S. public housing projects.
1964	Milwaukee's CRP created.	Milwaukee DCD completes the City's CRP for Federal review and approval.
1965	Housing Act of 1965	Authorized Federal funding for code enforcement projects.

Sources: United States Department of Housing and Urban Development, "Urban Renewal Directory, June 30, 1968" (1968), 126. Dickenson, "Through Highways" (2015). League of Women Voters, "Housing in Milwaukee" (1968). Redevelopment Authority of the City of Milwaukee, "City of Milwaukee Workable Program" (1960), 32-33. City of Milwaukee Department of City Development, "Milwaukee's Community Renewal Program: Projects and Objectives" (1964), 11-12. Cook, "The Battle Against Blight" (1960), 447, 452-454. Foard and Fefferman, "Federal Urban Renewal Legislation" (1960), 659, 670.

A. A New Paradigm: Framework for Urban Redevelopment

A.i. Recovering from the Stagnant Years

By the early 1950s, Milwaukee as a community and City leadership specifically felt a sense of urgency.

After emerging from two decades of increasingly difficult conditions during the Great Depression and World War II, there was a strong desire to move forward into a more prosperous era. With the intent of building the “Milwaukee of the future,” the City began large-scale planning and budgeting efforts for capital expenditures under the Permanent Improvement Program.³¹⁷ Under its first spending cycle from 1951-1956, the program identified six priorities for public funds:³¹⁸

1. To invest in parking facilities, city streets, and expressways to alleviate traffic congestion and more efficiently manage activity in the city;
2. To modernize, rebuild, and repair public buildings and facilities to provide greater levels of service to the city’s increasing population;
3. To extend infrastructure into newly annexed areas to provide services and protection to residents;
4. To redevelop blighted areas to improve housing quality and standards of living while reducing disease and juvenile delinquency;
5. To invest in new housing construction to alleviate the challenges of temporary housing, address blight and slum conditions in numerous neighborhoods, and address the overall shortage of approximately 20,000 dwelling units; and,
6. To invest in the backlog of public works projects that were underfunded or unfunded during the 1930s and 1940s.

³¹⁷ City of Milwaukee, “Permanent Improvement Program 1951-1956” (1951), 3.

³¹⁸ City of Milwaukee (1951), 6.

This early identification of spending priorities served as a template for City decision making over the next two decades. In leveraging Federal cost sharing under urban renewal and expressway development legislation, the City was able to offset an overwhelming amount of financial burden to pursue its urban redevelopment and expansion goals. While the goals as originally published were well intended, their outcomes produced severe negative consequences and disparities.

A.ii. Persistent Blight Conditions: Residential, Commercial, Industrial

Urban renewal projects represented the most aggressive position the City had ever taken on blight in its history. Over the course of approximately 50 years from the 1910s-1960s, the City regularly identified slum areas and blight districts; but, there was never any meaningful progress made on eliminating the deteriorated conditions thereby providing higher quality housing to residents. By the 1960s, blight had become an entrenched and persistent issue for inner core neighborhoods. This was ironically juxtaposed with the City's simultaneous annexation campaign that expanded formal housing submarkets on the city's periphery. Annexation resulted in an expanded tax base, additional housing units, and an increase in population. However, it did nothing to ameliorate challenges in the inner core.³¹⁹

As the inner core housing submarkets suffered these challenges, they also confronted de-population.³²⁰ As developers continued to build subdivisions on Milwaukee's periphery, the City's overall housing submarkets became decentralized. Previously, housing demand emanated from the central business district and inner core neighborhoods; but, due to the suburbanization of housing, White families with a sufficient income level consistently moved to periphery housing submarkets. As a result, those who remained in the inner core neighborhoods were predominantly lower-income and working-class White

³¹⁹ City of Milwaukee, "Residential Blight Analysis" (1964), 5-6.

³²⁰ John Steele Appraisal Company, "Re-Use Appraisal Hay Market Square" (1966), 16.

and non-White. Thus, these conditions created a disparate impact for Black Milwaukee in that Black residents were confined to the inner core by discriminatory housing policies that prohibited them from moving to higher quality housing in other neighborhoods.

As the City began its more purposeful confrontation with residential blight, it also – for the first time – began acknowledging and confronting commercial and industrial blight. Under the auspices of the Community Renewal Program, Candeub, Fleissig & Associates developed the “Non-Residential Blight Study” (1964) at the direction of the City. The study classified 144 commercial areas and 63 industrial areas for assessment and ranking of blight conditions.³²¹ Of those ranked highest for blight, the industrial areas were concentrated along the railroad and river corridors of the Menomonee Valley, Milwaukee River, inner harbor, and Kinnickinnic River; and, the commercial areas were concentrated in and around the central business district, lower East Side, near South Side, and Inner Core – North.³²² Parts of these areas would ultimately appear in urban renewal project plans. Initially, the plans were focused on select land uses – for example, residential-only or commercial-only districts. However, they also developed mixed-used plans that considered neighborhoods more cohesively.

These studies of residential, commercial, and industrial blight represent an early version of the expansive view that the City ultimately adopted for urban renewal.³²³ Each study indicated that blight could be found in districts throughout the city to varying degrees of intensity. The consultant findings served as the impetus for a concern among leadership that blight as a contagion had potentially spread

³²¹ Candeub, Fleissig & Associates, “Non-Residential Blight Study” (1964), 5.

³²² Candeub, Fleissig & Associates (1964), 14-20.

³²³ Note that both blight studies were referenced in the City’s application materials for the Community Renewal Program (CRP) as justification for urban renewal projects. The application was submitted in 1964.

beyond the inner core. As a result, Milwaukee's urban renewal approach was an aggressive action against this spread.

A.iii. Milwaukee's Economic Hypothesis for Urban Renewal

In a review of primary source documents, the historical record reflects the following reasonable summation of the City of Milwaukee's economic hypothesis for urban renewal.

Problem Statement

Deteriorated neighborhood conditions, including slums and blight, were becoming an endemic problem in the inner core neighborhoods. These threatened Milwaukee's economic base because of decreased quality of life, public health risks, and decreases in assessed property values. Further, these conditions were contributing to the city's housing shortage and were a manifestation of the technological obsolescence of buildings and utilities in Milwaukee's oldest neighborhoods.

Solutions Statement

To provide improved conditions for residents and maintain the city's economic competitiveness for commercial and industrial enterprise, large-scale rehabilitation and redevelopment of deteriorated conditions was needed. This would include the conservation of areas that needed select amounts of rehabilitation, while separately employing clearance and redevelopment projects for slum areas. The clearance of land would facilitate new developable acreage for housing, commercial companies, and industrial development. These projects would modernize the obsolescence of Milwaukee's built environment and infrastructure, thereby improving quality of life and enhancing economic productivity.

A.iv. Milwaukee's Economic Hypothesis for Expressway Development

In a review of primary source documents, the historical record reflects the following reasonable summation of the City of Milwaukee's economic hypothesis for expressway development.

Problem Statement

Due to the increased adoption of the personal automobile and the movement of freight via trucks, Milwaukee's street system was becoming overwhelmed with daily traffic congestion. This was leading to traffic accidents (including serious injuries and fatalities), slow transit times for freight, and slow transit times for the daily commute of employees. This resulted in additional vehicle maintenance costs, decreased access to residential neighborhoods, and decreased access to commercial and industrial properties. Generally speaking, this was a loss for economic activity in and around the central business district.

Solutions Statement

As a traffic engineering problem, the expressway system would facilitate efficient access for daily commuters and commercial traffic. Whether accessing the central business district, nearby industrial corridors along the railways and rivers, or the inner core neighborhoods, the expressways would provide immediate access at a variety of on/off ramps for personal vehicles and freight trucks. By reducing drive time and vehicle maintenance costs, economic productivity would be boosted through improved access to job centers and residential areas. This would strengthen Milwaukee's economic base, thereby increasing tax revenues.

B. Redevelopment Agenda: Urban Renewal & Redevelopment Plans

The initiation of urban renewal legislation in the Housing Act of 1949 marked an inflection point and major opportunity for Milwaukee. Previously struggling with expanding blight in inner core neighborhoods, the City had historically lacked the resources to adequately address the scale of the problem. However, with financial assistance from the Federal government, the prospect of curing the city of slums and blight seemed within reach. In hindsight, we can say that, on par, urban renewal was a net negative for American cities. The damage inflicted by highway clearance, redevelopment, and conservation projects created multi-generational challenges for inner core communities. However, at

the time, urban renewal was seen as an idealistic and positive approach to address slums and blight in cities.

To maintain regulatory compliance with Federal requirements, the periodic update reports submitted by the City to the Housing and Home Finance Agency provide important insight into how Milwaukee's leadership was approaching neighborhood redevelopment.³²⁴ Based on these reports, it is clear that Milwaukee embraced urban renewal programs through the Federal government. City leadership saw an opportunity to modernize Milwaukee, enhance its economic competitiveness, build affordable housing, and improve quality of life in neighborhoods. In the reports, Milwaukee self-identifies itself as a "city on the move" proudly stating: "The new spirit of progress is characterized by Milwaukee being the first major city in the United States to initiate and adopt as official policy a Community Renewal Program."³²⁵

While these reports are important primary source documents detailing Milwaukee's urban renewal efforts, they are indicative of a larger national trend to standardize municipal management across the country and build healthy cities. What we consider as normal course of business today was novel at the time. These progress updates were essentially a report card demonstrating Milwaukee's modernization. In the context of the large-scale redevelopment occurring in the city's inner core neighborhoods, the Federal urban renewal programs both forced and incentivized Milwaukee to professionalize its engineering, planning, and redevelopment departments. While the City had historically pioneered zoning and building codes, those types of real estate regulation became standard from a Federal perspective. As a result, the City institutionalized a number of responsibilities in various departments: zoning code enforcement, building code enforcement, neighborhood planning and redevelopment,

³²⁴ City of Milwaukee, "A Review of Progress under the Workable Program" (1965), i.

³²⁵ City of Milwaukee (1965), 1.

managing the relocation of displaced families, and managing citizen participation.³²⁶ Thus, urban renewal – both nationally and locally – was far more nuanced than what is typically discussed in popularized narrative.

In hindsight, Milwaukee’s early successes in the mid- to late-1950s in new construction and development in the central business district potentially gave leadership a false sense of confidence. The city’s first urban renewal project, East Side “A”, coincided with significant new investment in the downtown in close proximity to East and West Wisconsin Avenue. Commercial and office construction projects – whether new construction or renovation – included the IBM Building, the Lewis Center, Juneau Square, the Northwestern Life Insurance Building, the Edison Liquor Building, the Johnson Service addition, the Pfister Hotel addition, the Greyhound Building, the rehabilitation of the Security Building, the Time Insurance Building, the Marshall and Ilsley Bank Building, a new railroad depot, the new Federal Post Office, and an addition to the Vocational School.³²⁷ While the volume of this investment is notable for the business community, these were not residential projects. These were market rate developments driven by demand in downtown activity that was wholly separate from the residents living in the nearby inner core neighborhoods. The East Side “A” redevelopment project generated additional mixed-used development. The City noted in its 1965 report that this included two 14-story buildings, one 27-story building, and a shopping center with an estimated total value of \$17.289 million. In 2023 dollars, the value is approximately \$164.1 million.³²⁸ These investments identify Milwaukee as a unique case study in the criticism of urban renewal. Though the Federal legislation was meant to be well-intended, it was criticized as a mechanism to enable the private sector

³²⁶ City of Milwaukee (1965), 2, 14-15, 37-43, 56-61, 64-72.

³²⁷ City of Milwaukee (1965), 1-2.

³²⁸ City of Milwaukee (1965), 2. The Federal Reserve Bank of Minneapolis’s Inflation Calculator was used to convert 1965 dollars to 2023 dollars. The calculator is available online: <https://www.minneapolisfed.org/about-us/monetary-policy/inflation-calculator>.

to acquire cheap land in highly desirable areas for market-rate and luxury projects that did not serve lower-income and working-class people. At a local level, these large developments were facilitated by public-private partnerships.³²⁹ This highlights the irony of urban renewal and the unintended consequences inherent in public policy of such magnitude.

To make an important distinction, urban renewal as it is commonly understood in contemporary conversation was Federally enabled in the Housing Act of 1954. When the Federal government originally codified its urban redevelopment policies into the Housing Act of 1949, the legislation had an almost sole focus on housing projects. The 1954 Act was a reorientation of this policy to be far more expansive with a shift into urban renewal that encouraged wholesale redevelopment of urban environments for residential, commercial, and industrial land uses. This legislative change pushed public housing into a subordinate position and gave primacy to other redevelopment projects.³³⁰

This large-scale government intervention in neighborhood property markets catalyzed distortions in pricing that effectively prohibited working-class residents from affording developable land in their communities. Further, ongoing zoning code enforcement that had become prevalent in American cities produced additional negative economic consequences. It catalyzed the capital depreciation cycle by creating distorted and inflated market values of land prices. After being re-zoned for commercial or manufacturing uses, the residential use lost value because a potential future commercial user would generate more economic value. As a result, the concurrent effects of zoning and urban renewal created negative economic conditions in inner core neighborhoods.

³²⁹ Flanagan, "The Housing Act of 1954" (1997), 275. Von Hoffman (2000), 318.

³³⁰ Foard and Fefferman, "Federal Urban Renewal Legislation" (1960), 655-658.

Of the myriad of primary sources available that document urban renewal in Milwaukee, official reporting from the Housing and Home Finance Agency provides important details about projects approved for Federal loans or grants. These details are not readily available from other sources and provide important clarity on what projects were actually approved in Milwaukee. Ironically, the opposite is also true. If a researcher solely examined the planning documents for urban renewal areas written or commissioned by the City of Milwaukee, the materials would give the impression that Milwaukee undertook 21 projects. However, there is a mismatch between Federal reporting and local planning documents; while the City conducted extensive planning for the urban renewal areas, the Federal government only reported six projects as of 1965. Additionally, none of these projects were ever certified as having been successfully completed. Further, the Federal reports do not acknowledge the role that expressway development played in urban redevelopment. While the project plans for urban renewal areas frequently reference expressway clearance zones, the Federal reports almost exclusively focus on slum clearance and its relationship to blighted residential areas.

Table 4.28: Summary of Urban Renewal Project Areas Submitted for Federal Review, 1952-1965

Project	Program	Project Number	Current Status*	Basis for Assistance	Strategy					Characteristics of Project Area				Estimated Project Costs (\$000)†		
					Downtown Defensive	Residential Blight	Indus./Comm. Blight	Institutional	Expressway	Dwelling Units		Families		Total Gross Project Cost	Federal Project Grant	Local Share
										Sub-Standard	Standard	White	Non-White			

Federally Approved for Funding under Title I of Housing Act of 1949, As Amended																
<i>Eastside A</i>	R	R-1	E	R	X	X		X	X	674	366	900	62	15,575	8,252	
<i>Hillside</i>	U	1-2	E	R		X			X	416	19	6	317	4,098	1,999	
<i>Kilbourntown I</i>	R	R-9	P	OB						--	--	--	--	1,060	295	
<i>Kilbourntown II</i>	R	R-10	P	OB						1	--	NR	NR	1,357	0	1,357
<i>Lower Third Ward</i>	U	1-1	E	R	X	X	X		X	298	144	339	20	5,065	2,280	
<i>Marquette</i>	R	R-20	P	U		X		X		947	758	237	--	15,682	7,567	

Notes: *As of 1965. †Reported in 1963 and 1965 dollars.

Program: R – Urban renewal project authorized under amendments in the Housing Act of 1954; U – Slum clearance and urban renewal project authorized under Title I of the Housing Act of 1949, including amendments prior to those in the Housing Act of 1954.

Current Status: P – Final project plans (Part I, application for loan and grant) approved by URA; E – Authorization of a contract with a local public agency for Title I loan and/or grant for the execution of final project plans (Part II, application for loan and grant) approved by URA.

Basis for Assistance to Project Area: R – Blighted residential area (“slum area or deteriorated or deteriorating area” predominantly residential in character); OB – Other blighted area (“slum area or deteriorated or deteriorating area” other than an area predominantly residential in character); U – Urban renewal project (located in or near a college or university area) assisted under Section 112, added to Title I of the Housing Act of 1959.

Reporting Data: “- -” – 0; “NR” – Not reported by local agency.

Sources: Housing and Home Finance Agency, Urban Renewal Administration, “Urban Renewal Project Characteristics, June 30, 1962” (1962). United States Department of Housing and Urban Development, “Urban Renewal Directory, June 30, 1968” (1968).

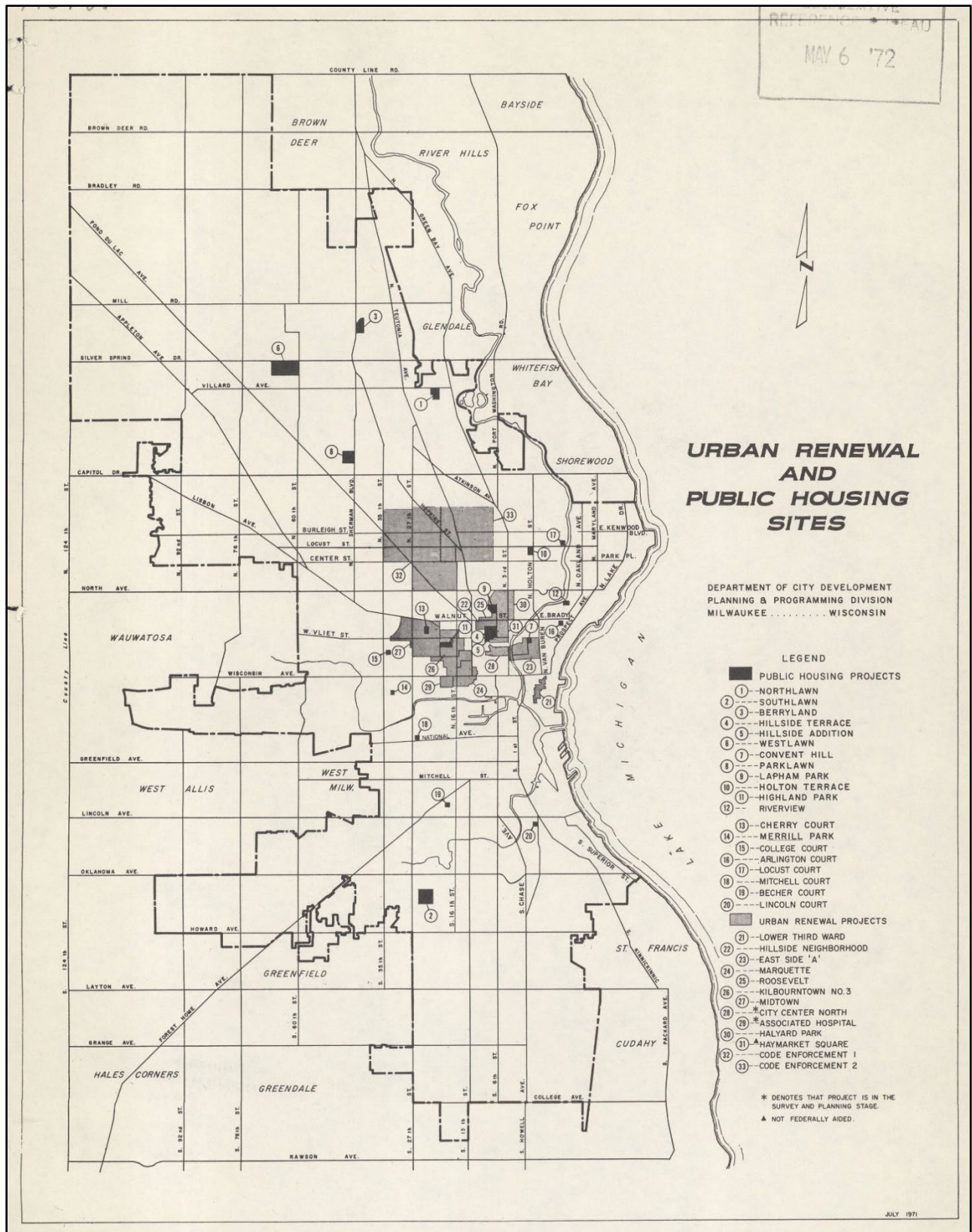


Figure 4.37: Summary Map of Urban Renewal & Public Housing Projects in Milwaukee, 1971
(Courtesy of UWM AGSL, Digital ID ctymke000112)



Lower Third Ward, Looking North (circa mid-1950s)

Source: Wenzlick (1959)



Hay Market Square, Looking Northeast (circa mid-1960s)

Source: John Steele Appraisal Co. (1966)

Figure 4.38: Neighborhood Conditions Prior to Urban Renewal Project Redevelopment
(Courtesy of Special Collections at the University of Wisconsin-Libraries
and Milwaukee Municipal Research Library)

B.i. Federal Oversight & Re-Certification Process, 1958-1964

To remain in good standing with the Federal government, the City was required to re-certify under multiple urban renewal programs to continue to qualify for cost sharing reimbursement. As Federal legislation evolved, these programs included the Workable Program, the General Neighborhood Renewal Program (GNRP), and the Community Renewal Program (CRP). These reports represent a summation of not only Milwaukee's urban renewal activities but also the modernization of its municipal processes and the expansion of its city planning and engineering departments.

Note that reports under the Workable Program and CRP were available in university archive libraries. However, the location of Milwaukee's sole GNRP plan was not identifiable. As a result, it was not reviewed for this research; and, its details do not appear in this section.

B.i.a. Workable Program for Urban Renewal, 1958-1960

The Federal Workable Program was the overarching operational mechanism in the late 1950s that facilitated urban renewal projects. A component of the Housing Act of 1954 that expanded Federal policy from urban redevelopment to urban renewal, the program required participating municipalities to complete recertification on an annual basis to demonstrate that their operations conformed to the vision of urban renewal as a tool to rehabilitate and redevelop deteriorated neighborhoods.³³¹ Each recertification report was submitted to the Federal government for review. In a fairly rapid fashion, Milwaukee built a robust program for recertification that consisted of a coordinated effort among multiple City departments to effectively address slum and blight conditions in select neighborhoods.³³² While the recertification was for the City overall, it was clear that the actual programs undertaken for urban renewal purposes were targeted at the inner core neighborhoods.

³³¹ Flanagan (1997), 274-275. Foard and Fefferman (1960), 636-637.

³³² City of Milwaukee Office of Urban Renewal Coordinator, "Recertification of Workable Program" (1958), 24-25.

Each recertification report was a summary of annual activities by the City. It provided a general outline of operations and accomplishments with select amounts of detail where the City deemed appropriate. Each recertification report contained seven sections: 1) codes and ordinances, 2) comprehensive community plan, 3) neighborhood analysis, 4) administrative organization, 5) financing, 6) relocation, and 7) citizen participation. The reports make clear that Milwaukee was diligently pursuing a comprehensive program for the city. Though the reports indicate that urban renewal began slowly in Milwaukee, it quickly developed by 1960 into what would become a large-scale effort.

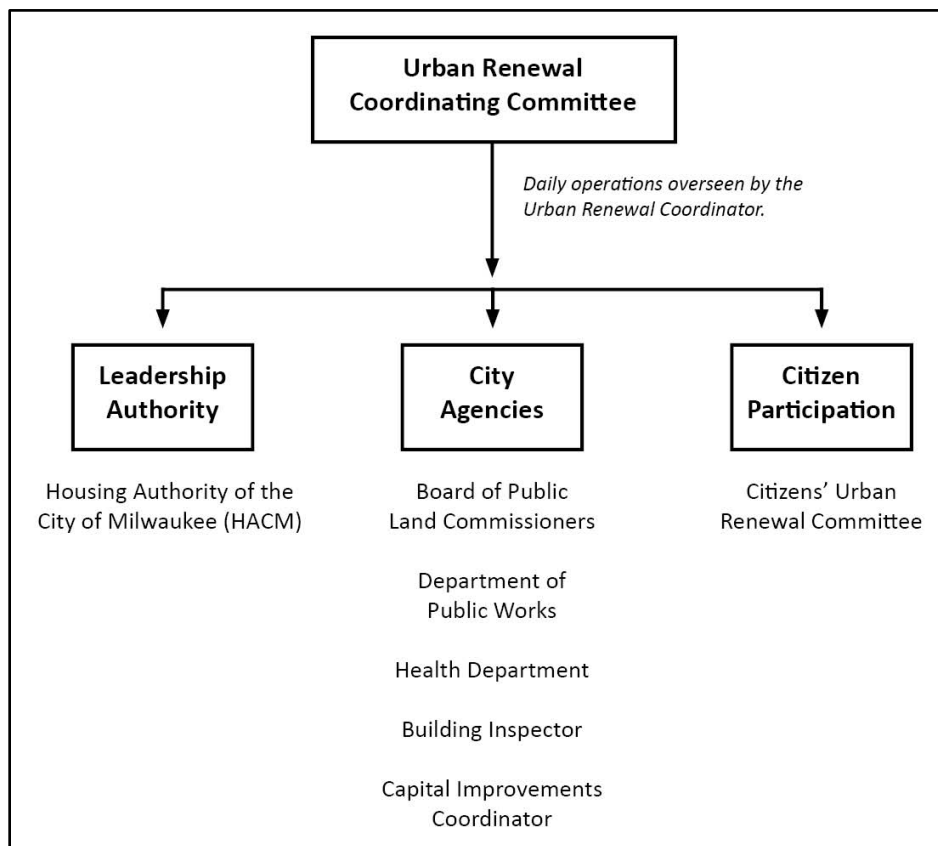


Figure 4.39: Milwaukee’s Municipal Hierarchy Under the Workable Program, 1958-1960

Milwaukee’s Workable Program focused on the city proper, but also considered the broader metropolitan perspective. Its recertifications in 1958 and 1960 discuss the City’s 1957 Comprehensive Plan as the basis for its urban renewal planning efforts. This vision provided a coordinated direction for

the next 20 years and was also a requirement of the Federal Workable Program. By 1960, the Southeastern Wisconsin Regional Planning Commission (SEWRPC) was in development. Multiple parties were building consensus for the establishment of the organization. The Metropolitan Study Commission was beginning its work to reassess the metro Milwaukee area and begin building a basis for a long-term vision for its many communities. Within the city, the Capital Improvements Program (CIP) managed capital expenditures for City departments on six-year increments to ensure that City leadership was employing a mid-term perspective on infrastructure spending.³³³

While Milwaukee had historically been a leader in zoning and building code enforcement as early as the 1910s, the Federal Workable Program required all participating municipalities to engage in consistent and citywide enforcement. This was indicative of a broader urban renewal goal of standardizing municipal operations across the country. Zoning and building code enforcement was seen as one of the most direct ways to improve neighborhood conditions by specifically addressing problem properties. Milwaukee's 1958 and 1960 recertification reports provide general updates on code enforcement and data about actions taken by the Building Inspector and Health Department.³³⁴ The 1960 report, however, provided data about displaced households due to code enforcement. For dwelling units, rooming houses, and hotels, 134 units were vacated due to violations displacing 653 people. The report notes that this data was only an estimate due to technical difficulties with the Housing Department's use of an IBM computer.³³⁵ To note, this "technical difficulty" was typical of statements by the City and County when addressing displaced households. Because neither municipal entity properly scaled or coordinated their relocation assistance programs, the data reporting frequently included excuses as to

³³³ Milwaukee Urban Renewal Coordinator (1958), 3-4. Redevelopment Authority of the City of Milwaukee (RACM), "City of Milwaukee Workable Program" (1960), 3.

³³⁴ Milwaukee Urban Renewal Coordinator (1958), 1-2, 9-23. RACM (1960), 1-2, 7-19.

³³⁵ RACM (1960), 13-15.

their inadequate efforts. The 1960 recertification report also provided data on the use of FHA 221 certificates by the Housing Authority of the City of Milwaukee to re-house families displaced by urban renewal projects, code violations, expressway development, infrastructure projects, and public housing projects. For the reporting year, 263 families were referred for certificate assistance, 103 of them received a certificate, and 46 were endorsed by the FHA.³³⁶ These data highlight the detailed nature of displacement, the variety of government actions that caused it, and the ensuing process – or lack thereof – for displaced families in trying to access assistance programs.

When the City began its urban renewal efforts, it did not have a sufficient cash position to fulfill its cost sharing obligations with the Federal government and finance the projects. As a result, the City proposed using general obligation debt for funding. By the late 1950s, the City was carrying a low rate of bond indebtedness due to a previous policy enacted during the Great Depression and World War II. In an effort to protect the City's finances, leadership had adopted a policy to not issue debt from 1935-1949. This policy put the City in a strong fiscal condition as it entered the 1950s. City leadership proposed financing its urban renewal programs with three bond issuances at \$2 million per issuance per annum from 1958-1960. These issuances would need to be approved by the public on a referendum.³³⁷ By 1960, however, the State Legislature had amended the Blight Elimination and Slum Clearance Act to empower local redevelopment authorities with the ability to issue bonds without public approval. As a result, Milwaukee's urban renewal cost sharing obligation was funded by bonds issued by the Redevelopment Authority of the City of Milwaukee.³³⁸

³³⁶ RACM (1960), 37-38.

³³⁷ Milwaukee Urban Renewal Coordinator (1958), 28-30.

³³⁸ RACM (1960), 36.

Due to the impacts of urban renewal, the Workable Program required that each municipal entity address the relocation of displaced residents and ongoing citizen participation efforts. In the recertification reports available from 1958 and 1960, some displacement had occurred and community engagement was ongoing. However, urban renewal and expressway development had not begun to scale up where the public would have fully understood the enormity of their impact. For displaced residents, the Housing Authority of the City of Milwaukee (HACM) was originally responsible for relocation assistance. This included – in its entirety – the use of FHA 221 vouchers to access other housing. Technically, this service provided by HACM fulfilled the Federal requirement; but, in reality, it quickly became woefully inadequate as thousands of households were displaced. Similarly, citizen participation and community engagement were ongoing by the late 1950s, but the public did not fully understand the scope of urban renewal. As a result, the community engagement was rather performative because so few projects were underway.³³⁹

While the reports are informative about the early years of Milwaukee’s urban renewal program, they are also revealing about the degree to which opposition from private property owners and the general public was slowing progress. Despite City leadership moving forward with urban renewal projects, property owners in the Eastside, Lower Third Ward, and Hillside areas fought back. By the late 1950s, they were consistently challenging the City’s authority to condemn their property and slowed the program’s process through litigation. At the City’s request, the State Legislature amended the Blight Elimination and Slum Clearance Act to facilitate more efficient condemnation proceedings that limited the ability of private property owners to challenge the eminent domain action in court.³⁴⁰ Thus, the action by City and State leadership to create a codified process by which the objections of local

³³⁹ Milwaukee Urban Renewal Coordinator (1958), 31-35. RACM (1960), 37-41.

³⁴⁰ Milwaukee Urban Renewal Coordinator (1958), 26-27. RACM (1960), 2, 32-33. Cook, “The Battle Against Blight” (1960), 449-451.

stakeholders were ignored was ironically antithetical to the neighborhood redevelopment proposed under urban renewal. This marks a moment in Milwaukee's urban renewal history because of the anti-democratic nature of eroding the private property rights of neighborhood residents.

B.i.b. Community Renewal Program (CRP), 1964

Milwaukee's community renewal program was born out of the Housing Act of 1956 that continued the Federal expansion of urban renewal efforts. At a Federal level, the CRP was seen as a necessary additional requirement to ensure that local municipalities were engaging in strategic and long-term planning with respect to urban renewal.³⁴¹ This fit within the intent of the Workable Program for the modernization of municipal governance. Milwaukee's 1964 CRP application and certification documentation was submitted in six parts: 1) an executive summary of the program overall, 2) the urban renewal techniques proposed for each project area, 3) the various project areas proposed for redevelopment or conservation, 4) the program's community engagement efforts for citizen participation, 5) an assessment of the relocation plan for displaced people, and 6) a financial assessment of the City's capability to pursue urban renewal. The application's approximately 500 pages of materials represented what was envisioned by the Federal government as comprehensive planning under the CRP.

The basis for Milwaukee's CRP was the planning documents under the General Neighborhood Renewal Program (GNRP) and two residential and non-residential blight studies conducted in the early 1960s. Based on the study results indicating blight and slum conditions in the inner core, City leadership embraced the redevelopment and conservation of neighborhoods. The conservation proposals emphasized the relationship between the City and neighborhood stakeholders in a process that would preserve the existing neighborhood and conduct spot treatments on select deteriorated areas. In

³⁴¹ Foard and Fefferman (1960), 659.

contrast, the redevelopment proposals discussed the relationship between the City and private developers in what would be neighborhood clearance and new construction.³⁴² As of 1964, the City was proposing five projects that represented a mix of urban renewal techniques: Lower Third Ward, Hillside Neighborhood, Eastside “A,” Marquette, and Roosevelt. In addition, eight redevelopment projects, four conservation projects, and four special treatment areas were being considered.³⁴³ For the inner core, this represented a multitude of projects that covered almost the entirety of those neighborhoods.

Table 4.29: Urban Renewal Projects Proposed Under Milwaukee’s CRP, 1964

<i>Attribute</i>	<i>Lower Third Ward</i>	<i>Hillside Neighborhood</i>	<i>Eastside “A”</i>	<i>Marquette</i>	<i>Roosevelt</i>
<i>Gross Acreage</i>	31.5	24.5	63.9	89.2	9
<i>Displacement</i>					
<i>Individuals</i>	20	69	325 (E)	2,415 (E)	12 (E)
<i>Families</i>	190	116	300 (E)	259 (E)	88 (E)
<i>Businesses</i>	58	77	162 (E)	52 (E)	34 (E)
<i>Structures</i>	230	204	223	82	60
<i>Gross Project Cost</i>					
1964	\$5,065,220	\$4,098,437	\$15,574,917	\$11,929,654	\$1,241,415
2023	\$48.83 mil	\$39.07 mil	\$146.5 mil	\$107.44 mil	\$9.77 mil
<i>Completion Date</i>	1965	1966	1969	NR	NR

Notes: NR – Not reported, (E) - Estimated

Source: City of Milwaukee Department of City Development, “Milwaukee’s Community Renewal Program Projects and Objectives” (1964), 13.

Due to the number and scale of the urban renewal project areas, the certification submittal included plans for citizen participation and a relocation analysis.³⁴⁴ While each document was lengthy and provided large amounts of detail, they were generally performative in nature. The citizen participation plan gave the impression that a large number of stakeholders were engaged and that extensive work was ongoing in neighborhoods. Similarly, the relocation analysis indicated that City resources were

³⁴² See City of Milwaukee Department of City Development, “Urban Renewal Techniques: Conservation, Redevelopment, Organization, Strategy” (1964).

³⁴³ City of Milwaukee Department of City Development, “Milwaukee’s Community Renewal Program Projects and Objectives” (1964), 13, 21-26, 30-31.

³⁴⁴ See Citizens’ Governmental Research Bureau, “Citizen Participation in Community Development and Urban Renewal” (1964), and Relocation and Management Associates, “City of Milwaukee Community Renewal Program: A Relocation Analysis” (1964).

more than adequate to accommodate displaced households and that vacant housing units were available and affordable. The message communicated through these two documents was disingenuous and inaccurate. The community engagement, while regular meetings were held and neighborhood organizations had been identified, was not meaningfully facilitating a real dialogue between the City and neighborhood residents to develop projects that fit the needs of the community. Admittedly, the community engagement plan did identify nine neighborhood organizations that were engaged with the City. Further, the volume of displacement of households and businesses caused by urban renewal and expressway development overwhelmed City and County resources. Any relocation efforts were under resourced and disjointed. While the plans technically satisfied Federal requirements, the reality in Milwaukee neighborhoods proved that circumstances were more challenging.

Despite Milwaukee's embrace of Federal urban renewal programs, City leadership needed to develop a feasible financial model to finance its cost-sharing responsibility. Based on projections, it was clear by the early 1960s that Milwaukee's "normal economic expansion" could not generate sufficient tax revenue to provide municipal services to the expanding city. Further, blight conditions were threatening the City's property tax base, which would erode Milwaukee's fiscal condition if declines in assessed property values continued.³⁴⁵ As a result, City leadership needed to propose a new component in its municipal budgeting process that enabled urban renewal.

The premise of Milwaukee's financial model for urban renewal was to make large-scale, short-term investments in neighborhood redevelopment that would yield modernized buildings, increases in assessed property values, and, therefore, increases in tax revenues. These increases in tax revenues would hypothetically create a net positive income stream to pay for the cash appropriation and general

³⁴⁵ Milwaukee Office of the Comptroller, "Milwaukee's Financial Capability for Urban Renewal" (1964), 1, 7.

obligation debt needed to finance urban renewal. Ultimately, the City proposed urban renewal as a permanent component of its Capital Improvements Program, which included annual cash appropriations and bond issuances of general obligation debt.³⁴⁶ The financial model assumed a tax rate of \$14 per \$1,000 of assessed value, a 15-year maturity on the general obligation bonds, and a 3% interest rate.³⁴⁷ The model anticipated two break even points: taxes returned and project costs paid. When the City focused its CRP on three inner core project areas, the break even points varied. The Lower Third Ward and Eastside “A” were modeled to break even by the early 1970s, whereas Hillside and Plymouth Hill were not modeled to break even until 1990. Thus, the Lower Third Ward and Eastside “A” fit well within a 15-year model for bonds, but Hillside and Plymouth Hill did not.

Milwaukee saw Federal urban renewal funding as a way to strengthen and build its economic base. Because further physical expansion of the city through annexation was no longer possible by the early 1960s, the City needed a strategy to maintain its economic competitiveness with the suburbs. As a result, urban renewal became a tool that could facilitate large-scale redevelopment projects to modernize neighborhoods and reduce the negative effects of obsolescence and blight.³⁴⁸

B.ii. Urban Renewal Project Development, 1958-1970

Urban renewal project areas ultimately covered significant portions of the Inner Core-North and Inner-Core-East with limited project development in the Inner Core-South. They represented a diversity of project types depending on the neighborhood context and the circumstances of local conditions.

Projects included residential-only, mixed-use, institutional, commercial office, and industrial. The spatial relationships between these areas resemble a puzzle with each project area fitting within the City’s

³⁴⁶ Milwaukee Comptroller (1964), 7-8, 14-15.

³⁴⁷ Milwaukee Comptroller (1964), 8.

³⁴⁸ Milwaukee Comptroller (1964), 15.

larger intent. When assessed from this macro-level perspective, it becomes clear that this was a coordinated effort that fit well within the Federal program:

The requirement of the Urban Renewal Administration for a “workable plan” is in large part based upon the intention of the Congress that redevelopment projects supported by Federal funds should be based upon broad over all and long-range community planning and, by implication, should not be carried out as isolated projects. As a result, it is necessary to view each redevelopment project as but a part of a much larger and longer range program which in the long run is designed to effect an efficient pattern of land use for the entire community. Each project, therefore, must be carried to a culmination which contributes to this broad objective.³⁴⁹

Per Federal requirements, the application process for cost sharing required the submittal of project plans for each area proposed for rehabilitation or redevelopment. These plans were required to comply with Milwaukee’s Workable Program, GNRP, and CRP and provide additional detail about actions proposed in the project area. The structure of the plans was uniform for each area and required a specific set of information. For the project areas discussed in this section, a variety of project types are represented. There are those that were Federally certified and designated with a state and project number, whereas there are those that were solely developed as potential projects by the city but never certified Federally. The projects discussed and analyzed in this section represent only those where a project plan was accessible for review at a library or archives. In the historical record, City documents indicate that there were additional geographies identified as project areas; however, project plans were not found to be publicly available for them.

³⁴⁹ Ratcliff, “Re-Use Value and Marketability Analysis: UR Wis. 1-1 Lower Third Ward Redevelopment Project” (1959), 6.

Table 4.30: Structure of Project Planning Reports for Urban Renewal Areas

<i>Planning Component</i>	<i>Process</i>
<i>Problems/Issues/Concerns</i>	Identification, discussion, and analysis about problems in the planning area indicated by data or field surveys. Typically included comments and concerns shared by residents, elected officials, and the media. At times, included rumors and inuendo.
<i>Project Area</i> <i>Historical Considerations</i> <i>Contemporary Conditions</i> <i>Future Considerations</i>	Basic description of historic and contemporary conditions in the planning area. Expressed the vision for future development following the rehabilitation or redevelopment of the area. Rarely included details that discussed historic properties, ethnic and racial groups, or existing socio-cultural systems and structures. Provided only a generic description of the project area.
<i>Re-Use of Land & Buildings</i>	Proposed future land uses and development projects. Proposed uses and buildings depended on the recommended rehabilitation or redevelopment treatment.
<i>Valuation of Land & Buildings</i>	Each project area required a market analysis and land appraisal. Attempted to anticipate market demand following eminent domain and land assemblage. Comparables were utilized to develop potential market values.
<i>Disposal of Land</i>	Land disposition plan identified the timeline for resale of blocks and potential parties that may be interested buyers. Included an expected timeline for the absorption of land.
<i>Regulatory Controls</i> <i>Zoning & Land Use</i> <i>Platting & Building Massing</i> <i>Duration of Control</i>	Could propose a variety of controls for rehabilitated and redeveloped blocks. May include recommended land uses or stricter zoning and platting controls. Some plans included durations of control as a sunset mechanism for the regulations to expire.
<i>Displaced Persons & Families</i> <i>Responsible Agency</i> <i>Service Provision</i>	Per State and Federal laws, each planning document was required to include a process for estimating the number of and assisting displaced people. The relevant County or City agency responsible for these actions was to be identified. This section of project plans was typically poorly developed or not included.

Because Milwaukee’s urban renewal project areas were focused within the inner core, White and non-White lower-income and working-class communities were the most affected. Historically, the project areas overlapped with Little Italy and the Pulaski Street Polish colony in the Inner Core-East, the Jewish and Black communities of the Inner Core-North, and the Polish and Mexican communities in the Inner Core-South. With respect to disparate impact – specifically with clearance operations, these

communities suffered disproportionately. In conjunction with expressway development, the inner core neighborhoods saw significant loss of socio-cultural and economic assets that served as the foundation for their communities. For the Black community in particular, this was one of the reasons many regarded urban renewal as “Negro removals.”³⁵⁰

B.ii.a. Inner Core-East Areas

Of the variety of purposes for renewal areas, those in the Inner Core – East were primarily designed to maintain a defensive posture around the central business district and the downtown retail area along Wisconsin Avenue. The mix of proposed uses varied greatly – residential, commercial, industrial, expressway, and community spaces, but the chief goal was to create a revitalized, market-rate environment in the downtown area east of the Milwaukee River.

The Inner Core – East renewal areas were composed of two: the East Side Urban Renewal Area (Wis. R-1) and the Lower Third Ward Redevelopment Area (Wis. 1-1). Though both shared proposed clearance zones for expressway development, they otherwise were distinct. The East Side Urban Renewal Area was proposed as a large-scale, mixed-use redevelopment of the lower East Side which sought to create a market-rate environment for residential development and corporate re-locations. It also included an expressway clearance zone for the North Belt route and Juneau Interchange. Conversely, the Lower Third Ward Redevelopment Area was focused on site preparation activities for future commercial and industrial users. The goal was to remove existing residential users and conduct site clearance to prepare multiple blocks for new construction. It also included an expressway clearance zone for the East-West route and Lake Interchange.

³⁵⁰ Grier (1964), 6.

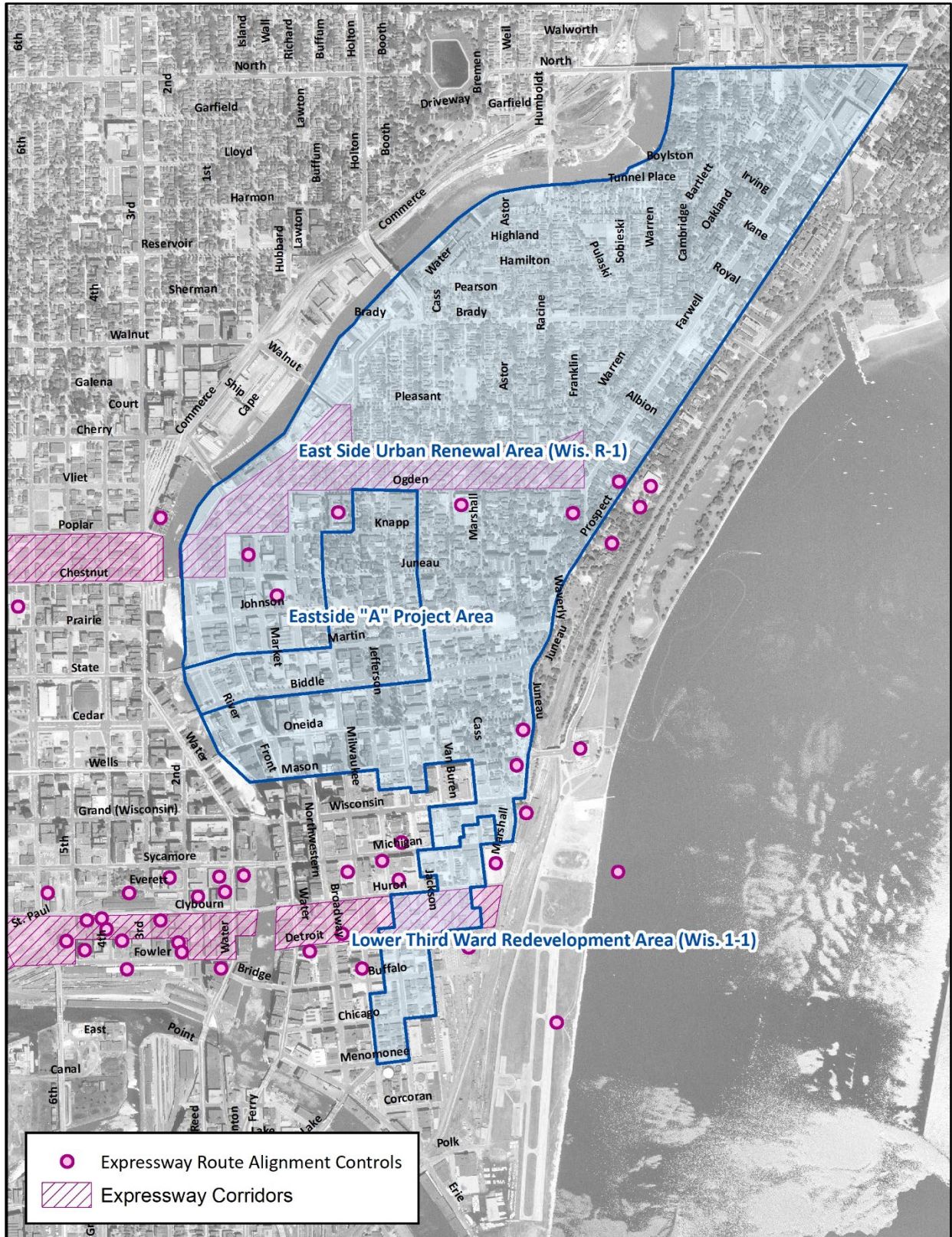


Figure 4.40: Urban Renewal Project Areas in the Inner Core-East

B.ii.a.1. East Side Urban Renewal Area (Wis. R-1)

The East Side Urban Renewal Area was expansive and covered a large part of the eastern side of the central business district and the lower East Side. This meant that it was a dynamic, mixed-use area of residential neighborhoods, commercial centers, and industrial districts. With respect to the strategy of the planning efforts, it was a mix between maintaining a defensive posture around the central business district, but also redeveloping residential neighborhoods. The area is also distinctive because of the influence of Kilbourn Park, the War Memorial, and the developing Lakefront park system. As an urban renewal project, it symbolizes one of the most complex that the City proposed.

The planning area encompassed almost the entirety of Milwaukee’s Italian community – save for the Lower Third Ward neighborhood – and the Polish community in the Pulaski Street area. By the time of urban renewal planning in the 1950s, these ethnic enclaves had been culturally significant to the Italian and Polish communities for nearly 70 years; though, the planning documents do not reflect the presence of these communities. Instead, the documents reference the need for significant areas of the residential uses to be cleared and redeveloped due to their deteriorated condition.³⁵¹ The plan notes that approximately 30.4% of dwelling units in the planning area, or 3,210 units, were “seriously substandard in condition.”³⁵²

The plan proposed multiple coordinated efforts for various parts of the neighborhood: clearance and redevelopment of residential and local business blocks, rehabilitation and conservation of higher density residential and commercial areas, and investments in public infrastructure and community facilities.³⁵³

The plan’s objectives sought to: retain and strengthen the residential character of the neighborhood

³⁵¹ Candeub & Fleissig, “General Neighborhood Renewal Plan: East Side Neighborhood” (1961), 6, 8.

³⁵² Candeub & Fleissig (1961), 8.

³⁵³ Candeub & Fleissig (1961), 1, Map Nos. 1-3.

primarily through the clearance of lower-density, substandard housing and the construction of higher-density apartment buildings; expand the central business district northward; develop a neighborhood shopping center at E. Brady Street and N. Farwell Avenue; preserve existing industrial uses along the Milwaukee River; add community facilities to the existing churches, schools, and parks; and, prepare for the enlargement of the campus for the Milwaukee School of Engineering.³⁵⁴

The scale and speed of the redevelopment activities also distinguished the East Side Urban Renewal Area. The plan scheduled a ten-year development period from 1961-1970. It called for the clearance and redevelopment of 289 acres out of a total planning area of 606 acres, which would result in the displacement of approximately 5,038 families. The estimated total cost to complete the redevelopment activities within the plan was \$57,467,421 in 1961. In 2023 dollars, total costs would be valued at \$580.23 million. Of any of Milwaukee's urban renewal plans, the East Side was the most aggressive. The historical record does not reflect why the City chose to pursue such large-scale redevelopment over such a short period of time at such a tremendous cost.

This project area is unique because it was one of the first to be the subject of a redevelopment proposal by private investors. In 1963, the East Towne Joint Venture – composed of Joseph J. Zilber and S. Daniel Tishberg – submitted bidding documents that proposed large-scale commercial, office, and residential redevelopment of seven blocks in the project area.³⁵⁵ The proposal sought to redevelop the Eastside “A” area and catalyze further redevelopment in the lower East Side. The scale of the proposal reflected the desires of the City to see a new version of downtown come to fruition through the urban renewal process.

³⁵⁴ Candeub & Fleissig (1961), 3.

³⁵⁵ See East Town Joint Venture, “East Towne: A Dramatic Community Development Proposal” (1963).

B.ii.a.2. Lower Third Ward Renewal Area (Wis. 1-1)

At the time of application for Federal funds in 1959, the Lower Third Ward Renewal Area was characterized as a primarily commercial and industrial area immediately adjacent to the central business district with access to railroad freight yards. The planning documents characterize existing residential uses as deteriorated properties incompatible with the future land use of the area.³⁵⁶ In reality, however, the area continued to be the heart of Milwaukee's Italian community. The residential properties characterized as blighted were the southern extent of a broader series of Italian neighborhoods that stretched from the lower Third Ward northward into the lower East Side. Importantly, the planning documents make no mention or entertain a serious discussion about the renewal area being the social epicenter of the Italian community.

The primary strategy of the Lower Third Ward Renewal Area maintained defensible space around the central business district by encouraging commercial and industrial uses while excluding residential properties. The 1959 market analysis report quotes an original 1952 redevelopment plan for the area from the Housing Authority of the City of Milwaukee that stated the renewal area's purpose: "the purpose of this redevelopment project is to eliminate residential uses from this general area of the city."³⁵⁷ Urban renewal planning for the Lower Third Ward is fairly emblematic of efforts to address commercial and industrial blight. The goal was to pursue "orderly redevelopment of the area" by acquiring parcels and combining them to offer larger tracts of land for commercial and industrial uses. This was to serve the broader purpose of urban renewal, which was to modernize urban areas through the removal of obsolescent parcel and building configurations.³⁵⁸

³⁵⁶ Roy Wenzlick & Co., "Market Analysis and Reuse Appraisal of the Lower Third Ward" (1959), 1, 3.

³⁵⁷ Ratcliff (1959), 5.

³⁵⁸ Ratcliff (1959), 6.

The redevelopment plan notes the evolution of the neighborhood and discusses historical and contemporary conditions. The Lower Third Ward developed as a mixed-use neighborhood that capitalized on its proximity to the central business district and access to rail and maritime freight terminals. By the 1950s, conditions in the area had shifted. The plan notes that increased vehicle congestion was impeding freight truck traffic, older buildings had become technically obsolete, companies lacked adequate parking for employees and customers, and the area had physically deteriorated resulting in declining property values and a less marketable environment.³⁵⁹ Further, the plan regards existing homes in the project area as “a residual residential pocket.” It notes the overall declining population of the area, that 60% of dwelling units were either dilapidated or had no access to private bathroom facilities, and that 85% of residential buildings were tenant-occupied with the some of the lowest monthly rents in the city.³⁶⁰

The plan recommends that future land uses strategically re-position the Lower Third Ward for industrial and commercial uses. This re-positioning would strengthen existing commercial activity in the central business district, capitalize on the growing metropolitan economy, integrate the neighborhood into the expressway system, coordinate with redevelopment activities in the Eastside Urban Renewal Area, and prepare for the harbor expansion and St. Lawrence Seaway development.³⁶¹ Importantly, in the valuation of land within the project area, the report discusses the role of the Lower Third Ward in making parcels available to maintain the competitiveness of Milwaukee’s urban commercial and industrial sites with the burgeoning suburban market for similar uses. This meaning that the Lower

³⁵⁹ Ratcliff (1959), 12-13. Wenzlick (1959), 5.

³⁶⁰ Ratcliff (1959), 13.

³⁶¹ Ratcliff (1959), 15-20. Wenzlick (1959), 10-11, 13.

Third Ward was seen as a vehicle to maintain Milwaukee's competitiveness in the growing metropolitan economy.³⁶²

B.ii.b. Inner Core-North Areas

The urban renewal areas of the Inner Core-North represent a variety of project types that sought to achieve different components in City leadership's overall vision. The Marquette Urban Renewal Area, Civic Center, and Depot Redevelopment Area represented master planning efforts to defend and strengthen the central business district west of the Milwaukee River. Hillside, Halyard Park, and Hay Market Square represented a mixed strategy on the near north side of downtown. Hillside and Halyard Park – though two separate projects – were viewed as being interconnected residential redevelopment areas. The project plans were clear that the goal was to use slum clearance to demolish blighted properties and conduct an almost wholesale reconstruction of the neighborhoods. In some contrast, Hay Market Square was seen as an opportunity to open developable land for commercial and industrial users while acknowledging a residential transition area on its north side where it met Hillside and Halyard Park. The Midtown Conservation Area and Kilbourntown No. 3 were primarily residential conservation, rehabilitation, and redevelopment projects on the city's west side. Interestingly, these projects straddled the inner core and the far west side, which was socio-economically distinct as an ethnic White area. As a larger whole, the projects in the Inner Core-North represented different components in the City's strategy to protect the central business district, maintain and strengthen its economic competitiveness, and rehabilitate and redevelop blighted residential areas.

When assessed in conjunction with expressway development and public housing projects, the Inner Core-North was the most heavily targeted geography for conservation, rehabilitation, and redevelopment. The scale of these projects is striking because the City undertook a complex and

³⁶² Ratcliff (1959), 31-41.

nuanced project portfolio that required a high-degree of professional expertise to execute. Ultimately, few of the projects in the Inner Core-North could be considered to have ever been completed.

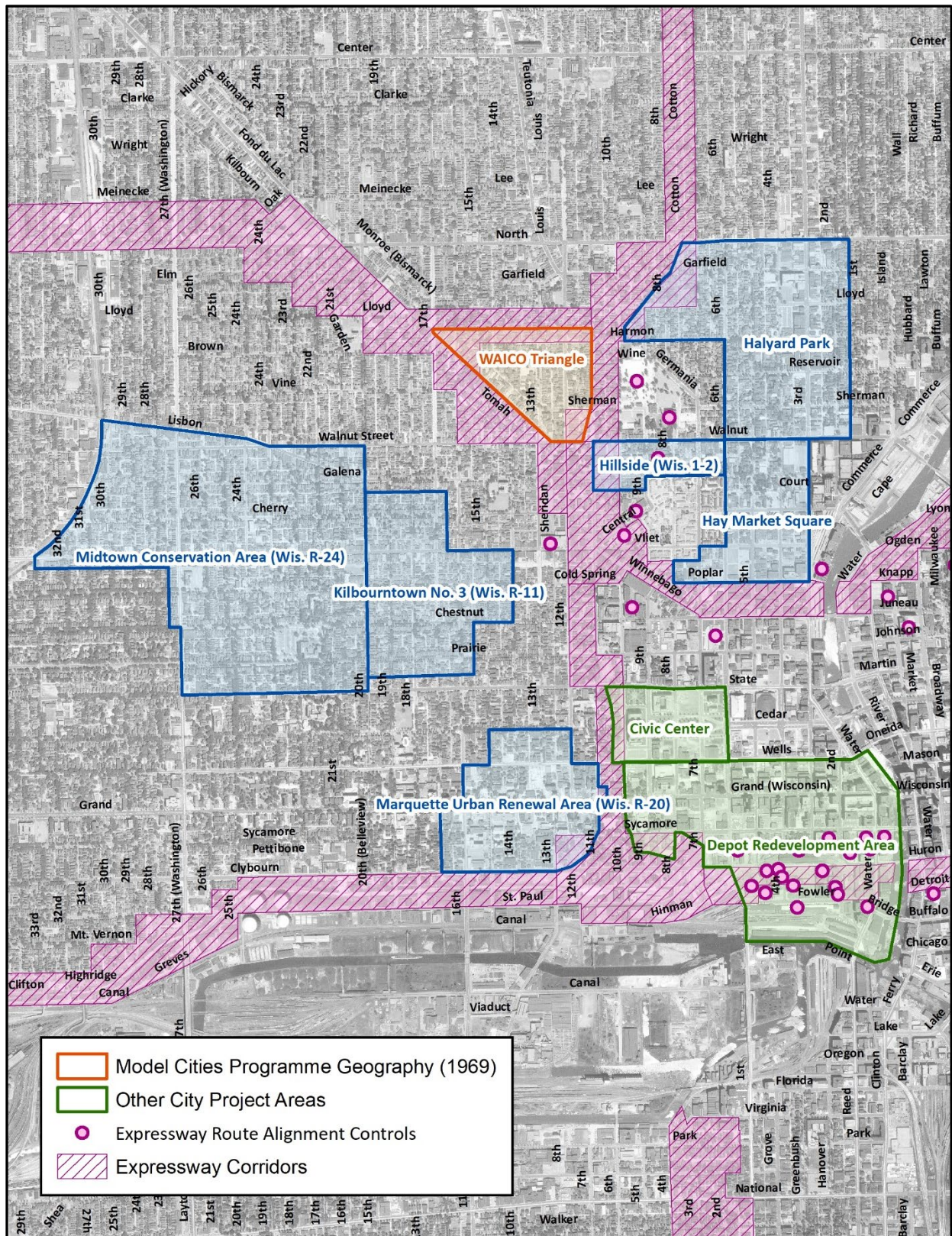


Figure 4.41: Urban Renewal Project Areas in the Inner Core-North

B.ii.b.1. Hillside Area (Wis. 1-2)

Of any blighted area or district identified by the City, the Hillside area was the first to be the serious subject of urban renewal. Ironically, this was not because of City planning efforts, but because of reporting by the Milwaukee Journal as to the severity of blight conditions within the area. Additionally, the newspaper also reported that the five-block stretch along Walnut Street was 98% Black.³⁶³ Urban redevelopment efforts began in the area in the late 1940s, which ultimately culminated in a public housing project, a redevelopment project area, and an expressway clearance zone. The City of Milwaukee Inspector of Buildings submitted the first urban renewal report about the planning area in 1953 at the request of the Housing Authority of the City of Milwaukee.³⁶⁴ The report catalogued the physical and sanitary conditions of structures in the neighborhood with a specific focus on identifying blight. The report concluded: “Considering all of the prevailing unfavorable factors we find that living conditions in this area are intolerable. After viewing the area the writer is of the opinion that nothing less than total demolition and redevelopment of the area is the answer.”³⁶⁵ These statements served as the foundation for the rationale of the area’s redevelopment.

The redevelopment of Hillside is a case study in the evolution of Federal urban renewal efforts. Stretching north and south of Walnut Street between roughly Sixth and Eleventh Streets, the projects were located at the center of the Walnut Street Business District. As a result, the Hillside urban renewal projects decimated Chocolate Boulevard. In 1948, construction on the Hillside Terrace public housing project commenced; and, in 1954, the Hillside Terrace Addition followed with additional housing units.³⁶⁶ In 1957, the Hillside Redevelopment Project began as a Federally-approved urban renewal

³⁶³ Vick (1993), 96.

³⁶⁴ Gurda, “Hillside Neighborhood Redevelopment Project No. 1” (1953), 1.

³⁶⁵ Gurda (1953), 2.

³⁶⁶ Vick (1993), 97. Housing Authority of the City of Milwaukee, “Public Housing in Milwaukee” (1966), 24-27, 32-36.

project.³⁶⁷ These three projects in conjunction with the expressway clearance zone designated as part of the North-South Expressway route effectively demolished a thirty-square-block area north and south of Walnut Street. It is difficult to avoid hyperbole in assessing the consequences of these projects; but, quite literally, the redevelopment of Hillside ripped the heart out of Black Milwaukee.

What differentiates the planning efforts for the Hillside Area from other urban renewal project areas was the extent of regulatory control the City of Milwaukee sought to exercise. Many area plans were adopted at a local and Federal level in an advisory capacity only. Their intent was to establish a vision for the area that would qualify the redevelopment projects for Federal cost sharing. Hillside was markedly different because the City was noticeably prescriptive in the area's zoning designations, allowable land uses, parcel platting rules, and building massing and envelope rules.³⁶⁸ It was an example of heavy-handed property regulations. Further, Hillside was one of the few urban renewal project areas in Milwaukee that included a provision for "duration of control," which was a sunset provision for when the regulatory controls would expire. Hillside's duration of control was codified as 40 years, meaning that the urban renewal controls persisted from 1961 (at the time of the plan adoption) to 2001.³⁶⁹ The "duration of control" provisions are a little known legacy of urban renewal that are seldom discussed in detail, but were tremendously impactful.

Plymouth Hill was one of three residential developments proposed in and around the Hillside Area. As opposed to the two Hillside public housing projects, Plymouth Hill was meant as a market-rate townhome development sponsored by the Horizon Renewal Corporation. The project intended to make

³⁶⁷ Vick (1993), 98.

³⁶⁸ Redevelopment Authority for the City of Milwaukee (RACM), "Redevelopment Plan Hillside Neighborhood" (1961), 2.

³⁶⁹ RACM (1961), 5.

“moderate-income housing” available in the form of owner-occupied, 1,000-square-foot townhomes that would include a private garage, basement, and patio. The expected sale price for each unit was \$12,000-13,000 in 1962 (converted to \$120,708-\$130,767 in 2023 dollars).³⁷⁰ The townhomes would be made available to families with annual incomes as low as \$4,200 (\$42,247 in 2023 dollars). This affordability was made possible due to changes in the Housing Act of 1961 and the FHA 221 certificate program.³⁷¹ The project proposed 192 three-bedroom townhomes across six development areas at the project site, which would include a neighborhood shopping center at the corner of Walnut and Sixth Streets.³⁷²

The projects were not without opposition, however. In 1948 and again in 1957, residents and small business owners in and around Walnut Street rallied alongside community groups to protest the projects. However, their concerns and complaints were disregarded.³⁷³ The City of Milwaukee approved the projects; the Federal government approved their funding; and, Milwaukee County approved the expressway route.

Redevelopment at the block scale was a foundational component of urban renewal efforts. This, however, had an ironic and damaging side effect for which the Hillside Area served as a case study. Despite the ostensible purpose of urban renewal being the betterment of quality of life through neighborhood redevelopment, members of local neighborhood communities were barred from participating in the urban redevelopment. Because the City refused to re-sell individual land parcels following eminent domain takings and demolitions, the only market participants with sufficient capital

³⁷⁰ Hisaka, “Proposal for the Development of Plymouth Hill” (1962), 9.

³⁷¹ Hisaka (1962), 10.

³⁷² Hisaka (1962), 11-12, 18.

³⁷³ Vick (1993), 97-98.

available to purchase and redevelop entire blocks were institutional investors.³⁷⁴ As an implicit exclusionary mechanism, this created the de facto conditions that barred neighborhood residents, small business owners, and community organizations from participating in redevelopment because they did not have the financial resources to purchase entire blocks, only individual parcels. Thus, the tragic irony of this land disposition policy was that local community members were deprived of any economic opportunity to participate in and benefit from their neighborhood's redevelopment. Along the Walnut Street Business District, this meant that residents and local business owners were effectively prohibited from buying back *their* land to redevelop *their* neighborhood.

B.ii.b.2. Halyard Park

Halyard Park was essentially a continuation of the Hillside Area. Generally residential in character – with some local business uses, the neighborhood was roughly 32-square-blocks of single-family homes, duplexes, and alley houses. When the City of Milwaukee Department of City Development (DCD) published the project area plan in 1967, it called for the complete clearance and redevelopment of the neighborhood.³⁷⁵ Of any project plan, it was one of the shortest consulted for this research at only eight total pages; it was also one of the most general in its description of the project area.

Bordered on the west by the North-South Expressway clearance zone and on the south by the Hillside Area, the general character of Halyard Park was one of Milwaukee's original neighborhoods. A mix of the Jewish and Black communities, the area was adjacent to and north of the Walnut Street Business District. The 1967 report does not discuss in any detail the characteristics of the neighborhood. Instead, it states that the "complete rebuilding of the area appears necessary in order to eradicate the serious

³⁷⁴ Vick (1993), 98.

³⁷⁵ City of Milwaukee Department of City Development (DCD), "Summary of Halyard Park Redevelopment Project" (1967), 1.

blight that exists.”³⁷⁶ The plan called for the revitalization of the local shopping area at the intersection of North Third Street and North Avenue in addition to new residential construction.

B.ii.b.3. Hay Market Square Redevelopment Project (Wis. R-8)

Whereas the Hillside Area and Halyard Park were generally characterized as residential neighborhoods, Hay Market Square was predominantly a commercial and industrial district with some residential uses along its northern edge. Historically, the center of the district had been the farmer’s market held in Hay Market Square on a weekly basis. Industrial and commercial users developed in surrounding blocks as wholesale suppliers to various skilled trades.³⁷⁷

The primary purpose of the redevelopment area was to eliminate obsolete and blighted properties for all types of land uses: residential, commercial, and industrial. The age of the district’s buildings was seen as an impediment to its future productivity. As a result, the plan recommended the demolition of a significant number of structures to facilitate redevelopment. The plan also noted an additional cause of blight as “the fact that most of the housing within the 4 tract area is tenant occupied.”³⁷⁸ The razing of the majority of properties was meant to create developable space for commercial and manufacturing uses. The plan concluded with: “The Lapham Park Public Housing Project and the Hillside Neighborhood Redevelopment Project plus other scheduled Urban Renewal and Redevelopment programs, the widening of North 6th Street and the imminent coming of the expressway are all helping upgrade the area.”³⁷⁹

³⁷⁶ Milwaukee DCD (1967), 1.

³⁷⁷ Steele (1966), 8-9.

³⁷⁸ Steele (1966), 12-13.

³⁷⁹ Steele (1966), 13.

B.ii.b.4. Kilbourntown No. 3 Urban Renewal Area (Wis. R-11)

Kilbourntown No. 3 was almost an exclusively residential redevelopment and conservation project.³⁸⁰ It was one of five conservation projects west of the central business district that focused on predominantly residential and local business uses. These project areas – including Twelfth and Vliet, Mt. Sinai, Midtown, and Marquette – were traditionally Milwaukee’s dense, single-family and duplex neighborhoods on the west side. Planning documents for these areas indicate a general desire to conserve the existing built environment and conduct selective clearance and redevelopment when appropriate.³⁸¹

As a residential project, the recommendations for redevelopment and conservation emphasized the need for a mix of single-family homes and apartments in the planning area. In total, planning documents anticipated 743 new housing units with the majority being apartments. These units were anticipated to absorb into the market over a 3–5-year period. The units would be priced for working-class families and would utilize the FHA 221 program to ensure this affordability.³⁸² In marketing these units, the planning documents note the strength of the housing market in the neighborhood; but, they express concerns about the presence of a new public housing project in the planning area. Further, the documents identify access to high-quality public schools as a decision-making criterion for families, notably the potential construction of a new elementary school.³⁸³ If the school were not built, the report states, “This situation would be especially unattractive to white families with elementary school age children because of the high proportion of nonwhite enrollment in the school districts including the project area and the nearby northwest, north, northeast and east neighborhoods.”³⁸⁴

³⁸⁰ Real Estate Research Corporation, “Land Utilization and Marketability Study Kilbourntown Number 3” (1965), 3, 10.

³⁸¹ Real Estate Research Corporation (1965), 10-12.

³⁸² Real Estate Research Corporation (1965), 39-40.

³⁸³ Real Estate Research Corporation (1965), 41.

³⁸⁴ Real Estate Research Corporation (1965), 42.

Within the project area, the Parkside Village Development Corporation proposed a racially integrated subdivision of approximately 150 three-bedroom homes in a nine-block area in the northern part of Kilbourntown No. 3. We Milwaukee, “a voluntary biracial group of businessmen and civic leaders,” sponsored and proposed the project as an attempt to address deteriorated housing conditions in the inner core.³⁸⁵ The development was proposed as a housing cooperative, whereby each new homebuyer would become a member of the organization. The average family income for the project was anticipated at \$5,000-\$9,000 (\$45,609-\$82,096 in 2023 dollars). The total package of a lot and home were estimated at \$13,500 (\$123,144 in 2023 dollars). It was anticipated that mortgages would be insured by the FHA with an interest rate of 3% and estimated monthly payments of \$250-\$350 (\$2,280-\$3,192 in 2023 dollars). Lawrence Katz, state director of the FHA Milwaukee office, offered his direct support of the project stating, “It will be the first time, in my knowledge, that an entire project of single family homes has been built to replace blighted homes in an urban renewal area.”³⁸⁶

The project possessed its own racial irony, however. Because Kilbourntown No. 3 and Midtown shared a planning boundary along 20th Street, Lawrence Katz argued that Parkside Village could receive displaced White families from spot clearance of blight in Midtown. He argued this would support integrated housing. However, his argument negated the reality that many of the families displaced by blight clearance in Kilbourntown No. 3 were Black. Thus, displaced White families could access 150 new homes, whereas Black families – particularly if they were lower-income and renters – did not necessarily possess the same opportunity. The assumption in the success of Parkside Village was that a family was a creditworthy borrower and could afford to buy a new home. This family profile was more true of White families on the west side than it was of Black families in the same area. Further, Parkside Village was

³⁸⁵ Testimony of Elmer Winter, United States Senate, “Tax Incentives to Encourage Housing in Urban Poverty Areas” (1967), 340.

³⁸⁶ Winter Testimony (1967), 340.

located within the FHA's blacklisted area for home mortgage lending. White families could potentially apply for a mortgage in the area, but Black families could not. This reveals the stark reality that Parkside Village was, at face value, an integrated housing project, but – in fact – was a *de facto* segregated project.

Parkside Village was the first example of suburban subdivision platting introduced into Milwaukee's street grid. While other urban renewal projects disrupted the city's historic street grid through block consolidation, Parkside Village introduced what would become the archetypical curvilinear suburban subdivision with cul-de-sacs. When built, the project was completely isolated from the surrounding neighborhood save for two access points at Cherry and 18th Streets. What had previously been multiple blocks of dense single-family and duplex housing was transformed into a contained unit separate from its surrounding area. This isolationist platting design was disruptive to the neighborhood fabric, particularly for access along Cherry Street. Thus, the notion that the project would provide ample replacement housing for blighted properties was not necessarily true on a per unit volume basis, though it may have been from the perspective of quality and standard of living.

Kilbourntown No. 3 represents one of Milwaukee's only urban renewal areas that received a comprehensive assessment of social services provided to residents during the redevelopment period. Strikingly, it did not become apparent to City leadership initially in the urban renewal process that social services would be required. Reporting seems to indicate that this realization did not occur until the early to mid-1960s – a point in time when urban renewal projects and expressway development were well underway. The United Community Services of Greater Milwaukee documented the social services provided to residents in the planning area for Kilbourntown No. 3 over a three-year period from 1967-

1969.³⁸⁷ This report represents one of the only available examples that documented services provided to displaced residents. Despite the overwhelming number of displaced families resulting from expressway development and urban renewal, there was no formal reporting on the efforts of the City and County to assist them.

B.ii.b.5. Midtown Conservation Area (Wis. R-24)

Of any of Milwaukee's urban renewal project areas, the Midtown Conservation Area was the largest by size and the grandest of scale. The planning area covered an approximately 69-square-block area on the west side of the city. The diversity of uses included dense residential areas of single-family, duplex, and apartment units, multiple public green spaces and public schools, and limited amounts of industrial use along the Chicago, Milwaukee, & St. Paul Railroad corridor near 30th Street. Midtown represents Milwaukee's largest attempt within the Federal urban renewal program to rehabilitate an entire neighborhood. The work program for the project area was expansive and revealed a multitude of challenges that demonstrated Midtown as a microcosm of Milwaukee's broader redevelopment agenda. As one of the City's final urban renewal projects proposed for Federal certification and funding, it represents something of a guidebook to the lessons learned by City leadership from almost a decade of urban renewal projects.

The analysis notes that the Midtown planning area occupied the southern extent of the Near West community area. It was also immediately adjacent to Kilbourntown No. 3, which was located to the east. While Kilbourntown No. 3 was seen as a planning area in the inner core, Midtown was seen as a neighborhood pushing further into the city's west side.³⁸⁸ The project area had been suffering depopulation for the better part of the previous 15 years. This was a general trend seen across the

³⁸⁷ See United Community Services of Greater Milwaukee, "Kilbourntown No. 3 Urban Renewal Project (Wisconsin R-11): Final Report of the Social Service Coordination Program, July 1, 1967 through December 31, 1969" (1970).

³⁸⁸ Kuehnle & Company, "Land Utilization and Marketability Study Midtown Conservation Area" (1966), 18

inner core areas of the city; but, what makes this conclusion distinctive is that the project area extends as far west as 30th Street.³⁸⁹ This meant that the area of depopulation had broadened far beyond the city center. Additionally, this influence of decentralization pushed retail trade further from the central business district, which subsequently also created a spatially disparate pattern of job centers for employees.³⁹⁰ Whereas Milwaukee's contained economy had its previous locus in and around the city center, decentralization had begun a process of fragmentation that distributed employees and businesses further into the suburban and rural periphery.

The analysis notes the general deterioration of the planning area's single-family, duplex, and multi-family housing units. A significant portion of the units were more than 45 years old and showing signs of physical deterioration. The analysis expressed a concern that the blight influence of the inner core had pushed west into Midtown.³⁹¹ The project proposed the clearance of 851 parcels that totaled 80.5 acres. This accounted for 28.3% of the project area's 283.7 total acres. The figures are inclusive of rights-of-way. This high degree of clearance and demolition was normal for Milwaukee's urban renewal areas. Many areas, in fact, saw much higher rates of clearance of up to 100% of original buildings.

The vast majority of households in the project area were native White. Of the total 3,869 families in the project area, it was estimated that 1,500 – or 38.7% – would be removed and displaced. The analysis also noted the expansion of the Black community was evident in the northeast corner of the planning area. Though the increase in the number of Black households was small, it was indicative of the community growing larger and moving beyond the inner core.³⁹² These facts importantly highlight that

³⁸⁹ Kuehnle (1966), 2, 19.

³⁹⁰ Kuehnle (1966), 13-14.

³⁹¹ Kuehnle (1966), 18, 24-26.

³⁹² Kuehnle (1966), 26-33.

Milwaukee's urban renewal project areas impacted White and non-White households alike. The ethnic and racial impacts were dependent on the project location in the city.

The City had learned a hard lesson from previous urban renewal projects that did not conduct a thorough market analysis to assess the potential for redevelopment. As a result, other project plans included potential re-sale value of parcels but no substantive discussion about whether the market was healthy enough to absorb new space. Due to Milwaukee's existing housing shortage, the analysis for Midtown assessed that new residential units would be absorbed upon delivery over the life of the project. Provided that the single-family homes and apartments were priced for working-class families, the analysis estimated that demand was sufficient to justify the redevelopment.³⁹³ Similarly, the redevelopment of select areas of local businesses and industrial properties was seen as reasonable. The business uses would serve neighborhood residents, while the industrial uses on the west side of the planning area would need to attract tenants.³⁹⁴

B.ii.b.6. Marquette Urban Renewal Area (Wis. R-20)

The Marquette Urban Renewal Area represents one of Milwaukee's more unique rehabilitation projects. Whereas other plans were more general in nature for future planning, Marquette's plan adopts a high degree of specificity for future land use, regulations, and infrastructure.³⁹⁵ It appears to be a custom regulatory document and planning regime for the area around Marquette University. The proposed renewal actions and future land use planning explicitly identified the purpose of the planning area was to serve institutional uses, limited residential areas, and limited local business uses.³⁹⁶

³⁹³ Kuehnle (1966), 2, 41, 44.

³⁹⁴ Kuehnle (1966), 2, 33-34, 57-66.

³⁹⁵ Redevelopment Authority of the City of Milwaukee, "Redevelopment Plan Wisconsin R-20 Marquette" (1964), 1-2.

³⁹⁶ RACM (1964), 5-7.

While not all urban renewal project plans contained provisions for duration of control, Marquette's future land using planning was clear. Whether the developer was Marquette University, the Redevelopment Authority of the City of Milwaukee (RACM), or a private developer, the urban renewal project plan had a duration of control of 25 years from 1964-1989.³⁹⁷ The project was restrictive in that it only permitted institutional uses for the university and accompanying small business uses and residential housing for campus members. Density controls in the area were strict, as were façade regulations for building design.³⁹⁸ The structure and content of the project plan is indicative of a master planning document that, in a contemporary circumstance, would be issued by a university for campus planning; in historical circumstances in the early 1960s, the planning document appears to be a tool needed by Marquette University to control campus build-out with the support of RACM.

The Marquette plan reveals an irony in urban renewal efforts. One of the clear purposes of urban renewal was to remove obsolete parcel configurations through land consolidation to facilitate redevelopment. This resulted in the City of Milwaukee preferring to re-sell entire blocks to developers, as opposed to individual parcels. However, urban renewal project plan boundaries were drawn, in some instances, with a striking degree of specificity that singled out individual parcels. By identifying individual parcels and creating a saw-tooth pattern in the planning area boundaries, the goal of facilitating block-scale redevelopment was effectively thwarted.

B.ii.b.7. Depot Redevelopment Area

In the historical record, the Depot Redevelopment Area is one of the last – if not *the* last – urban renewal project proposed by City leadership. By 1966-1967, the Federal government was transitioning from urban renewal programs to the Model Cities Program. The Depot Redevelopment Area was a

³⁹⁷ RACM (1964), 15.

³⁹⁸ RACM (1964), 7-15, 18-29, 29a-29c.

commercial office space market in the central business district originally studied by the Milwaukee Mayor's Economic Growth Council. Based on their visioning proposal, the City contracted a land utilization and marketability analysis to Midwest Planning and Research, Inc.

The 1967 analysis identifies the study area as a central component in the larger downtown area and as a sub-area that acted as a gateway for people when entering Milwaukee via the expressway system. The report states that the area needed to be revitalized due to "the growing recognition that many of these existing uses of the land are obsolete and unattractive."³⁹⁹ As a commercial office space market, the central business district was overbuilt with a vacancy rate of 15.3% by the late 1960s. It was anticipated that the downtown market would not rebound for office space until the early 1970s. Downtown east of the Milwaukee River was seen as the preferred market for office users, while the Depot study area was subordinate.⁴⁰⁰ The purpose of the study was ultimately as a planning tool to prepare City leadership and the private sector with the market data necessary to anticipate future demand into the 1970s.

The Depot Redevelopment Area represents Milwaukee's only potential urban renewal project solely focused on commercial office space. Though the project was never certified or funded by the Federal government, the project area did not contemplate residential uses as permissible or appropriate. This is in contrast to Milwaukee's other urban renewal areas that were typically mixed-used districts or predominantly residential neighborhoods.

B.ii.b.8. Civic Center

The development of Milwaukee's Civic Center is representative of a larger trend in the city's urban redevelopment which is the consolidation of community resources and buildings into clusters in select

³⁹⁹ Midwest Planning and Research, Inc., "Milwaukee Depot Area Study" (1967), 12.

⁴⁰⁰ Midwest Planning (1967), 40, 45-47, 49.

neighborhoods. Whereas these types of facilities had previously been distributed throughout the city, the monumental scale of redevelopment projects began to shift the spatial centers of the city. With respect to the Civic Center, government functions were originally split between Kilbourntown and Juneautown east and west of the Milwaukee River. The civic center idea proposed to leave City Hall in Juneautown, but consolidate the other government offices into a larger development with monumental scale. The idea of a consolidated civic center for Milwaukee dates back to 1919 when the Milwaukee Board of Public Land Commissioners commissioned a report to study the concept.⁴⁰¹ Over proceeding decades, the concept was operationalized and under development by the mid-1930s.

When originally conceived, the civic center would have redeveloped existing blocks of buildings in Milwaukee's central business district. However, after highway development began, it became necessary to integrate the project into the configurations of on/off ramps to facilitate access – specifically for the underground parking facilities.⁴⁰² A study by the engineering firm Howard Needles Tammen & Bergendoff assessed the 12-square-blocks of the project area to determine how to integrate traffic from West Kilbourn Avenue on the east and highway traffic from I-43 on the west. Prior to highway development, the topography of the project area was relatively flat; but, to accommodate the exposed, below-grade highway corridor on the west and three levels of buried parking structure, the public plaza needed to be elevated above grade and then tiered downward from west to east. This change in topography would accommodate three levels of underground parking totaling 1,665 spaces.⁴⁰³ The overall site plan included locations for the Milwaukee County Courthouse, Milwaukee County Safety Building, University of Wisconsin-Milwaukee, Wisconsin State Office Building, and Milwaukee Public Museum.⁴⁰⁴

⁴⁰¹ See City of Milwaukee Board of Public Land Commissioners, "Grouping of Public Buildings," Report to the Milwaukee Common Council, 1919.

⁴⁰² Howard Needles Tammen & Bergendoff, "Milwaukee Civic Center Development" (1959), i.

⁴⁰³ Howard Needles Tammen & Bergendoff (1959), 8-10.

⁴⁰⁴ Howard Needles Tammen & Bergendoff (1959), 7.

Despite these engineering changes due to expressway development, the Civic Center was meant to be a monument in the larger downtown area but still walkable for local residents. When the Courthouse Interchange was proposed after the Civic Center was well underway, it required the demolition of multiple blocks of dense residential uses on the west side of the project. Sol Ackerman, Milwaukee's Urban Renewal Coordinator, expressed concerns about how the expressway would negatively impact the original Civic Center design. The introduction of an expressway interchange would no longer make the Civic Center accessible to the local community.⁴⁰⁵

B.ii.c. Inner Core-South Areas

As compared to the Inner Core-East and -North, the Inner Core-South was largely untouched by urban renewal. While the North-South Expressway route pushed through Walker's Point along S. 5th Street, the larger South Side was generally not impacted. The Boys' Tech Industrial Area was expansive covering almost the entirety of Walker's Point across 52-square-blocks. However, the project – as originally proposed – was never fully executed. The project plan represents essentially a visioning document that was submitted at the end of the urban renewal era. While the project was unique for its sole industrial focus, it never came to fruition.

With respect to community impacts, the Polish and Mexican communities suffered some displacement. The Polish community historically had a strong presence on the South Side; but, because the Boys' Tech Area and the expressway corridor were pushed further to the east, their dense residential neighborhoods were preserved. The Mexican community, however, was forced to spatially shift and migrate to other areas in the South Side. This was primarily due to the expressway corridor and not urban renewal. When these impacts are compared to those of the Inner Core-East and -North, it

⁴⁰⁵ Casey, "Zeidler: Transportation Development" (2006), 72.

becomes clear that the South Side was largely spared during the 1950s and 1960s from significant damage.

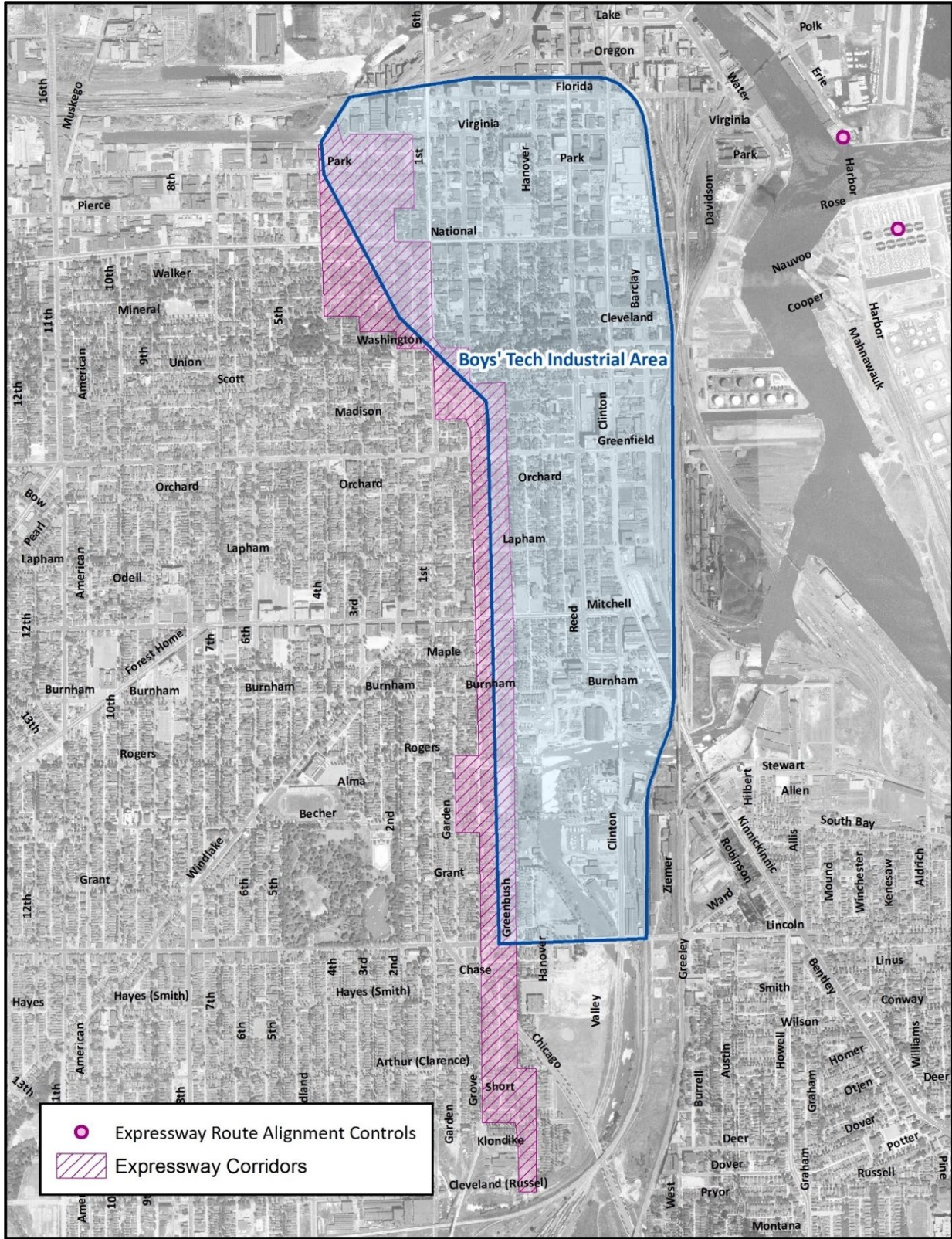


Figure 4.42: Urban Renewal Project Areas in the Inner Core-South

B.ii.c.1. Boys' Tech Industrial Renewal Area

The Boys' Tech Industrial Renewal Area is unique in Milwaukee's urban renewal history for two reasons:

1) it represents the only urban renewal project area in the Inner Core-South, including Walker's Point and Bay View; and, 2) it was the city's only industrial renewal project. Strikingly, the project area encompassed almost all of the Walker's Point neighborhood east of the North-South expressway route, which included a mixed-use district of residential neighborhoods, local businesses, and industrial users. Spatially, it is a unique project area because it closely resembles a linear corridor that follows South 1st Street and the Chicago, Milwaukee, St. Paul, & Pacific Railroad lines.⁴⁰⁶

The expressed purpose of the project area was to create additional developable land for industrial users under the development doctrine of "industrial conservation." The planning report clarifies this position in two ways:⁴⁰⁷

1. "Emphasis must be placed on industrial conservation. Industrial areas can benefit by a program of spot clearance and private developments undertaken by companies themselves. It is essential to eradicate conditions which jeopardize the confidence of a company in a particular area. Within this frame of reference a number of broad objectives for the study area will be sought."
2. "Many of the existing manufacturing facilities are in excellent condition with extensive activity constantly displayed. Any programs dealing in an area like this must exercise the utmost caution to prevent any possibility of upsetting the delicate balance indigenous to a viable industrial sector."

The City's fairly ardent position on industrial conservation fits within the broader challenges facing Milwaukee by the late 1960s. Because of decentralization, the depopulation of Milwaukee's inner core

⁴⁰⁶ Milwaukee Division of Economic Development, "Boy's Tech" (1967), 2-4.

⁴⁰⁷ Milwaukee Division of Economic Development (1967), 5-10.

neighborhoods had become a chief concern. Depopulation had initially been considered primarily a residential issue, but it quickly came to represent the additional loss of commercial businesses and industrial users. The purpose of the Boys' Tech project area was to serve as a counterweight to this trend and maintain the city's industrial base.

The mixed-use nature of the project area required addressing its residential neighborhoods. The project plan estimated the residential population at 6,700 people. While it acknowledged the scale of the relocation efforts required to rehouse this amount of people, the plan proposed relocating households in phases.⁴⁰⁸ Beyond this acknowledgement, the plan provided no further details about neighborhood residents. This is indicative of the plan's larger purpose to relocate the entirety of the population in the project area and represents the largest proposal for relocation of any urban renewal project in Milwaukee. Not only is the level of displacement striking, but so too is the position of the City. The Boys' Tech area did not undergo initial planning until the late 1960s. By that time, community opposition to large-scale clearance and redevelopment had fully developed. The fact that the City proposed the project anyway is curious.

The report acknowledges the post-World War II changes to manufacturing that de-emphasized multi-story buildings for large-format, single-story buildings. The development of the latter was better suited for larger, greenfield parcels, which were generally only available on the urban periphery in suburban communities. As a result, this project pursuing industrial conservation needed to strategically position the project area for industrial users that needed larger amounts of space. The project plan proposed making space available through the acquisition and clearance of existing, non-industrial buildings in the

⁴⁰⁸ Milwaukee Division of Economic Development (1967), 11-13.

planning area. For existing multi-story industrial buildings, the plan recommended the development of “incubator industries” for smaller firms and new ventures that required less space.⁴⁰⁹

B.iii. Note on the Model Cities Program, 1966-1973

The evolution of Federal urban renewal programs through the 1950s into the mid-1960s led to the Model Cities Program, which President Lyndon Johnson created in the Demonstration Cities and Metropolitan Development Act of 1966. After operating urban renewal programs for the better part of 16 years, the Federal government was facing increasing opposition to large-scale neighborhood demolitions and the continuing influence of inner-city blight. As a result, President Johnson proposed the Model Cities Program as a new-and-improved version of urban renewal with funding increases. However, the legislation was short lived. President Richard Nixon ended the program after only seven years in 1973 by suspending its funding.⁴¹⁰

One of Milwaukee’s first attempts at using the program was the WAICO Triangle project area. Feasibility analysis for the redevelopment area was ongoing by 1969, meaning that the project had not yet been undertaken by the end of the research time period for this dissertation. Generally bounded by Lloyd Street, Fond Du Lac Avenue, and 11th Street, the project area was a remnant of an inner core neighborhood largely untouched by urban renewal but surrounded on all sides by previously certified urban renewal project areas.⁴¹¹ The WAICO area was essentially another urban renewal project submitted under a separate Federal program.

⁴⁰⁹ Milwaukee Division of Economic Development (1967), 22, 36-38.

⁴¹⁰ Schechter, “An Empirical Evaluation of the Model Cities Program” (2011), 2-6. Marshall, Kaplan, Gans, and Kahn, “The Model Cities Program” (1973), 4.

⁴¹¹ Stefaniak, “WAICO Triangle Land Use Study” (1969), 3.

Because the Model Cities Program in Milwaukee did not begin in earnest until the late 1960s (and was subsequently defunded only a few years later), the inclusion of an analysis of program efforts would rely on data from the early to mid-1970s. Further, the Housing and Community Development Act of 1974 consolidated all urban renewal, Model Cities Program, and other HUD community development projects under one funding model.⁴¹² This series of events represents a transition in Milwaukee's housing policy in the early 1970s that occurs after the research time period for this dissertation. As a result, this research does not address it.

C. Suburbanization Agenda: Expressway Construction & Neighborhood Clearance

The development of Milwaukee's expressway system was an evolving process over almost 30 years that initially started with a focus on traffic engineering and the efficient movement of vehicles, but transformed into a larger economic project that reshaped the city and the metropolitan region. In contrast to urban renewal, expressway development in Milwaukee was not catalyzed by the availability of Federal funds. Instead, larger traffic thoroughfares were identified as an infrastructure priority in the 1930s. When large amounts of Federal funding became available almost 20 years later in the 1950s, the expressway system was scaled into a metropolitan infrastructure project that crossed county lines.

Though expressways are credited with the decentralization and suburbanization of households and economic activity, Milwaukee's inner core neighborhoods suffered significant damage to facilitate the infrastructure construction. The historic lower-income and working-class neighborhoods that had been the socio-cultural homes of multiple ethnic and racial enclaves were demolished to create developable land for the expressway system. When considered in conjunction with urban renewal project areas, Milwaukee's inner core neighborhoods became a set of overlapping geographies that saw large-scale demolition. This paradoxical development pattern created disparate impact between the inner core

⁴¹² Schechter (2011), 6.

neighborhoods that suffered demolitions and displacement, and outer-ring city neighborhoods and suburban communities that benefited from the expressways.

C.i. Rationale for Expressway Development, 1952

Concerns about the city's transportation network were not new in the 1950s; they had actually begun to manifest almost 15 years earlier in the mid-1930s. By the time Milwaukee County began serious planning for highway construction, transportation challenges had been compounding in city neighborhoods for over a decade.⁴¹³ Milwaukee's main thoroughfares were originally built – as early as the 1850s – as wide streets able to accommodate large amounts of traffic. However, it was not until the widespread adoption of personal vehicles and freight traffic that city streets became overwhelmed. Originally, the streets accommodated pedestrians, horses, wagons/carriages, and street cars. By the late 1930s, these modes had expanded to include personal cars, freight trucks, and buses. As a result, city streets became congested with large volumes of pedestrians, personal cars, freight trucks, street cars, and buses with each mode of transit competing for space.⁴¹⁴ This competition for space was not only for travel, but also for parking.

The engineering rationale for the expressway system design was based on the “1944-1945 Origin-Destination Traffic Survey” (1946) of vehicle traffic data for the city of Milwaukee and the larger metropolitan area. The U.S. Public Roads Administration and State Highway Commission of Wisconsin provided funding for the comprehensive collection and analysis of traffic data in Milwaukee County. The intent was to use the traffic study as evidence of the need for increased transportation infrastructure funding, specifically through the Federal Aid Highway Act of 1944.⁴¹⁵ The results of the survey showed

⁴¹³ Howard Needles Tammen & Bergendoff, “Milwaukee County Expressway System – Downtown Expressways: Supplementary Report” (1959), 1. Dickenson, “Through Highways” (2015), 5-7.

⁴¹⁴ See City of Milwaukee Board of Public Land Commissioners, “Truck Traffic Report, Milwaukee, Wisconsin” (1935).

⁴¹⁵ State Highway Commission of Wisconsin (1946), 3-4. Dickenson (2015), 23.

Milwaukee County entering a period of economic rebound from the Great Depression and World War II years. Personal vehicle registrations were increasing, freight truck traffic was expected to increase from commercial and industrial development, and the larger metro region was expected to continue adding population up to projections of 1.25 million people for the County overall. To limit travel time delays, reduce vehicle operation costs, and improve roadway safety, the study recommended a system of “limited-access highways” to facilitate the efficient movement of people and freight in the County.⁴¹⁶ The study ultimately developed the rationale and hypothesis for Milwaukee’s expressway development in the 1950s and 1960s, which became a mix of traffic engineering and economic considerations. Interestingly, this traffic study was one of the first examples of the detailed involvement of the Federal government at the local level in post-World War II America.⁴¹⁷ Unknown at the time, but this would portend the large-scale urban redevelopment efforts that would result from the Federal government’s push for expressway development and urban renewal.

The expressway system design proposed in the 1946 traffic study was accepted by the Milwaukee Common Council and Milwaukee Board of Public Land Commissioners in 1947. Route planning and cost estimation began immediately for what was initially envisioned to be a project that moved expeditiously. The initial system design anticipated the demolition of 2,469 structures including 399 commercial or industrial buildings and 4,069 residential units. Initial cost estimates for right-of-way acquisition and construction totaled \$103,544,000 (approximately \$1.41 billion in 2023 dollars). The Federal cost sharing contribution was estimated at 27.3%. Due to the substantial loss of buildings and the lower-than-expected Federal cost sharing contribution, the project was delayed and began to move

⁴¹⁶ State Highway Commission of Wisconsin (1946), 12-23.

⁴¹⁷ State Highway Commission of Wisconsin (1946), 67-74.

slower than expected.⁴¹⁸ Ultimately, the Common Council approved the system design in 1947. Then, in 1948, City residents approved a \$5,000,000 bond issuance to pay for project costs.⁴¹⁹

Importantly, as of the late 1940s, City leadership did not envision the expressway system as the sole component of improved traffic flow. Instead, the expressway was seen as one element of many in infrastructure investments the City would make to improve city streets. The original view of members of the Common Council was to engage in street widening to create larger thoroughfares throughout neighborhoods to facilitate more efficient on-street traffic movements. Some Common Council members were opposed to a larger expressway system because of the need for eminent domain acquisitions in neighborhoods, the demolition of structures, and the cost to the city.⁴²⁰ These concerns from aldermen led to a sense of skepticism, caution, and – to a certain degree – obstructionism to slow the process. While initial approvals for the expressway system moved relatively quickly in the late 1940s, further system development was delayed in the early to mid-1950s due to concerns from aldermen.⁴²¹

Vehicle trips data was then updated in 1951 and 1952 to provide engineers with an accurate understanding of shifting traffic patterns in the region.⁴²² Based on the data analysis, the expressway designs were meant to reflect modern city planning principles, integrate the routes into existing major thoroughfares and the State and Federal highway system, and importantly accommodate the anticipated traffic increases that would develop by 1980.⁴²³ The 1959 supplementary report for

⁴¹⁸ Dickenson (2015), 29-30.

⁴¹⁹ Dickenson (2015), 33-34.

⁴²⁰ Dickenson (2015), 31-34.

⁴²¹ Casey (2006), 36-37.

⁴²² Amman & Whitney (1952), 17. Howard Needles Tammen & Bergendoff (1959), 1.

⁴²³ Amman & Whitney (1952), 9. Howard Needles Tammen & Bergendoff (1959), 1-2.

expressway design from Howard Needles Tammen & Bergendoff identified four goals of the system: 1) provide “safe, high speed, and high-capacity highways” for drivers in the metropolitan area to access Milwaukee’s central business district, 2) coordinate major surface street development to facilitate the efficient flow of traffic from expressway on/off ramps in the central business district, 3) provide adequate parking facilities in the central business district, and 4) expand and modernize the central business district.⁴²⁴

Within this rationale, the design concepts included renderings and sectional drawings of expressway construction that would be fully integrated into existing neighborhoods. The renderings strongly indicated that local impacts would be minimized. At most, they show that narrow linear corridors of city blocks would be razed to make way for approximately 80 to 100 feet of width for traffic lanes. They further show integrated parking facilities under elevated expressways and the role that passenger rail would play in the central business district.⁴²⁵ However, the renderings were misleading. They represented a highly idealistic version of expressway development that did not materialize in Milwaukee. Instead, the narrow transit corridors originally proposed in fact developed as 300- to 400-foot-wide clearance zones.

⁴²⁴ Howard Needles Tammen & Bergendoff (1959), 5, 32-33.

⁴²⁵ Howard Needles Tammen & Bergendoff (1959), Figure 13. Amman & Whitney (1952), 12.

Table 4.31: Timeline of Expressway Development Planning Materials

<i>Date</i>	<i>Document</i>	<i>Notes</i>
1935	Truck Traffic Report, Milwaukee, Wisconsin	Documented increased congestion of freight trucks on city streets.
1938	Milwaukee On The Go! A Pedestrian & Vehicular Traffic Survey	Conducted multi-modal transit study for local business districts in the city.
1946	1944-1945 City of Milwaukee Origin-Destination Survey	Studied daily vehicle trips in Milwaukee metro area.
1952	Preliminary Plan for a Comprehensive Expressway System for the City of Milwaukee	Published as the first design concept of Milwaukee’s full expressway system.
1959	Milwaukee County Expressway System – Downtown Expressways: Supplementary Report	Published as an update to the 1952 report to expand the design concept to accommodate additional traffic in the central business district.
1962	Report on Urban Extensions to Interstate System in Milwaukee County	Proposed an expanded expressway system with a loop system in the inner core neighborhoods.
1963	Lake Front Expressway, Milwaukee County Expressway System	Proposed an expressway extension along Milwaukee’s lakefront to connect the East Side south to Bayview.

Note: The De Leuw, Cather & Co. proposed an expressway system design concept at the City’s request in 1949. This report is referenced specifically in Dickenson (2015), however a copy of the report could not be found for my dissertation research. As a result, limited details about it appear in this table and in later sections.

C.ii. Evolution of Expressway Routes, 1952-1969

Expressway development in Milwaukee was generally seen as evidence of progress for the city. There was an earnest belief that expressways would have a broad positive impact for the community and that it could be effectively integrated into neighborhoods to achieve that ideal. This was representative of the sense of idealism held by City leadership that the expressways would prepare Milwaukee for future growth and prosperity. However, the disparate impact of expressway development in inner core neighborhoods was overlooked in the decision making process and ultimately produced destructive urban transportation investments that were antithetical to the original vision.

The expressway route planning began in 1949 with a consulting contract to De Leuw, Cather & Co. to develop a feasible system design given engineering and construction considerations. At the time, the system was entirely envisioned to serve the city of Milwaukee. It was to be a contained system that

could integrate at a future date with State and Federal highways. Multiple routes for the east-west and north-south corridors were considered. The routes were meant to be optimized for the greatest potential to improve traffic efficiency and the greatest cost savings to avoid undue property acquisitions in the neighborhoods. This is most notable with the acquisition of the Milwaukee Electric Railway & Transit Co.'s right-of-way along the northern bluff of the Menomonee Valley and the serious consideration to route the expressway along the western side of the Milwaukee River.⁴²⁶ By 1952, the expressway system was no longer solely a vision for the city. A broader metropolitan perspective had developed for a system that would service all of Milwaukee County and surrounding suburban counties. The metropolitan basis for the system ultimately resulted in the creation of the Milwaukee County Expressway Commission (MCEC) and the transfer of authority of system development from the City of Milwaukee to the MCEC under Milwaukee County.⁴²⁷

The general goal of expressway development was to create a transportation network that would facilitate the efficient movement of daily passenger and freight truck vehicle traffic in the city of Milwaukee and in the larger metropolitan area, thereby relieving congestion on local streets and providing people with easy access to work, shopping, and recreational opportunities.⁴²⁸ As initially proposed, the 1952 design concept included North-South and East-West routes as the core elements of the system with an "inner cordon" (later referred to as the "inner loop" or "distribution loop") in the Inner Core-North and a lakefront extension into Bayview.⁴²⁹ The North-South and East-West routes

⁴²⁶ Dickenson (2015), 34-41, 43-49.

⁴²⁷ Dickenson (2015), 53, 56, 58, 61.

⁴²⁸ Amman & Whitney Consulting Engineers, "Preliminary Plan for a Comprehensive Expressway System for the City of Milwaukee" (1952), 11.

⁴²⁹ State Highway Commission of Wisconsin (1946), 72. Amman & Whitney (1952), Plate 1, 12. Milwaukee County Expressway Commission, "Report on Urban Extensions to Interstate System in Milwaukee County" (1962), 1-2.

were envisioned to carry the majority of daily traffic. The 44th Street and North Avenue routes were meant to alleviate additional traffic volumes coming from the northwest of the city.⁴³⁰

The route planning documents sought to emphasize the feasibility of the expressway system and made arguments in favor of its development. The reports presented the expressways as a positive solution to challenges in Milwaukee arguing that there would be broad community impact. Of the improvements and strengths of the system, the reports emphasized the following:⁴³¹

- Residential areas would see an improvement in the quality of life of residents after the removal of heavy truck traffic. Large tractor-trailer and other freight trucks were seen as a blighting influence on the neighborhoods. By restoring a more quiet atmosphere with their removal, it was expected that the neighborhoods would improve.
- In redeveloped areas along the expressway routes in residential districts, residual land parcels could be developed into “fringe parks.” This potential addition of green space was seen as a benefit to local residents.
- From a national security perspective, local companies serving the defense industry would benefit from an increased efficiency in the movement of workers and materials, thereby improving their production. The benefit of the physical expressways was noted: “In case of bombing, they would also expedite evacuation and provide firebreaks.”
- Mass transit for workers would benefit from the increased efficiency of bus routes. It was recommended that express bus routes could run more quickly on the expressway system by utilizing the on/off ramps to access bus stops and discharge passengers.

⁴³⁰ Amman & Whitney (1952), 12.

⁴³¹ Amman & Whitney (1952), 13. Milwaukee County Expressway Commission (1962), 10-13.

- Of any benefit, improved access to the central business district was seen as a main focus. The expressways were envisioned as a way to facilitate easy access for any car and truck to arrive at their destination with minimal transit on local streets and easy access to parking.

Of the publicly available reports about expressway development, 55 “alignment controls” were identified that guided route design.⁴³² These “principal properties” were identified as properties, buildings, or features that “control” expressway design and alignment. These “alignment controls” were to be avoided and not disturbed during expressway design and construction.⁴³³ Of the 55 controls, 53 were located around and within the central business district. Interestingly, the locations of the controls prevented the expressways from being developed through the downtown. Instead, neighborhoods immediately adjacent to downtown and in the inner core areas were ultimately decided as route locations. The remaining two controls outside of the central business district were in northern Bayview. Both were U.S. Naval installations important to national security.

It is important to note that while the alignment controls acknowledged – in a limited way – the presence of urban renewal project areas, the expressway planning materials do not explicitly discuss urban renewal. There is no conversation about integrating the expressways with urban renewal project areas – despite the obvious relationship between the two Federal programs. The expressway designs and urban renewal project plans acknowledge the presence of each other’s planning areas, but they do not demonstrate a coordinated effort.

⁴³² See Howard Needles Tammen & Bergendoff, “Milwaukee County Expressway System: Hillside Interchange Type Studies” (1961); Howard Needles Tammen & Bergendoff, “Lake Front Expressway, Milwaukee County Expressway System” (1963); and, Milwaukee County Expressway Commission, “Report on Urban Extensions to Interstate System in Milwaukee County” (1962).

⁴³³ Howard Needles Tammen & Bergendoff, “Milwaukee County Expressway System: Hillside Interchange Type Studies” (1961), 2-3.

Two funding sources were proposed as the primary means of financing for the expressway system: State and Federal funding programs, and a local bond issuance.⁴³⁴ The City of Milwaukee, Milwaukee County, and the Wisconsin State Legislature funded the majority of expressway development costs into the mid-1950s. The Federal government had no legislative means to assist local government agencies in funding expressways other than the Federal Aid Highway Act of 1944. It was not until the Interstate Highway Act and the Highway Revenue Act that expressway development became financially feasible for Milwaukee County.⁴³⁵ The Federal funding formula in this legislation provided a 90-10 cost sharing ratio where the Federal government provided 90% of funding for total project costs while the local municipality covered the remaining 10%.⁴³⁶ To secure this funding, the State Expressway Commission of Wisconsin recommended in 1957 to designate the various routes in the expressway system as interstates. With this designation, full Federal funding became available.⁴³⁷

Table 4.32: Estimated Construction Costs of 1952 Expressway Routes

Route	Cost (1952 Dollars)			Cost (2023 Dollars)	Length (mi.)
	Construction	Right-of-Way	Total	Total	
East-West	\$28,514,758	\$10,240,645	\$38,755,403	\$435,510,000	3.5
44 th Street	\$20,633,627	\$11,555,700	\$32,189,327	\$366,750,000	5.7
North-South North Segment	\$18,640,895	\$14,938,215	\$33,579,110	\$378,210,000	4.1
North-South South Segment	\$21,762,417	\$10,454,892	\$32,217,309	\$366,750,000	4.6
North Avenue	\$10,635,152	\$10,369,430	\$21,004,582	\$240,680,000	2.5
Total	\$100,186,849	\$57,558,882	\$157,745,731	\$1,799,360,000	20.4

Note: Inflation-adjusted 2023 dollars calculated with the Federal Reserve Bank of Minneapolis' online inflation calculator.

Source: Amman & Whitney (1952), 41.

⁴³⁴ Amman & Whitney (1952), 41.

⁴³⁵ Dickenson (2015), 74-75, 110, 122-124.

⁴³⁶ Dickenson (2015), 6.

⁴³⁷ Dickenson (2015), 124-125.

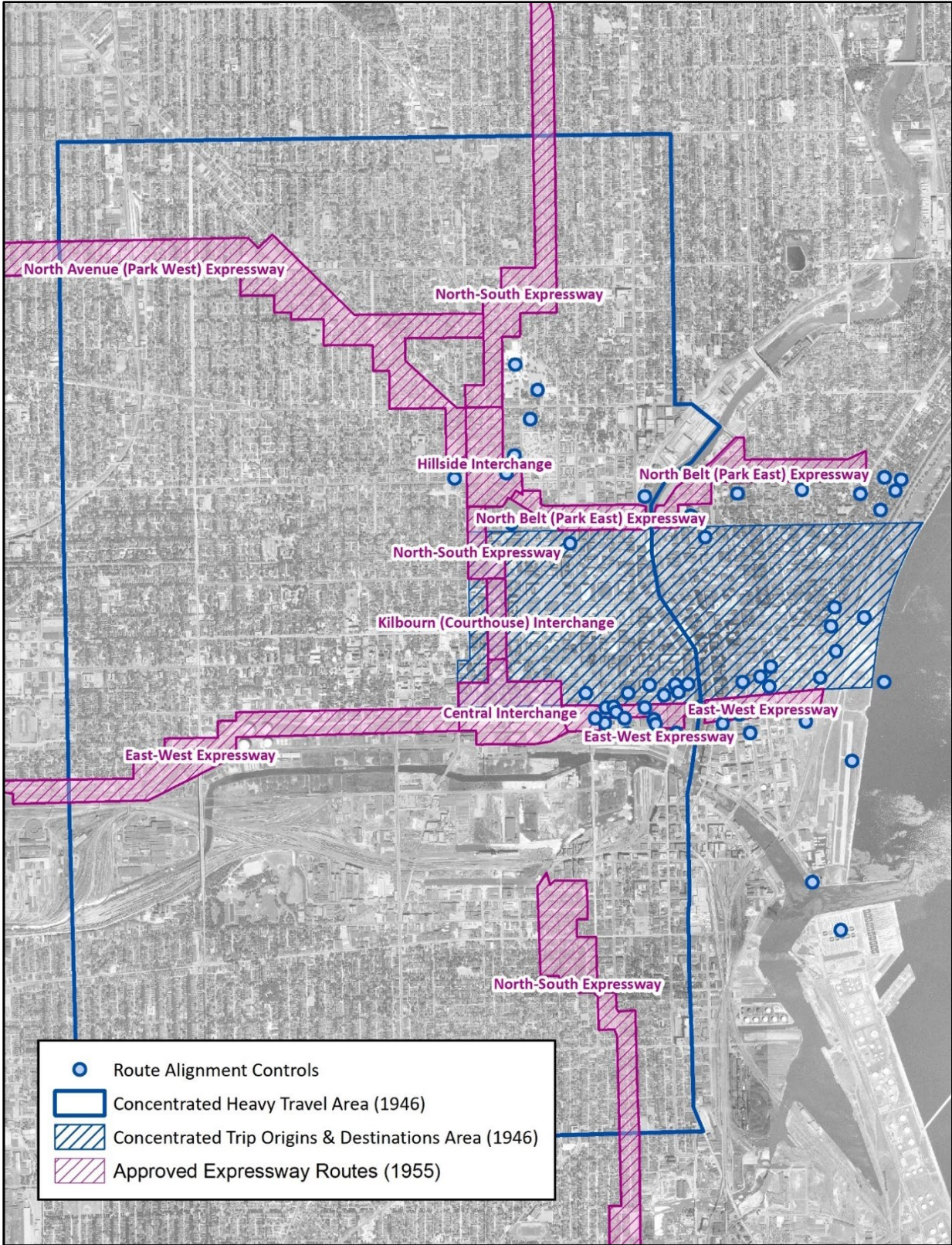
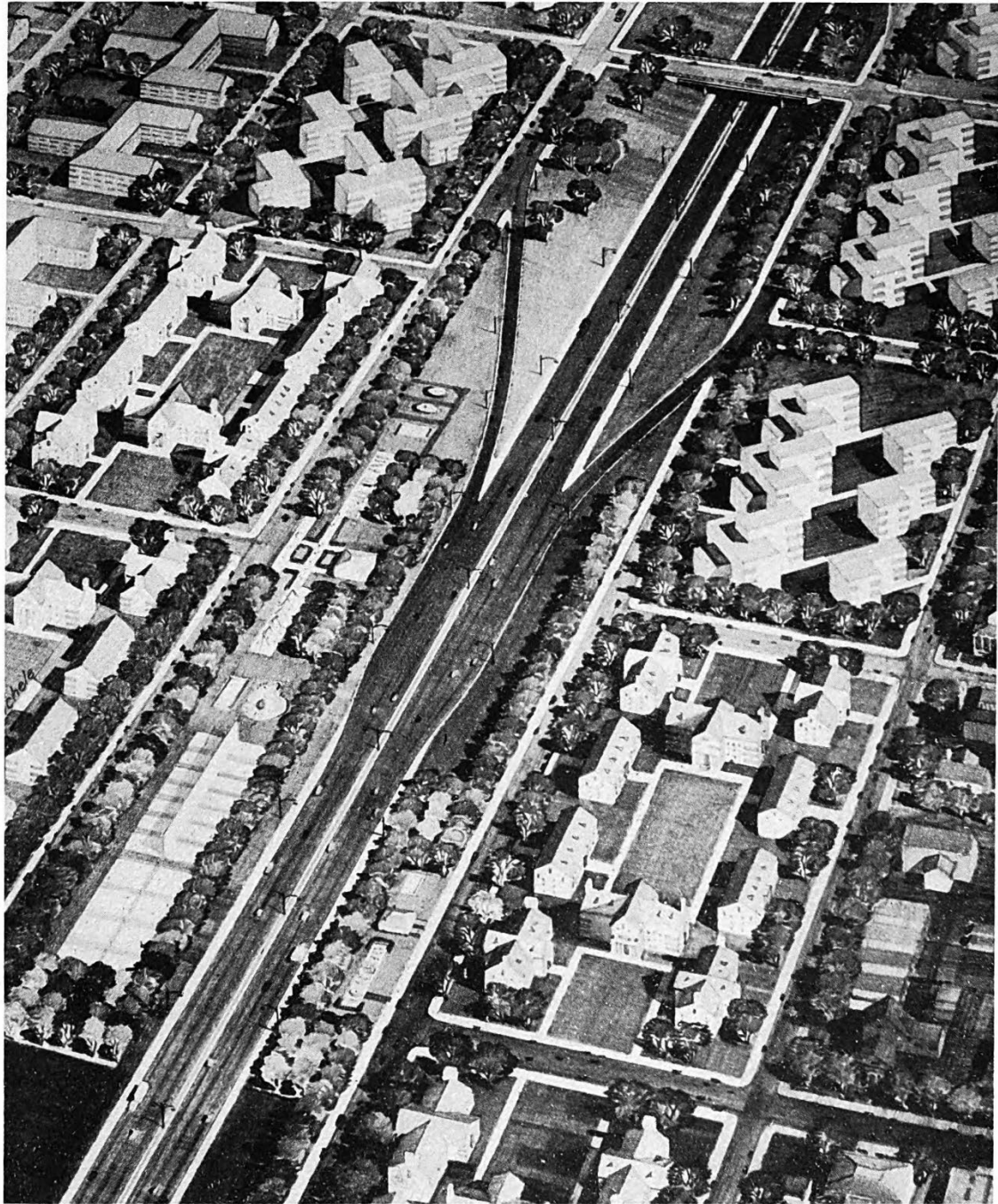


Figure 4.43: Initial Traffic Concentration Areas (1946) Overlaid with Approved Expressway System Routes (1955)



Sketch Showing Possible Development of Residential Neighborhoods Along the Milwaukee Expressway

Figure 4.44: Rendering of Expressway Corridor Conditions in the City of Milwaukee including Residential Developments and Fringe Parks, 1952

(Source: Amman and Whitney (1952), available in the public domain via HathiTrust and the University of Illinois at Urbana-Champaign)

C.iii. Concerns & Criticisms to Expressway Development, 1950s

The initial opposition by Common Council members that materialized in the late 1940s persisted and grew into the 1950s. While expressways were acknowledged as novel and a potential solution to Milwaukee's traffic inefficiencies and congestion, they were not wholeheartedly embraced by City leadership. There were serious concerns expressed by elected officials and municipal employees about the extent of the system, the disruptions in and destruction of neighborhoods, and the overall cost of the system.

While depopulation of the central area of Milwaukee had risen to the attention of City leadership by the late 1940s and early 1950s, there were correlated demographic and economic trends that caused concern. As the residential locations of workers shifted so too did the need for shopping districts and employment centers. As a result, it quickly became apparent that Milwaukee's central business district – once the hub of the city's commercial activity – was losing its customer base and the diversity of its business mix due to decentralization. Milwaukee's previously contained economy was quickly becoming spatially disparate and developing a polycentricity on the urban periphery. This was resulting in a loss of activity and an increase in vacancy in the downtown area; simultaneously, the central area of the city was beginning active demographic and economic competition with suburban areas.⁴³⁸

When the City transferred authority of expressway development in 1954 to Milwaukee County via the Milwaukee County Expressway Commission, City leadership saw it as a reasonable way to relieve themselves of the burden of what was quickly becoming a massive task with demographic, economic, and political consequences. However, the loss of authority brought a loss of control. Soon after transferring authority, City leadership began expressing concerns about decision making and route

⁴³⁸ Casey (2006), 60.

planning. Multiple City leaders criticized what they saw as a limited set of decision-making criteria based solely on traffic engineering considerations that ignored broader impacts to the central business district and surrounding neighborhoods.⁴³⁹ Casey (2006) assembled a detailed set of primary source materials, primarily focused on correspondence authored by City leadership, to detail what would become prescient concerns about the expressways. These materials are primarily sourced from two City officials: Elmer Krieger, Executive Secretary of the Board of Public Land Commissioners, and Sol Ackerman, Milwaukee's Urban Renewal Coordinator. Their criticism bluntly expressed their concerns about disruptions to neighborhoods, the loss of property tax base, and the inappropriate placement of expressway routes through productive and dynamic areas. A handful of notable quotes include:⁴⁴⁰

- “The point is that presently expressways are plowing through neighborhoods and the city is faced with the job of patching up the scars afterward.”
- “The expressway plans have been superimposed upon downtown without cooperation with the city except on an engineering basis. The expressway engineers appear to pay little or no attention to downtown land use, tax base, appearance, and functions when designing and locating the routes by mathematical formulae, as was so carefully explained at yesterday's meeting.”
- “Simply because the city turned over the job of building expressways to the county is no reason for the city to divorce itself from the responsibility of giving careful review to the plans the engineers present. After all, there may be 1,000 solutions. We want the right one.”

C.iv. Expressway Clearance Zones & Neighborhood Impacts, 1952-1969

In the original 1952 planning report, it was argued that the expressways would facilitate the redevelopment of residential neighborhoods and the addition of fringe parks. Once the expressways

⁴³⁹ Casey (2006), 68-70

⁴⁴⁰ Casey reports sourcing these quotes from a letter written to Mayor Frank Zeidler by Elmer Krieger dated June 4, 1959. Casey (2006), 69-70.

removed heavy traffic from local neighborhoods, these redevelopment opportunities would improve conditions for small business owners and create safer and healthier environments for families.⁴⁴¹ Because of the redevelopment opportunities, private capital would be attracted to the neighborhoods to pursue projects – potentially with urban renewal funds.⁴⁴² However, this argument was only ever made in the most general type of discussion. The expressway planning documents never assessed the route planning through specific neighborhoods in any level of detail; they solely mentioned the presence of certain types of land uses, which generally included residential, commercial, and industrial.⁴⁴³ Specifically for residential areas, the rationale for expressway development through those neighborhoods was as a blight elimination tool. The expressways were seen as another tool employed by City government to remove slum conditions; though, there was never a detailed discussion proposed about the exact process by which the larger redevelopment would occur.⁴⁴⁴

In addition to concerns expressed by members of the Common Council about the City's share of project costs, there was the concern about the loss of property tax base as a result of clearance operations for the expressway corridors.⁴⁴⁵ While the rationale for expressway development argued that an indirect benefit would be an increase in property values because of more efficient access to a variety of uses in the inner core and central business district, the argument ignored the financial cost of demolishing the existing uses – which would never be recovered through redevelopment.

When this rationale and these concerns are considered in conjunction with the then-ongoing urban renewal projects, the impacts to Milwaukee's inner core neighborhoods becomes clearer. Both Federal

⁴⁴¹ Amman & Whitney (1952), 13, 35-36.

⁴⁴² Milwaukee County Expressway Commission (1962), 10.

⁴⁴³ Milwaukee County Expressway Commission (1962), 6-8.

⁴⁴⁴ Milwaukee County Expressway Commission (1962), 13-14.

⁴⁴⁵ Casey (2006), 60-64.

project types, when exerting strong displacement forces in communities, caused significant physical damage with the attendant loss of socio-cultural continuity and community identity. Because the projects were undertaken – both individually and collectively – at such large scales, the ethnic and racial communities of the inner core could not adapt quickly enough to maintain their cohesion and preserve their neighborhoods. Instead, the inner core suffered massive amounts of clearance that left whole neighborhoods demolished. The following subsections provide individual notes related to these neighborhood impacts as well as accompanying maps to visually show the clearance operations.

Table 4.33: Expressway Routes & Interchanges in Inner Core Neighborhoods, early 1960s

<i>Expressway Routes</i>	<i>Expressway Interchanges</i>
North-South Route	Central Interchange
East-West Route	Lake Interchange
North Avenue Expressway (Park West)	Kilbourn (Courthouse) Interchange
North Belt Expressway (Park East)	Hillside Interchange
	Juneau Interchange

Sources: Howard Needles Tammen & Bergendoff, “Milwaukee County Expressway System: Hillside Interchange Type Studies” (1961); Milwaukee County Expressway Commission, “Report on Urban Extensions to Interstate System in Milwaukee County” (1962); Howard Needles Tammen & Bergendoff, “Lake Front Expressway, Milwaukee County Expressway System” (1963).

C.iv.a. East-West Route & Central Interchange

The Madonna Dei Pompei Catholic Church had been the socio-cultural epicenter of Milwaukee’s Italian community for generations prior to urban renewal and expressway development. From the 1930s-1950s, Italian residents had out-migrated from the Lower Third Ward to Milwaukee’s periphery neighborhoods and surrounding suburban communities. As a case study in the city’s challenge with depopulation, the congregation of Madonna Dei Pompei went from a high of approximately 1,500 in the 1930s to about 200 in the mid-1950s. In addition, the Lower Third Ward was transitioning into a predominantly industrial district. In 1954, Mayor Zeidler proposed a redevelopment project that would eventually become the Lower Third Ward Urban Renewal Area, which called for the demolition of Madonna Dei Pompei and the remaining residential homes. The Church and remaining Italian community members fought back and delayed the eminent domain acquisition and demolition. Due to

this opposition, the church was spared demolition during urban renewal; but, when the East-West route was pushed through the Third Ward to meet at the Lake Interchange, the church was ultimately removed.⁴⁴⁶

C.iv.b. North-South Route in Inner Core-North

The North-South route quickly came to serve as a socio-cultural barrier that divided previously integrated neighborhoods from one another. In the Inner Core-North, churches and synagogues played important roles in community cohesion and daily life. When the North-South Expressway was completed, the congregation of St. John Lutheran Church was physically divided on one side of the expressway or the other with some members ultimately deciding to join a different church due to the barrier.⁴⁴⁷ The Black community lost three significant churches due to expressway development: St. Mark's African Methodist Episcopal Church, Mount Calvary Holy Church of America, and the Church of the Living God.⁴⁴⁸ In addition to the socio-cultural disruption, neighborhood residents who had previously used the street car to access community institutions were no longer able to do so because the street car tracks were not extended over the expressway overpass bridges.⁴⁴⁹

Though there is little publicly-available historical evidence to demonstrate that Milwaukee directly linked its urban renewal project areas with expressway corridors, Dickenson (2015) reports a memo written by Milwaukee's Urban Renewal Coordinator Sol Ackerman to Mayor Frank Zeidler in 1958, which suggested that expressway clearance could effectively remove slum housing in the vicinity of 8th and Brown Streets more quickly than urban renewal could.⁴⁵⁰ This piece of evidence may help to explain why the final route was chosen for the North-South Expressway. When initially developed in 1949, the

⁴⁴⁶ Dickenson (2015), 140. Smith, "From Socialism to Racism" (2003), 80-81.

⁴⁴⁷ Dickenson (2015), 139-140.

⁴⁴⁸ Dickenson (2015), 141-142.

⁴⁴⁹ Dickenson (2015), 139-140.

⁴⁵⁰ Dickenson (2015), 146, 151.

system design called for the North-South route to run along the west side of the Milwaukee River in an attempt to avoid damage to neighborhoods in the Inner Core-North. Ultimately, the route was abandoned due to objections about its circuitous and less-than-efficient path, potential damage to Milwaukee County's park system, potential damage to natural ecosystems along the Milwaukee River, and objections from stakeholders in Glendale about on/off ramps. Instead, the corridor paralleling N. 7th and 8th Streets was chosen, which ran directly through Black Milwaukee.⁴⁵¹

C.iv.c. North-South Route in Walker's Point

In the late 1950s, correspondence between members of City leadership indicated that Walker's Point was seen as a mixed-use district with industrial uses along the railroad lines and harbor, but that it had been experiencing an extended period of deterioration. The neighborhood was seen as better suited for industrial purposes and a reasonable location for the expressway corridor as a result. Because of the demolition that would occur with expressway development and the land use change that was sought, the City did not feel that further rehabilitation or redevelopment efforts were warranted.⁴⁵² The correspondence did express caution, however, about the importance of Mitchell Street as a shopping district. It appears that the concern was about easy access for auto traffic without an explicit acknowledgment of the importance of the business corridor to the community. More generally, this also fits within a concern that expressways could be an additional blighting influence because of their disruption to neighborhoods, increased noise, and increased vehicle traffic around the on/off ramps.⁴⁵³

C.iv.d. North Avenue (Park West) Route & Hillside Interchange

Though the Hillside Interchange was fully developed and became operational, the North Avenue (Park West) route was never constructed. The 19-block corridor for the route was cleared of all buildings by

⁴⁵¹ Dickenson (2015), 36, 40-41, 98, 150-151.

⁴⁵² Casey (2006), 59.

⁴⁵³ Casey (2006), 59.

1970, but the area was never developed beyond the clearance zone.⁴⁵⁴ The North Avenue (Park West) route as a component in the larger expressway system marked a demarcation for the community and City with respect to how ongoing expressway development and urban renewal efforts were being managed in Milwaukee. Common Council members representing neighborhoods along the route objected to its planned location as early as 1957. Martin Schrieber, Vel Phillips, and Fred Meyers objected to the planned route, arguing that it would devastate the North Avenue business district. In addition to these objections, the West North Avenue Advancement Association organized a community meeting to protest the route.⁴⁵⁵ The Common Council approved the route anyway in 1958.

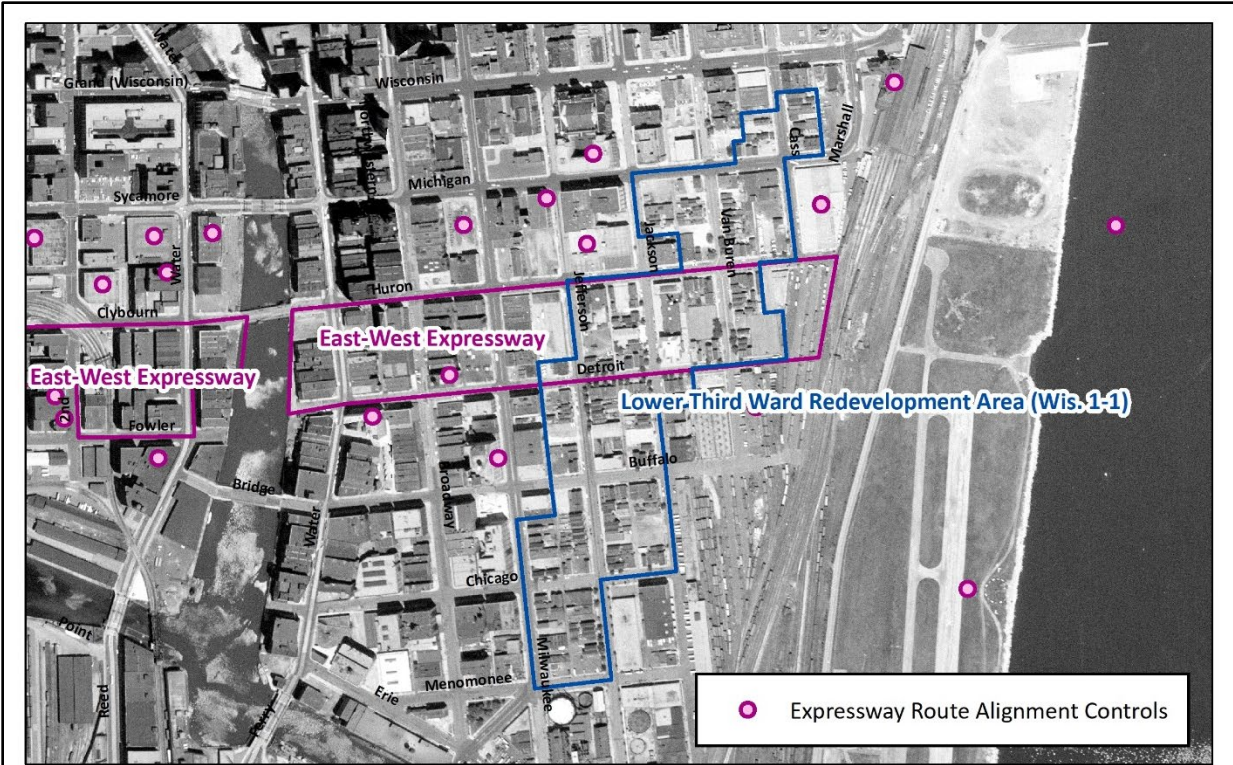
C.iv.e. North Belt (Park East) Route & Juneau Interchange

Sol Ackerman, Milwaukee's Urban Renewal Coordinator, expressed concerns about the North Belt (Park East) route and its impacts on the Vliet Street and N. 3rd Street business corridors. What had been historically dynamic and economically vibrant areas had maintained their significance into the 1950s. As a result, the proposed clearance of business districts for expressway development was concerning and seen as a negative impact to the local neighborhood. Additionally, Ackerman noted his concern about the fragmentation of neighborhoods where whole blocks would be demolished in one area while another area was left untouched as a fragmented island.⁴⁵⁶ These concerns are in contrast to his reported correspondence to Mayor Zeidler seeming to indicate that expressway development could be used as a slum clearance tool, despite the proximity of the North Belt (Park East) route to the North-South route only blocks away. The historical record does not clarify this dissonance in his thinking.

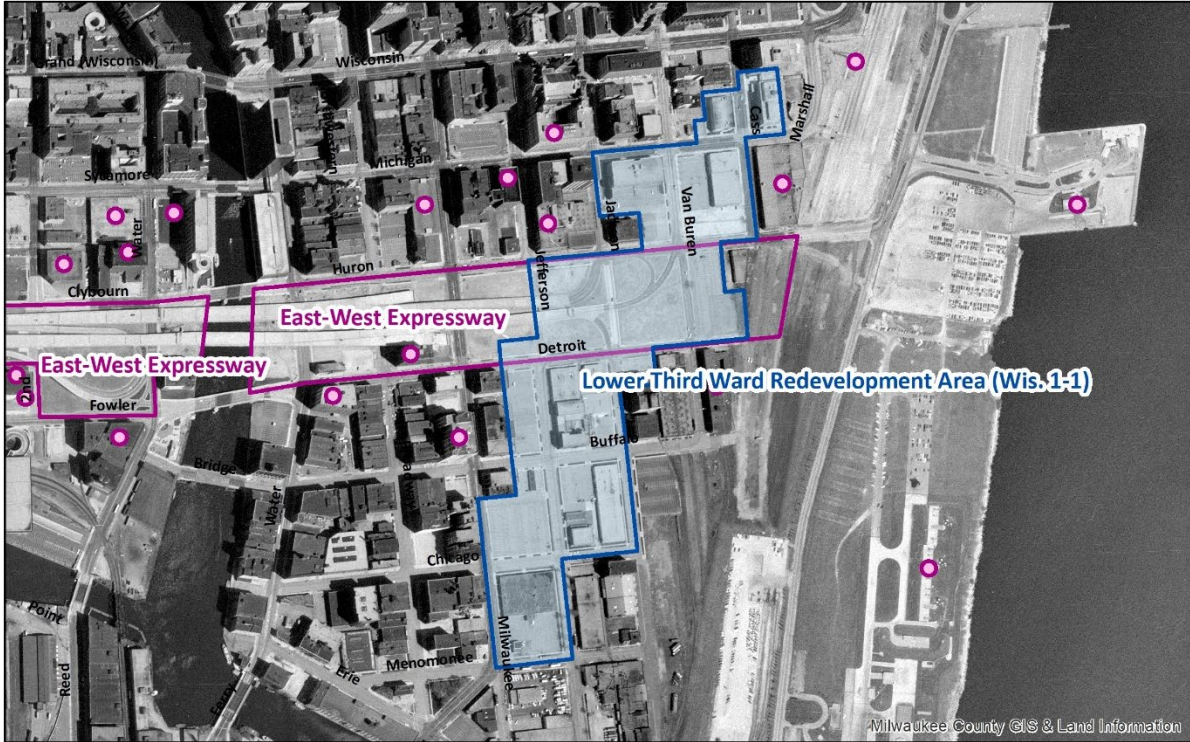
⁴⁵⁴ Vick (1993), 105.

⁴⁵⁵ Dickenson (2015), 154.

⁴⁵⁶ Casey (2006), 72.



1956 Aerial



1970 Aerial

Figure 4.46: Expressway Development & Urban Renewal Impacts on the Lower Third Ward, 1956-1970

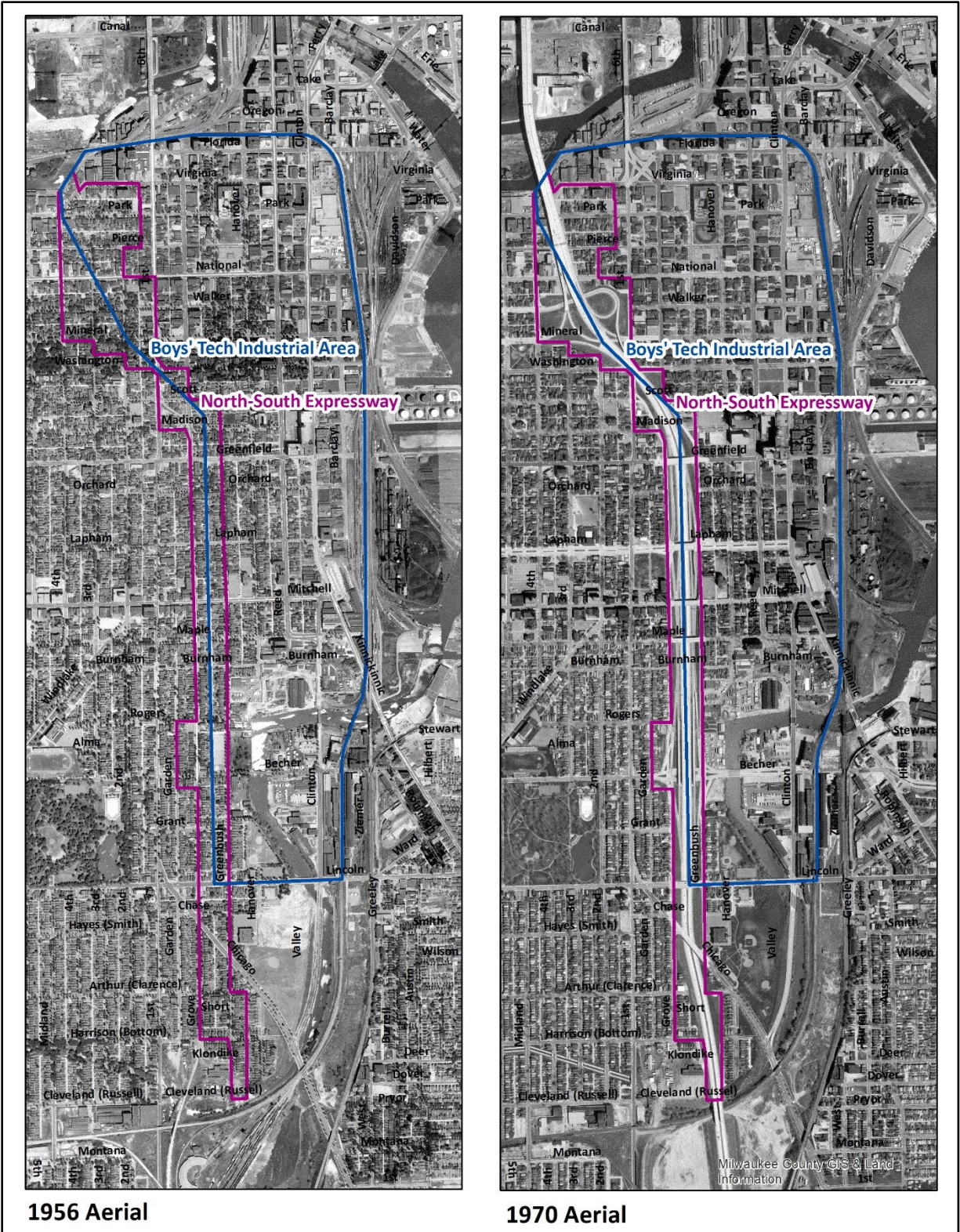
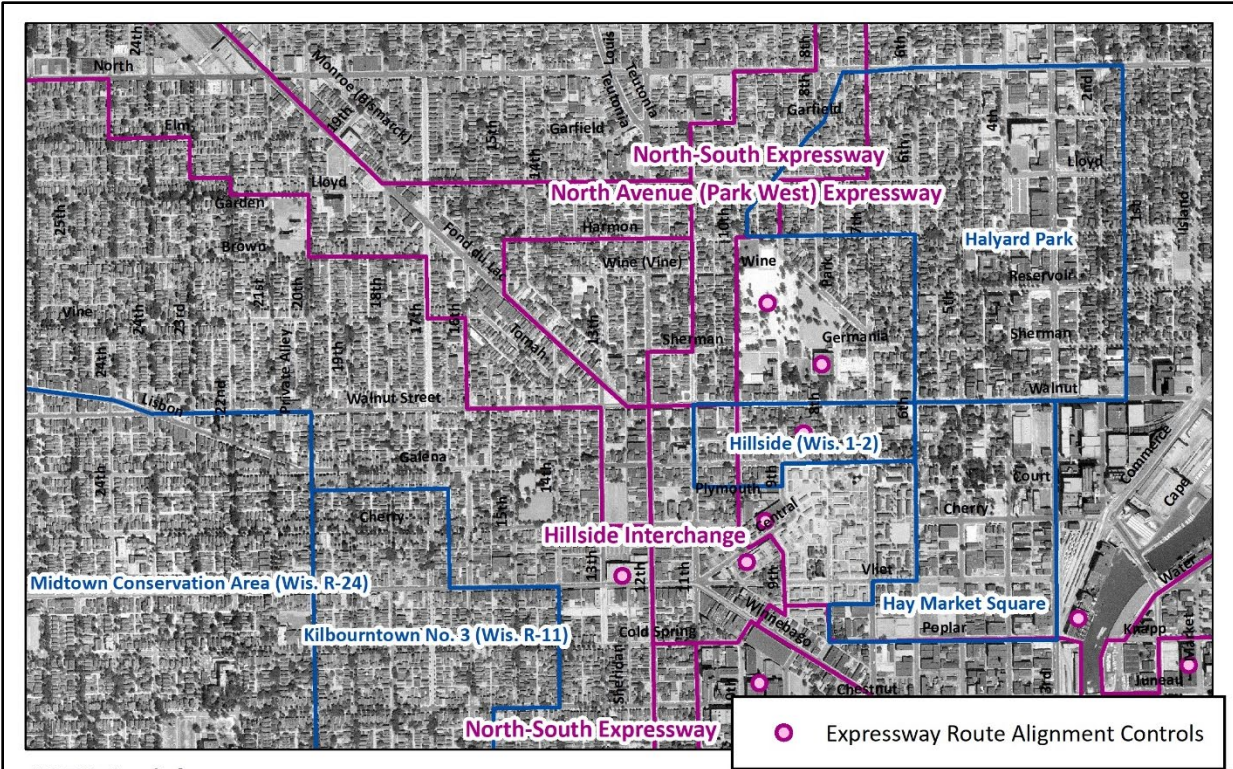
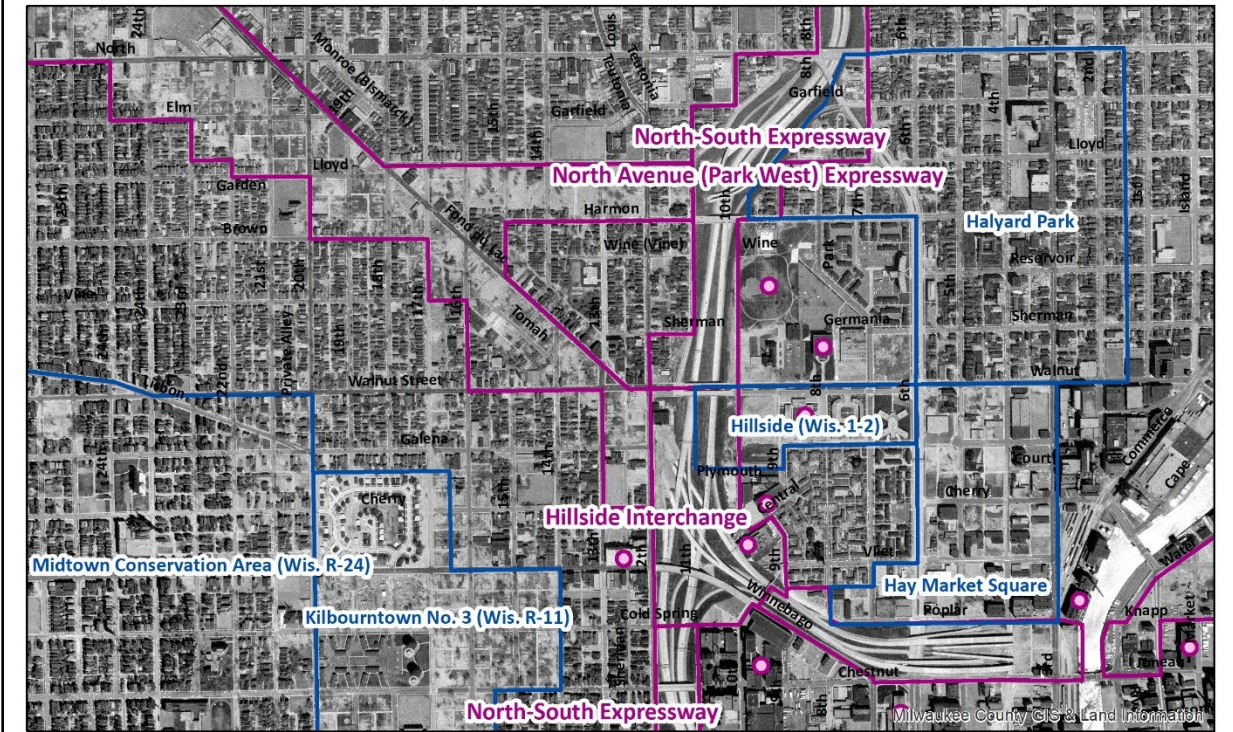


Figure 4.47: Expressway Development & Urban Renewal Impacts in Walker's Point, 1956-1970



1956 Aerial



1970 Aerial

Figure 4.48: Expressway Development & Urban Renewal Impacts in the Hillside Area, 1956-1970

C.v. The “Expressway Revolt” Builds Opposition to Further Development, mid-1960s

Despite strong support from leadership in the City of Milwaukee, Milwaukee County, and the Wisconsin State Legislature, neighborhood opposition to expressway development was initially limited but began to develop more fully by the mid-1960s when clearance operations were ongoing at a citywide scale. Criticisms, protests, and attempts to block projects were typically localized to select neighborhoods in the 1950s. Faith leaders expressed concerns about negative impacts to neighborhoods where members of their congregations lived. Businesses expressed concerns and frustrations about whether their operations could continue, which was notably relevant for industrial users with large manufacturing footprints. Some politicians and neighborhood groups objected to the expressway routes because of their negative impact to neighborhood economies – for example, as discussed previously about the North Avenue Route. The distinction between this opposition and what would follow is that early objections were expressed as local neighborhood concerns while the later opposition movement became coordinated across multiple groups.

The lack of a coordinated opposition movement in the 1950s can potentially be explained by a variety of factors. Firstly, it was difficult for City leadership and neighborhood residents alike to understand and fathom the scale of demolition and redevelopment that would result from expressway construction and urban renewal projects. No similar efforts had ever been undertaken in Milwaukee. Previously, there had been overwhelming opposition to any notion that government would take private land through eminent domain for redevelopment purposes. In what had been opposition to this for multiple decades, the Milwaukee Common Council changed its position seemingly over night to embrace the projects. The idea that whole neighborhoods would be demolished was almost incomprehensible. Second, planning for the expressway routes and urban renewal project areas was constantly in flux and shifting. For the better part of a decade, details were changing every few months with project boundaries never having a state of permanence. As a result, neighborhood residents never actually knew if their homes and

businesses were located in a project area. Third, there was little to no coordination between the Milwaukee County Expressway Commission and City departments to understand the relationships and overlap between impacts resulting from expressway construction versus those from urban renewal project areas. It is well documented in the historical record that neither the County nor the City conducted adequate operations to assist displaced people. As a result, neighborhood residents and business owners were not adequately prepared or supported by the very government agencies that were evicting them from their private property. Fourth, the neighborhood residents most negatively impacted by expressway development and urban renewal were lower-income and working-class of various ethnicities and races (Polish, Italian, Jewish, Black, Mexican). Their neighborhoods were communities in Milwaukee's inner core that had become a "second class" city because of decades of municipal decision making, neglect, and abandonment. There are indications in the historical record that the City and County failed to adequately inform and notice these communities of the changes that would result from expressway development and urban renewal. Other researchers have developed a body of evidence that indicates that this lack of proper notice and community engagement was an intentional act to disenfranchise the neighborhoods. Dickenson (2015) provides a cohesive summary of the researchers' assertions and their individual pieces of evidence.⁴⁵⁷ The "second class" status of these residents essentially meant their voting power and voices were diluted.

As the expressway planning process developed and construction was imminent, the displacement of residents became a high-priority issue. In 1957, staff at the Milwaukee County Expressway Commission did not believe that the displacement of residents, the lack of a coordinated relocation assistance program, and the demolition of dwelling units (which would further exacerbate the already entrenched housing shortage) were cause for concern. Staff believed that displaced residents had adequate access

⁴⁵⁷ Dickenson (2015), 149-154.

to other housing choices. By 1962, however, 1,100 families had been displaced and projections indicated an additional 7,000 families would be displaced by 1970. Responding to community criticism, staff at the Expressway Commission stated that their responsibility to assist displaced families was limited and that they were not required to assist families in finding new dwelling units. They referred displaced families to the Redevelopment Authority of the City of Milwaukee, which was supposed to be managing relocation assistance for families displaced by urban renewal projects.⁴⁵⁸ The Redevelopment Authority had limited resources and was understaffed, meaning that it did not have the capacity to assist a large volume of displaced families. This “tit-for-tat” and “passing of the buck” between the County and City was emblematic of failures in expressway development and urban renewal in Milwaukee. Neither unit of government was prepared for or actually concerned with the disruption, dislocation, and destruction caused by the projects.

By the mid-1960s, other neighborhoods and surrounding suburban communities had watched as projects developed in the lower East Side, lower Third Ward, and Inner Core-North. Now having a better grasp of the destruction that came with expressways and urban renewal, residents quickly organized and fought back. Public opposition to the North Belt (Park East) Expressway (later named the Park Freeway) on the lower East Side and the Lake Freeway loop that extended from the East Side south into Bayview and the southern suburbs organized in the mid- to late-1960s.⁴⁵⁹ Their efforts effectively curtailed further expressway development through the East Side and Bayview. By the late 1960s and early 1970s, opposition had built against the Belt Freeway, which had been proposed by the Southeastern Wisconsin Regional Planning Commission as a bypass around the city of Milwaukee that would pass through suburban communities in southern Milwaukee County, Waukesha County, and

⁴⁵⁸ Dickenson (2015), 155-156.

⁴⁵⁹ Dickenson (2015), 157-159.

Washington County. Similarly, by the mid-1970s, development on the Fond du Lac Avenue and Stadium Freeways were halted due to opposition from neighborhood residents on the west and northwest sides of Milwaukee.⁴⁶⁰

For the scale of expressway development and the damage it caused, demolition and construction occurred rapidly. For what was built of the originally proposed system, construction only took approximately eight years. Within only 4-5 years of starting construction, the opposition became so intense that all other elements of a larger expressway system were halted or abandoned. In a tragically ironic way, these series of events demonstrate what happened when the idealism of expressway development collided with the reality of the destruction of neighborhoods. What was originally proposed as a limited-impact project with corridors no wider than approximately 100 feet became a monolithic endeavor with far-reaching consequences. Thus, while the expressways did achieve their goal of improving traffic flow efficiency, they fundamentally failed in the basic concept of clustering as a key spatial component of urban economics. The expressways decentralized the metropolitan economy introducing large-scale inefficiencies in the allocation of capital across various markets and the spatial mismatch between residential areas and job centers.

D. Containment Agenda: Evolution of the “Inner Core-North” Geography

The racialization of American inner core housing submarkets came to the fore by the early to mid-1960s in what became known as the Urban Crisis Period. The acute concentration of multiple challenging factors in inner core neighborhoods proved too overwhelming for local governments and could no longer be ignored in the public eye. This forced a reckoning between community residents, multiple jurisdictions of government, and the private sector about how to effectively address challenges in inner core neighborhoods. Though urban renewal programs had been ongoing for almost a decade, the

⁴⁶⁰ Dickinson (2015), 144, 161-165.

Federal government continued an expansion in its interest and involvement in urban issues by the late 1960s. Through President Lyndon Johnson's address "The Crisis of Cities," the National Commission on Urban Problems, and the National Advisory Commission on Civil Disorders, the scope of the Federal focus on America's cities was broadened.

By the mid-1960s, Milwaukee ranked as one of America's largest cities. It was also identified as one of the Northern cities that experienced the most pronounced Second Great Migration, which caused a marked shift between White and Black residents in the city. From 1950-1960, the city of Milwaukee saw a 186.9% increase in the number of Black residents from 21,772 to 62,458 people. This was by far one of the single largest increases of a Black population in an American city during this period.⁴⁶¹ For the first time in Milwaukee's history, residents witnessed an identifiable and literal change in the racial composition of the city. It was undeniable because it was physically apparent in the skin color of residents. This striking visual change catalyzed a new era in Milwaukee. Importantly, this change affected the city specifically. Of the 41,041 new Black residents in Milwaukee's Standard Metropolitan Statistical Area that arrived between 1950-1960, 99.1% of them moved into the city of Milwaukee. Only 355 moved into the suburbs. This meaning that Milwaukee's Second Great Migration was concentrated in the city proper.⁴⁶²

Public consciousness about housing in Milwaukee had generally focused on deteriorated conditions in the inner core neighborhoods with some special attention to the Black community. The recurring theme of "the Negro Problem" had arisen over multiple decades leading into the 1950s. But, as Milwaukee began its recovery and expansion from the Great Depression and World War II, the City began a certain

⁴⁶¹ Grier, "Obstacles to Desegregation in America's Urban Areas" (1964), 5.

⁴⁶² Grier (1964), 9-11.

degree of diversification. The Second Great Migration brought a large increase in the Black population, while Mexican and Puerto Rican immigrants began arriving in the city, as well. These demographic changes forced a reconsideration of housing in the inner core neighborhoods. While “the Negro Problem” persisted, City leadership expanded their perspective to include all non-White people.

HOLC neighborhood surveys indicate that Milwaukee’s Mexican population became noticeable by the late 1930s, whereas the Puerto Rican community gained some prominence by 1950. In the early 1950s, estimates indicated the Puerto Rican community had grown to 2,500 people while the Mexican community totaled about 500. Additionally, the 1950 Census estimated the Japanese community at 270, the Chinese community at 286, and the American Indian community at 457.⁴⁶³

By the mid-1950s, the Negro District in the Inner Core-North had established a level of permanence for Black Milwaukee. The public narrative about the area indicated a variety of assumptions: a mixed-race community with a 50-50 split between White and Black households, overcrowding and doubling up of households in low quality housing, and poorly maintained housing units without access to private bathrooms.⁴⁶⁴ It was acknowledged that “home ownership for Negroes [was] made difficult by economic and social discrimination...while almost ½ of all white Milwaukeeans are homeowners, only ¼ of the Negroes own their own homes.” Additionally, rent profiteering against Black households was common with 15-35% premiums paid for comparable housing units rented by Whites in nearby locations.⁴⁶⁵ The discrimination was clarified further: “Milwaukee Negroes do not live in the blighted section of town through choice. Even those with sufficient income must usually remain there because

⁴⁶³ Governor’s Commission on Human Rights, “NonWhite Housing in Wisconsin” (1954), 51-52.

⁴⁶⁴ Commission on Human Rights (1954), 53.

⁴⁶⁵ Commission on Human Rights (1954), 55.

they are not wanted elsewhere, because they meet a fairly ironclad 'gentleman's agreement' when they try to move."⁴⁶⁶

As a result of these community changes, Milwaukee's containment agenda became a publicly explicit exercise in confronting a series of overwhelming challenges in inner core neighborhoods. The irony of the need for this type of approach was that the challenges themselves were a direct result of City leadership's complacency and neglect of deteriorated housing conditions, discrimination, and segregation over the previous 30-40 years.⁴⁶⁷

Suburban communities responded to the Second Great Migration and the subsequent influx of White residents out-migrating from the city of Milwaukee by implementing exclusionary land use controls.⁴⁶⁸

While racially restrictive covenants had been prevalent in the region for decades, suburban communities built an effective strategy using platting controls to price potential Black homeowners out of their markets. By increasing minimum lot sizes and implementing additional fees for public services, suburban communities made housing unaffordable for lower-income and working-class Black families. This also proved true for lower-income and working-class White families. Thus, racially restrictive covenants specifically targeted Black families, while platting regulations provided dual controls of excluding lower-income and working-class families regardless of race.⁴⁶⁹

D.i. Community Studies of the "Inner Core-North," 1960-1965

As had been the case previously, City leadership periodically revisited Milwaukee's "Negro problem" when circumstances or conditions in Milwaukee caused concern in the White community.⁴⁷⁰ During the

⁴⁶⁶ Commission on Human Rights (1954), 62.

⁴⁶⁷ Grier (1964), 6.

⁴⁶⁸ Grier (1964), 8.

⁴⁶⁹ McCarthy (1983), 43.

⁴⁷⁰ Smith (2003), 84.

Urban Crisis Period of the 1960s, a renewed focus on Black Milwaukee expressed concern about the deteriorated conditions of housing in the central city area and the socio-economic prospects of Black Milwaukeeans. Mayor Frank Zeidler commissioned a study about Black Milwaukee in the central area of the city to better address its future.⁴⁷¹ Over five years from 1960-1965, three studies about the Inner Core-North were published documenting housing conditions and demographic attributes about Black residents.

The original 1960 report was generally indicative of the conclusions of the other two studies. It indicated that the condition of the built environment in the Inner Core-North was in a deteriorated state. To arrive at this conclusion, the committee assessed multiple factors related to housing in the study area: density, obsolescence, absentee ownership, pattern of land use, over-occupancy, and current practices of real estate transactions and mortgage banking.⁴⁷² Ultimately, the committee focused on density and obsolescence as chief concerns. The report clarified that the issue of density was not the overcrowding of individual dwelling units by too many occupants, but that the parcels were overcrowded by structures.⁴⁷³ The report further clarifies: "Over 16.2% or 2,386 of the total number of dwelling unit structures in the inner core are located in the rear half of the lot and are commonly known as 'alley' dwellings. While this practice of over-crowding the land with structures on 30 foot lots in the 1900's was considered as an economical use of land, it is no longer legal and is one of the severely blighting influences in the area. The distribution of these 'alley' structures is as might be expected – not uniform throughout the area, but more concentrated in the southern and western part than in the northern and eastern part."⁴⁷⁴ As the committee's study focused on the condition of individual dwelling

⁴⁷¹ Smith (2003), 89.

⁴⁷² City of Milwaukee, "Mayor's Study Committee on Social Problems in the Inner Core Area" (1960), G2.

⁴⁷³ City of Milwaukee, "Social Problems in the Inner Core Area" (1960), G12.

⁴⁷⁴ City of Milwaukee, "Social Problems in the Inner Core Area" (1960), G5.

units, the committee noted that many were technologically obsolete and in need of repair and renovation. Specifically, the report noted the need for interior renovation, broken windowpanes, defective bathroom floors, vermin and rat infestations, defective plumbing, defective electrical fixtures, rubbish and garbage nuisances, and poor housekeeping.⁴⁷⁵ Following these observations, the committee interestingly appears to shift blame onto the tenants asserting that the general upkeep of the structure, the potential need for renovations, and maintenance of plumbing and electrical were their responsibility, not that of the landlord.⁴⁷⁶

At the conclusion of the report, the committee made a series of recommendations. Due to the seriousness of housing deterioration in Black Milwaukee, it could be assumed that a housing renovation or construction program was proposed. Instead, the committee recommended further study by RACM to better understand the issue, a review of zoning ordinances and the housing code, the consideration of a new property tax levy to address “milking” (i.e., landlord property neglect and rent profiteering), that the City’s Human Relations Committee conduct outreach to educate the public about civil rights and the real estate community about opportunities in Black Milwaukee, and that Milwaukee’s social institutions advocate for open housing and a “Covenant of Open Occupancy.”⁴⁷⁷

D.i.a. Federal Housing Administration Blacklisted Lending Area, 1965-1966

Of the various geographies related to ethnic and racial enclaves, blighted areas, and local business districts, the historical record did not definitively identify a boundary that possessed the explicit purpose related to housing discrimination against the Black community until the mid-1960s. Talsky (1967) discusses the relationship between housing markets, race, and property values in an examination of Milwaukee’s inner core markets. In his research, he indicates that he conducted a number of interviews

⁴⁷⁵ City of Milwaukee, “Social Problems in the Inner Core Area” (1960), G7.

⁴⁷⁶ City of Milwaukee, “Social Problems in the Inner Core Area” (1960), G7-8.

⁴⁷⁷ City of Milwaukee, “Social Problems in the Inner Core Area” (1960), 21-24.

with real estate and banking professionals to better understand the financial conditions of the inner core housing submarkets. In this discussion, he identifies the director of Milwaukee's Federal Housing Administration (FHA) office as Lawrence Katz. In off-the-record conversations, Katz identifies Milwaukee's blacklisted area for FHA lending in the inner core as a geography bounded by the Milwaukee River, Juneau Avenue, Keefe Avenue, and 20th Street.⁴⁷⁸ The FHA refused to lend mortgages within this area. Later in 1966, Katz went on the record with a reporter from the Milwaukee Sentinel to confirm the geography, though he argued that the rationale for denying mortgages was based solely on economic considerations and not on racial ones.

This idea of using real estate or market controls to contain Black Milwaukee was not new. It had historical precedent as early as 1924 when the Milwaukee Real Estate Board contemplated the creation of a "black belt" to limit Black households to certain areas of Milwaukee.⁴⁷⁹ However, the public admission by Katz that the FHA had been making lending decisions based on a blacklisted area is historically consequential, in part because the area aligned closely with the Inner Core-North. This meaning that the FHA refused to lend in Milwaukee's Black community.

⁴⁷⁸ Talsky, "Real Estate, Race, and Revenue: A Milwaukee Case Study" (1967), 18-21.

⁴⁷⁹ Milwaukee Journal, September 16, 1924, as reported in McEntire, "Residence and Race" (1960), 244.

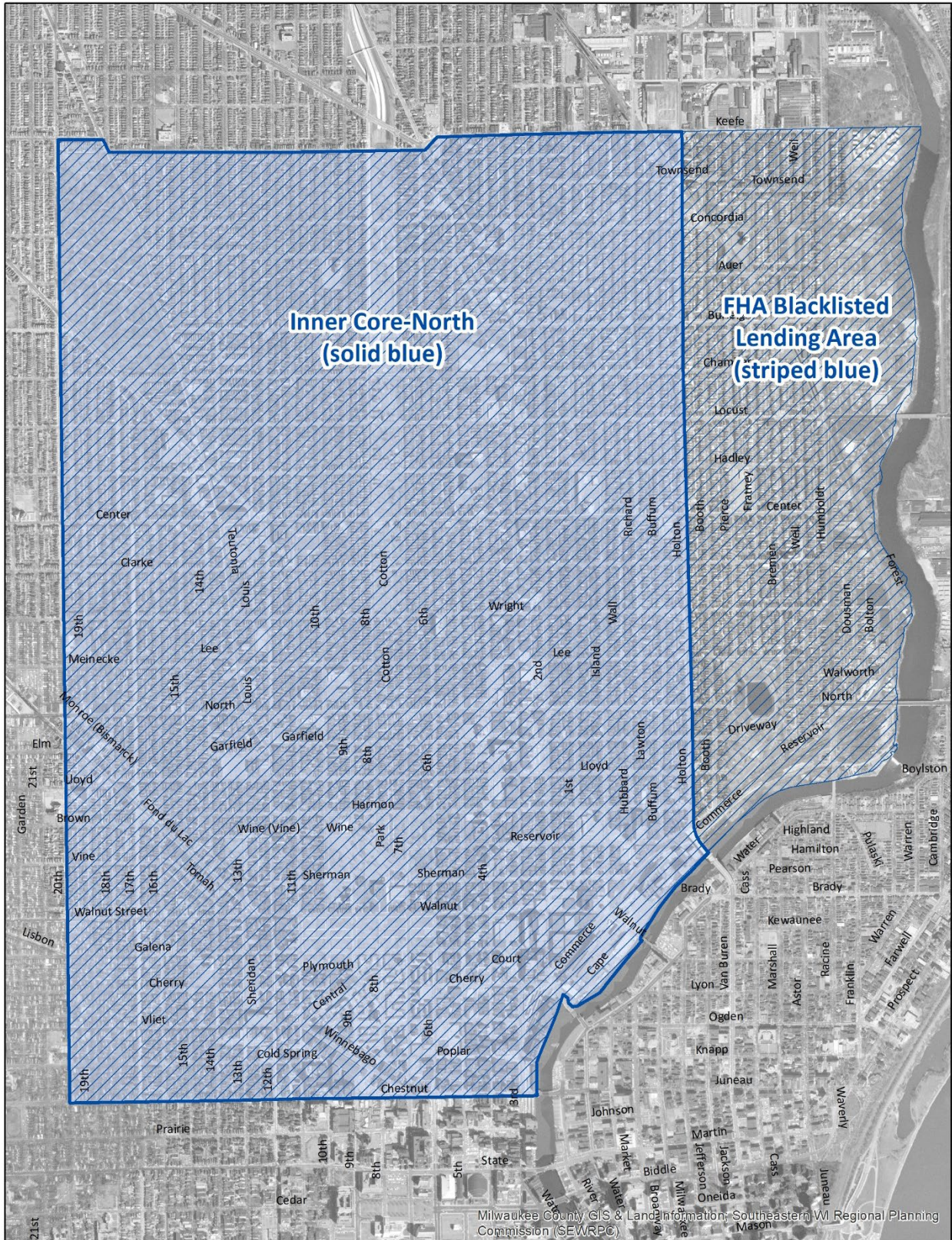


Figure 4.49: Comparison of Inner Core-North and FHA Blacklisted Lending Area Geographies, 1960-1966

D.ii. The Intersection of Housing, Public Education, & Law Enforcement

While slums and blight had been recurring themes in Milwaukee's public consciousness from the 1910s onward, the concerns were never at the forefront. When issues would arise anew, a sense of moral outrage would flare up as citizens and City leadership lamented the deteriorated housing conditions; but, that outrage was short lived. It never coalesced into a sufficient, properly scaled response to alleviate the deterioration of the inner core neighborhoods. This neglectful pattern of leadership behavior persisted until the Second Great Migration. By the late 1940s, however, Milwaukee had quickly become a racialized city; and, housing was a chief mechanism to extend the City's control into neighborhoods.

Through the 1950s and 1960s, a variety of actions, events, and factors coalesced to produce the intersection of housing, public education, and law enforcement in the Inner Core-North. This was no more apparent than in the direct consequences of the Second Great Migration and the rise of Milwaukee's first Black power structure. With a substantial increase in population, the Black community experienced growing political power – notably in the election of Vel Phillips as an alderwoman, the success of the Walnut Street Business District, and the continued strengthening of the socio-cultural fabric of the community – which was in large part driven by self-help strategies, the Milwaukee Urban League, and the NAACP. What could be described as the nascent stages of an era of prosperity, the Black community was on the rise until the Hillside Area Urban Renewal Project and North-South expressway route were proposed and developed through the Inner Core-North, which effectively demolished 60 years of growth and progress.

The community activism, protests, and riots of the 1960s were decades in the making in Milwaukee; but, the catalyst for the civil rights movement was a confluence of events at the national and local level. This commentary on the intersectionality of housing, public education, and law enforcement is not meant to

serve as a comprehensive history. Instead, it is meant to serve as a statement on the need for further research. There is a wealth of literature about these three topics addressing Milwaukee’s urban history, but there is lack of a multi-disciplinary approach that integrates them. This section provides a primer on a potential approach to these three interrelated issues.

Table 4.34: Timeline of Housing, Public Education, & Law Enforcement Events in Black Milwaukee

<i>Date/Year</i>	<i>Action</i>	<i>Notes</i>
1954	Brown, et al., v. Board of Education of Topeka, et al.	Known as Brown I. U.S. Supreme Court declares “separate but equal” unconstitutional in American public schools.
1955	Brown, et al., v. Board of Education of Topeka, et al.	Known as Brown II. U.S. Supreme Court clarifies Brown I stating school desegregation must occur “with all deliberate speed.”
1958	Daniel Bell Incident	Milwaukee Police Officer Thomas Grady, a White man, fatally shoots Daniel Bell, a 22-year-old Black man. Grady is later exonerated by an all-White jury.
1958	Vel Phillips proposes public housing project in Second Ward.	Alderdwoman Phillips proposed public housing project to be financed with Federal money. Project met stiff opposition from business groups and was denied by Milwaukee’s Land Commission.
1962-1967	Open Housing legislation proposed.	Alderdwoman Phillips proposed a citywide open housing ordinance four times. Each time, White Common Council members voted it down 18-1.
1963	Milwaukee Board of Realtors opposed open housing legislation.	Milwaukee Board of Realtors endorsed the National Association of Real Estate Boards’ “Property Owners’ Bill of Rights” that opposed open housing legislation.
1964-1965	MUSIC Protests	The Milwaukee United School Integration Committee (MUSIC) protested de facto segregation in Milwaukee Public Schools.
1965	Amos, et al., v. Board of School Directors of the City of Milwaukee, et al., filed in Federal court.	Lloyd Barbee, a Milwaukee-based civil rights attorney, files a lawsuit on behalf of Milwaukee Public School (MPS) students arguing that MPS has failed to follow the orders of Brown I and II to desegregate schools in the city.
1967	Black Christmas	The Milwaukee NAACP Youth Council and Commandos organized a boycott of downtown retailers during the holiday

		season to continue a pressure campaign for open housing.
1967-1968	Open Housing Marches	Fr. James Groppi and Milwaukee NAACP Youth Council organize open housing marches from the Inner Core-North to the South Side.
April 4, 1968	Martin Luther King Assassinated	Martin Luther King was assassinated on April 4, 1968.
April 11, 1968	Civil Rights Act of 1968	Also known as the Fair Housing Act, the Federal legislation prohibited discrimination in housing.
April 30, 1968	Milwaukee Common Council passes open housing ordinance.	Milwaukee Common Council passes an open housing ordinance that is more comprehensive than the Fair Housing Act.
1976	Federal court decides <i>Amos, et al., v. Board of School Directors of the City of Milwaukee, et al.</i>	Federal Judge John Reynolds determines that MPS had unconstitutionally maintained segregated schools following <i>Brown I</i> and <i>II</i> and orders them integrated.
1980	Seventh Circuit Court of Appeals affirms settlement in <i>Amos, et al.</i>	Seventh Circuit affirms MPS integration plan previously approved by Judge Reynolds in 1979 following NAACP appeal. Case is settled.
1992	School Desegregation Impact Report Published	The Wisconsin Advisory Committee to the U.S. Commission on Civil Rights publishes its report, "Impact of School Desegregation in Milwaukee Public Schools on Quality Education for Minorities....15 Years Later."

Sources: Jones, *"Selma of the North"* (2012). Smith, *"From Socialism to Racism"* (2003). Milwaukee Library of the United States Courts, Special Research Project entitled *"Milwaukee Desegregation Case"* (2004).

D.ii.a. Housing at the Forefront of Public Consciousness

For the communities of the inner core neighborhoods, the Milwaukee Urban League served as a housing advocate beginning in the late 1910s.⁴⁸⁰ Because of the concentration of Black Milwaukee in the then-Sixth Ward and the proximity of numerous immigrant communities (including Russian Jews, Greeks, and Chinese), the League became a de facto voice to the people of Milwaukee's second-class city. Though the League's housing programs were specifically for the Black community, their continued efforts served as a reminder to the City about the persistence of slum conditions and the lack of affordable housing in the inner core.

⁴⁸⁰ Ross Grover, *"All Things to Black Folks"* (1994), 32-35, 48-49.

At its inception, the League confronted poor housing conditions through advocacy, neighborhood studies, and self-help programs. Milwaukee's housing landscape continued to evolve through the 1930s, which forced the League to adapt its efforts. It continuously confronted slum clearance efforts by the City, re-zonings and zoning code enforcement, steering and block busting by realtors, and the containment and segregation of the Black community in the inner core areas west of the Milwaukee River.⁴⁸¹ In an effort to quantify Black housing, the League documented conditions in the Sixth Ward in its fall 1926 housing survey. The survey results documented conditions in 175 homes that showed "inadequate [living] conditions," estimated rent inflation of 30-200%, and the overcrowding of dwelling units by one or more families with boarders.⁴⁸² The League also pursued its "Better House" program, which taught Black community members how to obtain affordable housing. In conjunction with mortgage lending provided by Columbia Savings & Loan, the efforts sought to increase housing access.⁴⁸³

Though the racialization of Milwaukee's inner core housing submarkets became apparent in the late 1940s, the first instance of what would eventually become the Open Housing Debates manifested in the site selection for the Parklawn public housing project beginning in 1933. To address the acute need for affordable housing in the Black community, a site in the Sixth Ward was chosen to secure Federal funding. However, due to opposition from local groups and State legislators citing the Sixth Ward as a Black-majority district, Parklawn was eventually moved to a site on the city's periphery along Capitol Drive.⁴⁸⁴ The fight over Parklawn's location served as prescient instruction for segregationist housing

⁴⁸¹ Ross Grover (1994), 73.

⁴⁸² Ross Grover (1994), 48.

⁴⁸³ Ross Grover (1994), 46, 48-49.

⁴⁸⁴ Ross Grover (1994), 74.

policies in Milwaukee. When future public housing projects were undertaken, many were pushed beyond the reach of the Black community into neighborhoods at the city's periphery.

The geography of Black Milwaukee coalesced into the epicenter of what would become the Open Housing Debates by the late 1930s. Known by many names including Milwaukee's Little Harlem and Milwaukee's Black Metropolis, the area developed a discernible epicenter in the inner core west of the Milwaukee River and north of Grand Avenue in the central business district.⁴⁸⁵ This geography would serve as the genesis for the Inner Core-North by the mid-1960s.

Catalyzed by the Second Great Migration, Milwaukee's Open Housing Debates began in the late 1940s. Spurred by the influx of Black migrants and public housing projects developed under the Housing Act of 1937, housing policy was forced to the forefront as a pressing issue for the city. In its advocacy efforts, the League responded with the coordination of multiple organizations to lobby on behalf of Black community members. These included the Joint Action Committee on Better Housing, the Sixth Ward Better Housing Community Club, Carver Memorial Homes, Inc., the League's Neighborhood Department, North Side Community Inventory Conference (NSCIC), and the Joint Committee for Equal Opportunity in Housing.⁴⁸⁶

Just as much as primary source materials reveal the nuances of conditions in Milwaukee's neighborhoods, there are others with a clear bias in advancing an official position either on race relations or housing issues in the city. This is no more evident than in the Milwaukee Commission on Community Relations report entitled "The Negro in Milwaukee: Progress and Portent, 1863-1963,"

⁴⁸⁵ Ross Grover (1994), 82-83.

⁴⁸⁶ Ross Grover (1994), 88, 93-104, 104-109.

which stands in contrast to the efforts of the Milwaukee Urban League. Written in honor of the centennial of Abraham Lincoln's Emancipation Proclamation, City leadership sought to publish a document providing an update on the status and condition of Black Milwaukee. Developed under the guise of civil rights, the report adopts a romanticized and nostalgic view of human rights recalling the principles of the Enlightenment and the foundational thought of the American Constitution.⁴⁸⁷

However, the tone of the report is patronizing. Claiming an improvement in "the official status of Negroes," basic demographic and jobs data is used to seemingly illustrate a general improvement in the Black community. Comments early in the report, though, reveal the true position of City leadership:

Special circumstances pose a problem with new dimensions for Northern communities with large Negro populations, often inadequately educated, poorly housed and badly paid because they were unskilled. Responsible citizens know this, and in the large cities where this is true, both Negroes and whites dedicate themselves to the task of eliminating these obstacles. Every devotee of democracy knows that America will not have reached the ideal true racial equality until the complex, far-reaching "Negro problem" in these cities has been solved.⁴⁸⁸

This sentiment perpetuates the arguments and prejudice of City leadership that dates to the latter part of the 19th century and the first parts of the 20th. Whether discussing foreign-born immigrants or Black residents, City leadership argued that deteriorated conditions in the city were not the result of government's failure to adequately care for its residents, but it was the residents themselves who were culpable due to their lack of skill, ignorance, and immorality. Thus, from the initial identification of the slum wards in the 1910s through to the civil rights era and Open Housing Debates in the 1960s, City leadership perpetuated a justification for their laissez-faire attitude.

The report goes further in advancing this message of blame on inner core neighborhoods. Proclaiming "We can be proud of our record," City leadership takes credit for success in improving employment prospects in the Black community. However, it then goes on to defend the concentration of the Black

⁴⁸⁷ Milwaukee Commission on Community Relations, "The Negro in Milwaukee" (1963), 1-2.

⁴⁸⁸ Milwaukee Commission on Community Relations (1963), 3.

community in the inner core as an act of self-segregation. Acknowledging that the out-migration of some Black households to other neighborhoods in the city has been facilitated by Whites “gradually let[ting] down their barriers against the purchase of property by Negroes,” the report fails to truly identify the scope and impact of racially restrictive covenants, steering, and block busting in neighborhoods.⁴⁸⁹ It states:

Despite this outward movement of a venturesome few, however, the major Negro population growth still occurs with this “core area.” This suggests that Negro families, much as the other ethnic groups which earlier settled in the community, prefer to live near friends and friendly institutions. Add to this tendency restrictive practices which confine Negroes within the older and more or less designated area, and overcrowding results with its many social problems.⁴⁹⁰

In the report’s concluding remarks, the truly prejudiced and patronizing position of City leadership is revealed. The remarks demonstrate the belief that the Black community did not possess the skill or fitness to improve itself. As a result, under the auspices of identifying themselves as “Society,” Whites would need to intervene.

Had we several generations to solve these critical problems, we might rely more on the minority groups themselves to ready their own members to function effectively in the city. Clearly, they have an important role which they have not adequately performed. But today our minority groups by themselves have neither the resources nor the know-how to do the total job that needs to be done immediately. We must also realize that Negroes of low income, still unaccustomed to life in a Northern city, do not have a long heritage of culture and an ethical tradition on which to build their lives. They seem to lack a sense of family intimacy and interdependence; as a result, their families often do not instill into children good behavior patterns and ideals. Not everybody is fortunate enough to be born into families with these principles. In time, of course, Negroes will learn them. Meanwhile, Society must share the responsibility.⁴⁹¹

The significance of this report cannot be understated. There are few primary source materials that are so revealing in the direct ties between City leadership and the prejudiced approach to not only Milwaukee’s Black community, but also to other people living in the inner core areas. As a cornerstone

⁴⁸⁹ Milwaukee Commission on Community Relations (1963), 6.

⁴⁹⁰ Milwaukee Commission on Community Relations (1963), 6.

⁴⁹¹ Milwaukee Commission on Community Relations (1963), 8.

of Milwaukee's municipal management and housing policy, this 1963 report so clearly identifies the persistence of discriminatory thinking on the part of City leadership.

D.ii.b. Vel Phillips, Father James Groppi, & the 1960s Housing Marches

After decades of containment in what would become the Inner Core-North and the persistent refusal of White landlords and homeowners to rent or sell housing to Black families, Milwaukee civil rights activists began a public and persistent campaign for an open housing ordinance. This direct approach agitating for fair housing was the culmination of obstructionism on the part of private business interests and City leadership. After decades of being ignored and pursuing reforms through advocacy, community members and civil rights leaders decided to engage in peaceful protest. The Wisconsin NAACP advocated for a statewide law beginning the early 1960s. Vel Phillips, a Milwaukee Common Council Alderwoman, requested a vote four times on a citywide open housing ordinance from 1962-1967. Each time, the vote failed 18-1 with all of the White Common Council members voting against it. In 1963, the Milwaukee Board of Realtors endorsed the National Association of Real Estate Boards' "Property Owners' Bill of Rights" that opposed open housing legislation.⁴⁹² Though the fair housing efforts were deliberate and public, the White community maintained its consistent opposition.

A hallmark of Vel Phillips' career was her persistence in demanding equitable access to housing and the construction of public housing in Milwaukee. When Milwaukee began pursuing Federal urban renewal projects, Phillips support was conditioned on the 1:1 replacement of all housing removed due to redevelopment. In 1958, she proposed a public housing project in her Second Ward that would be financed with Federal money. Demonstrative of politics of the 1950s, private real estate interests opposed the proposal arguing that it would compete with market-rate projects and was a "socialistic"

⁴⁹² Jones, "Selma of the North" (2012), 18-20.

endeavor. The racial overtones of the opposition were clear in that Whites did not want Black public housing built in the city. The City's Land Commission ultimately voted against the project.⁴⁹³

In August of 1967, Father James Groppi in coordination with the Milwaukee NAACP Youth Council organized an open housing march from the Inner Core-North to the predominantly White South Side across the 16th Street Viaduct. In what would become an extended campaign of marches through the spring of 1968, Milwaukee civil rights groups advocated for a citywide opening housing ordinance that would make discrimination in the rental and sale housing illegal, including the use of racially restrictive covenants and gentleman's agreements.⁴⁹⁴ The assassination of Martin Luther King on April 4, 1968, served as a shock and catalyst for the United States with respect to fair housing. As a tragic and devastating event, White opposition was overcome literally within weeks of his killing. By the end of April 1968, the U.S. Congress and City of Milwaukee Common Council passed fair housing legislation that prohibited discrimination in its sale and leasing.

In 1971, the Wisconsin State Committee of the U.S. Civil Rights Commission provided an assessment of the supply of affordable housing in the city of Milwaukee and surrounding suburbs. It serves as a summary for challenges identified during the 1960s. The State Committee reviewed the City's delivery of affordable units from 1960-1970, noting figures published by the U.S. Department of Housing and Urban Development (HUD) indicating a shortage of 1,172 housing units in the city.⁴⁹⁵ The Committee criticized City leadership for almost exclusively emphasizing the development of high-rise structures for the elderly during this time period. While the supply of affordable units for low-income families had remained static since 1960, the City had continued to provide units to the elderly with data showing the

⁴⁹³ Smith (2003), 87-88.

⁴⁹⁴ Jones, "Selma of the North" (2012), 17.

⁴⁹⁵ State Committee, U.S. Civil Rights Commission, "Housing Milwaukee's Poor" (1971), 6.

tenants were overwhelmingly White.⁴⁹⁶ Further, the Committee noted that South Side neighborhoods had effectively resisted the development of public housing for low-income families. Though the neighborhoods had begun allowing elderly housing to be built, low-income families should have been accommodated.⁴⁹⁷

Table 4.35: Public Housing Developed in Milwaukee, 1953-1970

Project	Year Built	Unit Type	No. of Units	Total Occupants	Total Development Costs		Source of Funds
					1970 Dollars	2023 Dollars	
Hillside Terrace Addition	1956	Elderly	404	1,604	\$5,406,411	\$39.01 mil	Housing Act of 1949
Convent Hill	1961	Elderly	120	194	\$1,849,755	\$7.8 mil	Housing Act of 1949
Lapham Park	1964	Low Income, Large Family, Elderly	370	1,438	\$6,350,416	\$46.82 mil	Housing Act of 1949
Riverview	1965	Elderly	180	234	\$2,382,828	\$15.61 mil	Housing Act of 1949
Arlington Court	1967	Elderly	230	NR	\$3,381,000	\$23.41 mil	Housing Act of 1949
Cherry Court	1967	Elderly	120	195	\$2,056,416	\$15.61 mil	Housing Act of 1949
Highland Park	1967	Large Family, Elderly	276	938	\$5,248,758	\$39.01 mil	Housing Act of 1949
Holton Terrace	1967	Elderly	180	234	\$2,136,862	\$15.61 mil	Housing Act of 1949
Merrill Park	1967	Elderly	120	195	\$1,905,607	\$7.8 mil	Housing Act of 1949
College Court	1968	Elderly	251	NR	\$3,863,063	\$23.41 mil	Housing Act of 1949
Locust Court	1969	Elderly	230	NR	\$3,615,296	\$23.41 mil	U.S. HUD
Scattered Sites	1967-1970	Low Income, Large Family, Elderly	38	NR	\$121,903	\$951,173	U.S. HUD
Total			2,481	5,032	\$38,196,412	\$297.45 mil	

Notes: NR – Not reported

Sources: City of Milwaukee Department of City Development (1966), University of Wisconsin-Milwaukee School of Architecture (1970).

⁴⁹⁶ State Committee (1971), 5, 6.

⁴⁹⁷ State Committee (1971), 8.

The behaviors and actions of suburban communities were reviewed and scrutinized by the Committee, as well. Due to the lack of public housing projects outside of the city of Milwaukee, the Committee questioned why additional development beyond the city boundary had not occurred. Its report noted: “While not unanimous, the strong consensus was that suburban communities are closing themselves off to low-income families to an increasingly severe extent in the Milwaukee area. Local zoning bodies appeared to have thoroughly learned the lessons of other metropolitan areas: namely, that land use controls can be an effective determinant to what type of persons will reside in a given community. This usually embraces all but the poor and the nonwhite.”⁴⁹⁸ It also noted, “Equally important, suburban communities are allowed, if not encouraged to extend present inequitable growth patterns, the most readily segregated in the Nation.”⁴⁹⁹ Though the suburbs had begun to consider the development of public housing, the Committee recommended that the communities request “fair share quotas” from SEWRPC to determine the minimum number of affordable units they should build. Ironically, the report includes a note with this recommendation highlighting that “the suburban communities of Milwaukee...owe their existence to Federal housing subsidies (VA and FHA).”⁵⁰⁰

D.ii.c. Segregation in Milwaukee Public Schools

With growing power in the civil rights movement organized to address discrimination in housing, other Milwaukee Black leaders sought to address de facto segregation in Milwaukee Public Schools (MPS). Despite the decisions of the U.S. Supreme Court in *Brown I* and *Brown II* declaring separate-but-equal in American public education to be unconstitutional, MPS maintained segregation in its schools. As a result, Lloyd Barbee, a Milwaukee-based civil rights lawyer, in conjunction with Reverend B.S. Gregg of St. Matthew Christian (Colored) Methodist Episcopal Church and Father James Groppi, organized the Milwaukee United School Integration Committee (MUSIC). Throughout 1964 and 1965, MUSIC

⁴⁹⁸ State Committee (1971), 1.

⁴⁹⁹ State Committee (1971), 30.

⁵⁰⁰ State Committee (1971), 16-19, 37.

organized protests, boycotts, and the attendance of Freedom Schools by Black students to demand MPS integrate schools and increase funding.⁵⁰¹ With continuing opposition from MPS, Barbee sought to force the integration issue and filed a Federal civil rights lawsuit against the district. In *Amos, et al., v. Board of School Directors of the City of Milwaukee, et al.*, Barbee argued that MPS' policies were in direct contradiction with *Brown I* and *II* and the school district should be immediately brought into compliance. The factors considered in the case included whether MPS' policies on neighborhood schools, busing, student transfers, lack of sufficient funding for predominantly Black schools, and overcrowding in Black schools were demonstrative of disparate impact and segregative intent or were unrelated issues with no underlying bias or discriminatory intent.

Though the school desegregation protests occurred simultaneous with the open housing movement in Milwaukee, *Amos, et al.* was adjudicated over a 15-year period and was not formally settled until 1980. Federal Judge John Reynolds issued his original opinion in the case in 1976 requiring MPS to develop an implementation plan to integrate its schools. However, his decision was overruled on appeal to the U.S. Supreme Court in 1977 and remanded back to his court for further review. It was not until 1980 that the Seventh Circuit Court of Appeals finally settled the case. This extended timeline demonstrates the challenges in dismantling the multi-decadal racialization of Milwaukee. From the date of the initial *Brown I* decision to the final appeal at the Court of Appeals, MPS refused to integrate its schools for 26 years.⁵⁰²

⁵⁰¹ Smith (2003), 92-93.

⁵⁰² Staff Writer, *New York Times*, "Judge Orders Milwaukee To Desegregate Schools" (20 January 1976). Morton Mintz, *New York Times*, "Supreme Court Nullifies Two Segregation Rulings" (30 June 1977). Milwaukee Library of the United States Courts, Special Research Project entitled "Milwaukee Desegregation Case" (2004). Milwaukee District Court, Eastern District of Wisconsin, *Amos, et al., v. Board of School Directors of the City of Milwaukee, et al.*, C.A. No. 65-C-173, 1976.

An important research question when assessing the history of public education in Milwaukee is its connection to housing in neighborhoods. Because MPS operated under the neighborhood schools model for decades, there was a historical correlation between schools with predominantly Black student populations and those with predominantly White student populations. This model, in conjunction with the containment of Black Milwaukee in the Inner Core-North, significantly reduced the ability of Black parents and their children to access resources outside of a designated area. Because the time period for this dissertation research ends in 1970, the effects and consequences of the confluence of the Fair Housing Act and the desegregation of MPS schools does not manifest until multiple decades later in the 1980s and 1990s. An assessment of the relationship between public school integration, demographic migrations, residential mobility, and housing submarket formation in Milwaukee is a critical endeavor for future research. An appropriate starting point would be the proceedings and report of the Wisconsin Advisory Committee to the U.S. Commission on Civil Rights published in 1992.

D.ii.d. Community-Police Relations and the Civil Disturbances during the Summer of 1967

With respect to community relations and the containment of certain ethnic and racial populations in select Milwaukee neighborhoods, it cannot be understated that the Milwaukee Police Department – under the leadership of Chief Harold Breier – played an influential role in maintaining the City’s power structure. Breier was publicly and unapologetically a segregationist; and, his efforts to maintain Milwaukee’s contained neighborhood geographies is well documented in the historical record. Specifically for Black Milwaukee, the community had been organizing for decades prior to the Second Great Migration and into the climax of the Open Housing Debates in the 1960s. This continuous coordination had created a burgeoning Black power structure within the city that would come into direct conflict with Chief Breier specifically over his tenure of multiple decades.

Within the activity of the civil rights movement in the 1950s and 1960s, the Milwaukee Police Department and Black community came into contact twice in highly charged incidents that remade the notion of community-police relations in the city. In February 1958, the Daniel Bell Incident occurred. Milwaukee Police Officer Thomas Grady, a White man, fatally shot Daniel Bell, a 22-year-old Black man, following a foot pursuit. After a jury later exonerated Grady for his actions – despite inconsistencies in the police reporting, the Black community responded with protests and calls for action. Almost two decades later, Grady’s partner, Louis Krause, reported the truth and detailed the facts of the incident as it occurred. Because Bell was unarmed, a knife was planted at the scene to give a false impression, and Grady lied about his actions, he was ultimately charged and sentenced to a prison term.⁵⁰³ The second community-police conflict occurred during the Long Hot Summer of 1967. Between July 31 and August 4, civil rights protests and riots rocked Milwaukee. The Police Department requested assistance from the Wisconsin National Guard and instituted a curfew to control civilian activity. Ultimately, numerous buildings were burned to the ground, four people died, 1,500 were arrested, and 1,300 were convicted.⁵⁰⁴ Both incidents served to worsen relations between the Milwaukee Police Department and the Black community. With Chief Breier as its leader, the Department was largely unresponsive to calls for reform.

While the role of the Milwaukee Police Department and Chief Breier is relevant to the city’s housing history, the full extent of their influence should be assessed in separate research. Because the role of law enforcement in urban environments is its own academic discipline, my dissertation research will not diverge into that field but will maintain its focus on historic housing patterns. That said, further research into the relationship between the Milwaukee Police Department, Chief Breier, and the city’s housing

⁵⁰³ Smith (2003), 88-89. Barton, “Daniel Bell police death case still resonates 50 years later,” *Milwaukee Journal Sentinel*, 27 May 2013.

⁵⁰⁴ Flaming, “The 1967 Milwaukee Riot” (1970), 1, 29-30, 56.

patterns is warranted for a future endeavor. Relevant sources for this future research include Elkins (2017), Flaming (1968), Neumann and Towles (1972), Slesinger (1968), and Snyder (2002).

5. CONCLUSION

The original purpose of this research was to test the efficacy of city information modeling (CIM) as an emerging technology and analysis methodology to assess the demographic, economic, and spatial elements of change in Milwaukee's housing submarkets. The desktop analysis and public deployment of digital tools was meant to serve as a proof of concept demonstrating that multi-disciplinary housing submarket analyses can be conducted with large volumes of data at refined urban scales. This proof of concept has thus been proven in my research to be feasible, as it has been reported in this dissertation and deployed for public use on the internet.

The context for this testing was Milwaukee's historic, inner-core housing submarkets. To achieve a reliable and valid test of the technology, the housing submarkets were re-created with a multitude of historic datasets. With the re-creations built into 2D interactive maps, data dashboards, and digital twins, historic conditions were back tested with various scenarios to more precisely quantify decision making and events. Within the complexity of these datasets and scenario modeling, my dissertation research has revealed nuances and ambiguities in this approach. As an emerging technology and multi-disciplinary research method, conducting housing submarket analysis with CIM is a nascent approach. Further research utilizing the methodology in conjunction with continued developments in the technology will improve reliability in the data analysis, build and test transferable data models from city to city, and identify needed improvements in the analysis workflow.

The approach of my dissertation research yielded not only valuable research conclusions from the datasets, but also important observations relevant to contemporary decision making in Milwaukee and notes related to CIM operations. These conclusions and observations are noteworthy to researchers for

two reasons: 1) they provide insights specific to an understanding of Milwaukee's housing submarkets, and 2) they present transferable knowledge about CIM that can be applied to research in other cities.

A. Research Conclusions to Inform Contemporary Decision Making

One of the chief benefits in approaching research into the re-creation and back testing of conditions in historic housing submarkets is hindsight. Contemporary perspectives, theories, and methods provide a context for seeing the past through different lenses. While ideologies, pre-dispositions, and biases still influence the research process, there is an added level of clarity in conducting research when time acts as a buffer between the researcher and the study period. Importantly in this approach, historical research into urban environments provides the ability to identify and analyze verifiable information sources for research conclusions, identify missing information sources as limitations in the research, and discuss gaps in the general knowledge about the topic.

Milwaukee is a case study environment for historic housing submarket research because of the vast information sources available about the city. While there are missing sources and data limitations, my dissertation research successfully re-created housing submarkets at various points in time to develop neighborhood portraits that accurately depict local conditions and facilitate comparisons throughout the study time period. With this analysis, research conclusions are organized into four categories that document specific historic elements of Milwaukee's neighborhoods, data trends through time, and patterns of change indicative of recurring themes. The conclusions are categorized as demographic, economic, spatial, and public policy. Additional notes about data limitations seek to clarify missing information sources from the research.

While the express purpose of my dissertation research was to conduct historical analyses of Milwaukee's housing submarkets, the implicit rationale for this was to use the research conclusions to

inform contemporary decision making. Because of the cyclical nature of neighborhood change, I originally hypothesized that Milwaukee's contemporary challenges were substantially similar to its historical ones – ostensibly because they were persistent issues that had never been fully resolved. As a result, the methodologies of my dissertation research were specifically designed to develop case studies of Milwaukee's historic housing submarkets that would be transferable to contemporary conditions and modern applications.

The conclusions of my dissertation research can be utilized as a roadmap or cautionary tale that illustrates the successes and failures of urban policy in Milwaukee's pre-highway period. When the city was at its densest and most contained spatial form from 1910-1970, it embodied something of a testing environment that could be defined and quantified. This condition operationalized my research's methodological approach, which was a modified form of urban systems analysis. Utilizing the benefit of hindsight and modern technologies, my research viewed the city as a controlled environment with defined datasets to back test historic conditions and understand recurring patterns and trends. This meaning, the analysis of historic Milwaukee is a valuable approach to provide context about the city's contemporary challenges and inform future decision making. As has been said, the present rhymes with the past; and, this must be understood to anticipate the future.

A.i. Intent of Decision Making: Ignorant, Incompetent, or Malicious

With respect to the popular narratives about redlining, discriminatory housing policy, urban renewal, and expressway development, there is the strong suggestion that municipal decision making from the 1910s to the 1960s was borne out of malice – primarily racial prejudice. While the historical record is clear that there is truth to those assertions, there is also evidence that indicates that the decision making was representative of professional ignorance and incompetence. In an assessment of urban

housing, it is important to distinguish between ignorance, incompetence, and malice – even when the consequences are the same.

When Milwaukee's City leadership began instituting reforms in the 1910s, there were no professional standards or best practices to rely upon as guidance. Werner Hegemann's 1916 city plan was one of the few resources – aside from Charles Whitnall – that City leaders could reference for guidance.

Otherwise, it was a period of trial and error in attempting to institute reforms and address deteriorating neighborhood conditions. This is no excuse, however, for the negative impacts caused by the decision making. As would become apparent by the 1940s, the Progressive era of urban reforms in the first decades of the 20th century would not prove to be as enlightened as originally envisioned. Instead, one of the chief outcomes of the era was decentralization, which caused the spatial fragmentation of the city.

In contrast, the historical record is also clear that City leadership engaged in blatantly discriminatory behavior. Evidence of nativist sentiment, ethnocentrism, and the racialization of Milwaukee's housing submarkets is evident in the early 1900s. Though this prejudice was largely masked in public and not explicitly codified into law, it did clearly manifest itself in the City's containment strategy for the slum wards by 1920. This boundary would serve as the spatial genesis for the inner core neighborhoods and act as a de facto control mechanism to prevent the outward spread of slum conditions and lower-income and working-class White and non-White households. This was a deliberate initial act which was then reinforced over multiple decades to delineate preferred areas of the city that held primacy over those that were subordinate and considered to be lower quality.

A.ii. "Second-Class City": Working Class, Poor, Renters, Immigrants, Non-White

This research is a study in contrasts. The popular narrative about discriminatory housing policy is that it primarily impacted non-White households. That it was a targeted effort based almost exclusively on race. When considered in the context of the city of Milwaukee, this is partially true. The City, business community, and residents engaged in multiple decades of discriminatory and segregationist policies to contain the Black community in the Inner Core-North. In a further examination of this partial truth, a broader reality is exposed: these acts of racial conflict against the Black community were part of a larger effort that included class conflict against lower-income, working-class, and renter households – regardless of ethnicity or race. In a spatial study of Milwaukee, the geographies of these acts of conflict clearly identify the inner core neighborhoods as the preferred location for a second-class city of less than desirable households and individuals.

A component of these behaviors and policies was the creation of something akin to a caste system in the city: the have-nots, the unwanted, the undesirables. The City was well aware by the 1910s that slum conditions had substantively materialized in the inner core neighborhoods. Though City leaders instituted regulatory reforms to address the issue, they invested significantly in decentralization and the expansion of the formal housing market on Milwaukee's rural periphery. However, the barriers to entry for that market were racial and financial. For a White household to out-migrate from the central city area, it needed to have the financial means to afford a new single-family home. Without sufficient funds, White households were limited in their residential choices. For non-White households, racially restrictive covenants and gentleman's agreements prohibited access to any housing submarket outside the inner core. This spatial distinction persisted between the informal markets of the inner core and the formal markets of the city's periphery. While City leadership continued to support the annexation and development of additional rural land, it conversely engaged in decades of inaction, obstructionism, and

neglect of the inner core. As a result, the neighborhoods continued to struggle with blight conditions and effectively deteriorated in place. Even when public housing began to be built en masse with funds from the Housing Act of 1949, the majority of the initial projects for low-income households and large families were built on the periphery of the city; the only public housing project built in the inner core was Hillside. When urban renewal project areas and expressways routes were approved, they concentrated in the inner core fragmenting the existing neighborhoods and displacing thousands of households. This disparity in treatment of these neighborhoods by City leadership should not go unnoticed. Just as much as racial discrimination played a central role in the containment of the inner core, so too did class.

A.iii. The Idealism of Urban Renewal & Expressway Development

Consider for a moment an alternative history of urban renewal and expressway development in Milwaukee. As opposed to assessing the historical understanding of both processes and projects in the city, consider the original City and consulting plans that would serve as the basis for both programs from 1948. Consider a program of neighborhood rehabilitation and redevelopment in conjunction with an expressway system design that was scaled only to those parameters that were necessary. Discard the idealism and planning goals of both programs. Consider if the projects under each program were planned and executed to satisfy only required needs.

Milwaukee's 1948 blight study conducted by the Redevelopment Coordinating Committee identified three areas of focus: Kilbourntown in the Inner Core-North, Juneautown in the Inner Core-East, and Walker's Point in the Inner Core-South. The study generally concluded that while the areas required rehabilitation and select redevelopment, neighborhood conditions were acceptable. The planning recommended rehabilitation for the majority of blocks and redevelopment in a limited number of blocks considered to be substandard or slums. The study also emphasized the need for reinvestment in

infrastructure upgrades, public schools, and public parks. No portion of the study called for large-scale neighborhood clearance. Under this proposal, the Polish, Italian, Black, Jewish, and Mexican communities would still have been impacted by these planning efforts.

Now, consider the 1948 and 1952 consultant reports proposing Milwaukee's first expressway system design. Both reports called for the development of the North-South and East-West routes, but there was disagreement on the need for an inner cordon in the Inner Core-North and along 44th Street. The North-South route was not proposed in the vicinity of N. 12th Street as it was constructed, but along the Milwaukee River to avoid neighborhood impacts. Neither report recommended the significantly expanded North Avenue (Park West), North Belt (Park East), and Lakefront expressways that would be proposed later. Additionally, the reports called for narrow expressway corridors of 100 feet in width. Similar to the blight study, the expressway system design as originally proposed would have impacted multiple inner core neighborhoods. Little Italy would still have suffered full demolition due to the East-West route and the need to clear the blocks along E. Detroit Street.

In considering this alternative history, the City would have only pursued urban renewal and expressway development under the auspices of the original reports that proposed the least amount of damage to Milwaukee's ethnic and racial enclaves. This act of preservation would have spared the Pulaski Street Polish colony, the Walnut Street Business District, Borchert Field, and the nascent Mexican community in Walker's Point. Though these communities would have suffered damage, the majority of them would have been preserved.

The core conclusion from this alternative history is the juxtaposition between the original proposals for both programs and the historical reality. Milwaukee's history of urban renewal and expressway

development was one of unrestrained idealism and seemingly unlimited Federal funding. Though the city could have used Federal assistance for its limited number of original projects, it instead chose to expand its urban renewal and expressway development efforts to a far larger scale. This upscaling produced an unmanageable set of consequences for which the city had not prepared. If the city had been more judicious and exercised a greater degree of restraint, the outcomes may have been different.

A.iv. Distributional Effects of Land Use Regulations

Zoning and platting are misunderstood regulatory tools. A common misconception is that a regulation can encourage a person or firm to behave in a certain way as they use land and buildings. This is not accurate. Regulations are control mechanisms, not incentive structures. Zoning and platting tell a property user what they can and cannot do. There is no form of encouragement in a regulation.

When Milwaukee instituted its first zoning and platting codes, this was a misunderstood aspect of land use regulations. Because so few other cities were actively regulating their neighborhood property markets, lessons learned and best practices had not been developed. The circumstances of the situation created a certain naïve ignorance in City leadership. Because zoning was a well-intentioned effort to address unsanitary living conditions and protect private property values, it had a positive connotation. However, it ultimately led to a series of negative consequences with long-term implications: land use transitions in neighborhoods that disfavored housing, market value distortions that caused inflated land prices and a lack of affordability, milking and rent profiteering by landlords, and the creation of homogenous land use districts that lacked diverse activities. When City leadership began learning about these issues in the late 1930s and early 1940s, they should have adjusted their regulatory stance. Instead, they continued to broaden their zoning and housing code enforcement, causing persistent challenges in inner core neighborhoods.

Under the police powers of government, zoning and platting have a limited role in the exercise of authority to control local property markets. However, decision makers must be cognizant of the consequences of their regulatory actions and the distributional effects that will reverberate throughout the community's economy. These considerations include:

- Homogenous land use districts deprive neighborhoods of dynamic, mixed-use environments. When possible, a variety of uses should be encouraged in neighborhoods either through the relaxation of permitted uses in existing zoning districts or through new mixed-use designations that include significantly fewer prohibited uses. In addition to the diversity of activity, mixed-use environments create resiliency in the municipal tax base.
- Re-zoning land and existing buildings can cause shifts in market prices for property depending on the zoning designation. These price distortions can incentivize property owners to conversely either re-invest in their properties or effectively abandon them to deterioration. The market impacts of regulations should be top of mind for municipal decision makers.
- Municipalities have a vested interest in increasing their total assessed value of real estate to generate additional tax revenues. Decision makers need to balance the fiscal condition of the community with the affordability of land and buildings to residents and small business owners. Because overregulation can constrict a local economy and make it cost prohibitive to live and do business in a community's neighborhoods, municipal leadership should exercise caution when making regulatory decisions.

A.v. Adaptable Space Use in Unregulated Property Markets

Prior to the codification of Milwaukee's first zoning code in 1920, a common criticism of the city's

historic neighborhood property markets – whether at the time or in contemporary discussion – focused

on the overcrowding of parcels by structures. While the built environment was varied and textured,

there were concerns that the building coverage on lots created a level of density that fostered unhealthy

conditions. While this is a valid concern, it belies a more important set of behaviors in the neighborhoods. Due to a lack of land use regulations, the neighborhoods were able to respond immediately to the needs of residents and businesses through the adaptability of land and buildings. Space users had complete freedom and autonomy to use the environment as they saw fit. This meant that the unregulated property markets allowed communities to use land and buildings to achieve their socio-cultural and economic goals.

As immigrant quarters, Milwaukee's inner core neighborhoods were critical social hubs for newly arrived individuals and families. With the social structures of existing native- and foreign-born community members, new immigrants could access formal and informal self-help organizations and networks for resources. With respect to land and buildings, this typically manifested as boarding homes, the rental of individual rooms for boarders, and the development of existing buildings into de facto community centers. These social activities required flexibility in the built environment. Similarly, small business activity was significantly strengthened by affordable space when a community member could use a spare room, storefront, or extra space in a commercial building. This fostered an informal entrepreneurial ecosystem through a neighborhood's social structure. These social and economic processes relied on mixed-used areas to operationalize these behaviors and processes. The co-location of residential, commercial, and manufacturing uses created neighborhood cohesion and walkable environments for community members.

When Milwaukee began enforcing its zoning and housing codes in the 1920s, the regulatory actions began a process of dismantling these local social and economic systems. More broadly for the inner core neighborhoods, the polycentric structure of activity that had been so vibrant was severely restricted. Though this was never the explicit aim of City leadership, it was a harmful consequence. In

addition, the City began its campaign of demolitions and eminent domain actions against blighted properties. These coupled with regulatory enforcement effectively deprived neighborhoods of their vitality and diversity by constricting the adaptability of space. This ultimately created homogenous land use districts and reduced the housing supply in Milwaukee's inner core neighborhoods.

While history has shown through overcrowding and public health concerns that unregulated property markets can be harmful, there is also just as sufficient historical evidence demonstrating that limited regulation facilitates socio-cultural and economic activity. While regulations seek to control and not encourage, the lack of regulatory enforcement allows space users to adapt neighborhood land and buildings to their needs. Contemporary decision makers should understand the causative relationship between dynamic, mixed-use neighborhoods and the regulations that seek to control them. It should be understood that government action in neighborhoods produces direct, indirect, and induced effects as local residents, business owners, and property owners respond.

A.vi. Decentralization as Precursor to Suburbanization

Decentralization as public policy was a multi-faceted endeavor: a land use management strategy to expand the municipal tax base, a public health initiative to improve quality of life and reduce illness, and a housing policy to facilitate the construction of neighborhoods on the urban periphery (albeit segregated ones). When conceived in Milwaukee in the mid- to late 1910s, City leadership encountered a different set of conditions than what would manifest almost 40 years later during expressway development and suburbanization. Because Milwaukee benefited from an economy fully contained within its municipal boundary, City leadership sought to expand these conditions and consume available farmland – primarily for residential development – along the urban boundary.

Though decentralization was an act of public policy, suburbanization was the resulting process by the late 1930s and early 1940s. Milwaukee had not needed expressways up to that point to facilitate the out-migration of residents – almost exclusively White homeowners – because the dramatic increase in the adoption of personal automobile use expanded the residential choices of households. Additionally, White homeowners who possessed the financial means to out-migrate chose to do so because of discriminatory motivations as Milwaukee’s Black population increased during the Second Great Migration and because deteriorated neighborhood conditions had become persistent. In an act to protect their home values and achieve racial harmony, White homeowners moved to the suburbs; and, their jobs and retail amenities followed. In contrast, non-White households – specifically Black ones – did not benefit from the expansion of residential choice. This thus created a spatial disparity: Black households contained in the inner core, and White households suburbanizing.

As homeowners and consumers generated demand on the urban periphery, suburban communities responded and began organically developing a metropolitan economy. The influx of residents brought their purchasing power to communities that had previously been small rural cities and farming towns. This spatial shift in demand caused a correlated spatial shift in economic centers around the city of Milwaukee. As a result, the city began actively competing with suburban communities for residents and economic activity.

While these migratory and economic patterns were the unintended consequences of decentralization, they had been induced by the public policy – but had not been formally codified as its goals. This changed in the 1950s when Milwaukee began its urban renewal, expressway development, and metropolitan planning efforts. While urban renewal sought to revitalize inner core neighborhoods,

expressway development and metropolitan planning encouraged further economic development away from Milwaukee's city center.

By the late 1940s and early 1950s, leaders in the public and private sectors realized that decentralization – and its new incarnation, suburbanization – had depopulated the city over the previous 30 years. In so doing, Milwaukee lost residents, workers, retail and commercial establishments, and manufacturers. In essence, the businesses followed the consumers and workers as they moved further and further from the city center. As a result, leadership needed to balance dueling priorities: continue to facilitate development on the urban periphery to capture additional tax base and preserve the city's industrial economy, while also revitalizing the inner core neighborhoods. In this paradoxical environment, leadership needed to re-populate the city while it was simultaneously depopulating.

Decentralization and suburbanization serve as a case study in municipal decision making that failed to adequately anticipate a variety of scenarios. While it is not the fault of City leadership to fail to anticipate the advent of the automobile, the removal of the street car system, or the construction of expressways, it was within their power to consider the implications of moving a large number of households to the urban periphery. Even in the 1910s, basic economic theories should have suggested that moving customer demand away from its corresponding supply in the central business district would cause an economic mismatch. However, this consideration of an alternative history can also attribute City decision making to professional ignorance. Because city planning was a nascent professional field, there was a lack of best practices to act as guides.

A.vii. Persistent Lack of Parks and Green Space

While parks have been a frequent topic of conversation in Milwaukee – either in contemporary discussions or circa the 1910s with the work of Charles Whitnall, the city's original neighborhoods never

possessed equitable access to green space. When City leadership and urban reformers became concerned about congestion and unsanitary conditions in the neighborhoods, a core element of the critique of the built environment was the lack of trees, fresh air, and open spaces for recreation. When the City began instituting reforms, they focused their efforts on ensuring that green space was incorporated into the development of new subdivisions, primarily through zoning and platting regulations that preserved front, side, and rear yards for recreation.

The Sanborn Maps (1910), Milwaukee Bureau of Public Land Commissioners' (BPLC) maps (1920), and Milwaukee County's 1937 aerial photography provide details about Milwaukee's original green space. The Sanborn and BPLC maps indicate the locations of parks, while the aerial photography shows tree canopy. When assessing the availability of green space, it becomes clear that parks were a destination in the city and a luxury, but were not a recurring neighborhood feature. The 1937 aerial photography indicates that naturally occurring trees were more likely in residential blocks. The original neighborhoods did not show a defined pattern of street trees, however. The placement of trees appears to be more randomized with buildings being built around trees, as opposed to trees being specifically placed. This contrasted with the new subdivisions built on the periphery of the city where street trees and landscaping were common. As for the commercial and industrial areas, there was no green space and trees. These areas were highly functional and devoid of any extraneous features that would impede the flow of traffic.

For elements of the original city within Milwaukee's 1920 municipal boundary, no space existed for the construction of new parks. The idea of retrofitting the original neighborhoods with green space would have required the city to acquire private property – likely through eminent domain, demolish the existing structures, and build parks. For a multitude of reasons, this proposition was not feasible:

eminent domain was extremely unpopular, City leadership and the business community were fiscally conservative, and the slum areas – whose power was politically diluted – were not a priority beyond the need to prevent their contagion from spreading. As a result, the lack of green space persisted as a condition for the inner core neighborhoods throughout the time period of this dissertation research.

B. Data Limitations

In recent years, voluminous amounts of primary source material for the historic study of urban environments have been scanned into online libraries and archives. Generally, these materials are available to the public. For historic resources not scanned into digital formats, the original print material continues to be available at university and public libraries. Scanning historic materials is the first step in the digitization process. As a result, if a researcher cannot acquire scanned materials, then their next step is to acquire the original source material and digitize it themselves.

My dissertation research benefited from these vast collections of historic primary source material. One of the main reasons my research conclusions are so specific is that original data sources were pooled to create a cohesive data portrait. However, at select points in the research process, data limitations inhibited the analysis due to missing sources. For the sources unavailable for analysis, two reasons largely determined their level of access: 1) determining the location of the source and its accessibility for public use, and/or 2) the volume of materials in the data source and whether or not it had been scanned.

B.i. Public Health & Education Data

Generally speaking, the historical record is sufficiently clear to explain community-wide issues affecting public health and education in the slum wards in the 1910s and for Black Milwaukee by the 1940s.

However, neighborhood- and block-level data is not available. As a result, we can generally understand

the health and educational status of neighborhood residents, but a greater level of specificity is not currently possible.¹

Primary source materials and secondary historical research regularly discuss the relationship between congested housing units and the spread of contagious disease. Using general statistics from secondary-source historical research, a portrait of Milwaukee's slum wards in the 1910s and then later the Black community in the 1940s was developed for this research to understand where and how city residents were falling ill. Similarly, primary- and secondary-source research materials reference educational data from Milwaukee Public Schools. Generally, this commentary on public education in Milwaukee's neighborhoods was included in my dissertation research to develop a more thorough historical narrative. However, the original source data for these public health and education studies is no longer readily available.

The City of Milwaukee invested significant effort in writing a multitude of reports in the 1930s and 1940s that addressed a variety of issues in the city. My dissertation research relies specifically on the City's housing studies as primary source documents, which are available in historical archives and university libraries. However, similar public health and education studies are not as readily available. To address this gap, additional research needs to be conducted to identify potential data sources that could be utilized in an assessment of the relationship between housing conditions, public health, and education.

B.ii. Federal Housing Administration (FHA) & Homeowners' Loan Corporation (HOLC) Data

In the study of urban housing markets in the United States, one of the most valuable datasets is the address-level data describing loans originated and ensured by the FHA and HOLC. If these datasets exist

¹ For more comprehensive research on public health in Milwaukee, see Mulloy (1940), Leavitt (1996), and Charaus (2010).

in any format or location, they would hold the key to understanding how inner core housing submarkets developed from the 1930s-1950s in American cities. Unfortunately, the location of the data is unknown. Library aides and communications with the Library of Congress did not yield clues as to the existence or location of the data. Additionally, similar searches with the National Archives were not successful. As a result, the lack of data availability means that specific neighborhood studies of home lending were not feasible for my dissertation research. I did, however, utilize the resources made available by the University of Richmond's *Mapping Inequality Project* to study HOLC districts and their accompanying neighborhood surveys. This survey data was used as a proxy for the lack of address-level FHA and HOLC data.

B.iii. Building Demolitions Data, Milwaukee Bureau of Public Land Commissioners, 1936

Milwaukee's blight management policy of building demolitions was an extended campaign that lasted from the 1920s into the 1950s. The City's Department of Building Inspection and Safety Engineering was the agency responsible for the policy for its entire duration. Their annual reports beginning in 1937 offer a wealth of data and analysis about citywide trends in building demolitions, particularly the commentary about a growing concern that Milwaukee's housing supply was being severely restricted with no simultaneous housing deliveries to alleviate a demand build-up. However, these annual reports do not provide neighborhood-, block-, or address-level data. As a result, tracking data at any refined scale for demolished properties is difficult. The Milwaukee Bureau of Public Land Commissioners compiled an address catalogue, entitled "Building Demolitions Which Took Place from 1930-1936 Inclusive" (1936), to maintain a written record of structures demolished by the City during the time period identified in the title. While the catalogue is valuable and interesting, it includes almost one hundred pages of typewriter script of city addresses from the 1930s. The resource is available for public viewing in the Milwaukee Municipal Reference Library, but it has not been scanned and digitized. The process to digitize the address-level data into a point feature class would be beyond the resources

available at this time. Understanding the address-level impacts of building demolitions from the 1920s to the 1950s is an important topic in Milwaukee's urban history and residential landscapes. While the data is not available for my dissertation, it is a potential future research opportunity.

B.iv. Works Progress Administration (WPA) Real Property Survey of Milwaukee, 1934

The Works Progress Administration conducted real property surveys of numerous American cities throughout the mid- to late-1930s. Prior to the U.S. Census Survey of Housing in 1940, no similar effort had been undertaken to study the detailed aspects of the demographics and economics of America's urban housing markets. The Milwaukee Public Library holds an original copy of the survey from its publication in 1939 that includes data for the City of Milwaukee and surrounding municipalities in Milwaukee and Waukesha Counties. However, the survey is only available in paper copy and contains hundreds of pages of reports, data tables, and maps. The survey has not been scanned or digitized. Upon consulting with librarians at the Milwaukee Public Library, it is not currently possible – given existing resources – to scan and digitize the dataset. As a result, it is not available for detailed analysis using modern technologies, though it is available for viewing in person. While housing data from the 1940 Census serves as a reasonable proxy, the WPA data is still incredibly valuable. Given resource constraints at present, the digitization and study of Milwaukee's Real Property Survey should be considered as a future research project.

B.v. Lack of Continuity in Neighborhood Geographies for Data Analysis

In Milwaukee's history, there is no recognizable or standardized set of geographies to track demographic trends continuously over a multi-decadal time period. The demographic, economic, and political geographies of the city were constantly shifting – typically every five years. As a result, there is no single data source that can provide reliability and validity in tracking trends at the neighborhood and block level. For my dissertation research, I pooled and blended multiple data sources to build an as-accurate portrait as possible about neighborhood conditions. However, there are persistent data gaps

because the geographies of the various data sources do not align. Census Tract and Block data was generally the most useful because it could be spatially related to a historical geography and used to recreate a portrait of demographic and market conditions at the block scale. However, the lack of continuity in geographies proved challenging and created an impediment to the development of more detailed neighborhood profiles.

C. Reflections on CIM & Digital Twin Construction & Operation

Because CIM and digital twins are nascent technologies, their development is an ongoing process that requires consistent monitoring to understand their operation. As was discussed in Chapter 3, the technology has only been deployed for public use over the last few years with many of its components still being theoretically envisioned; it has not been widely adopted nor has it been scaled into complex operations. As a result, the technology is consistently being beta tested by professionals to learn about its capabilities and limitations.

It cannot be overstated the positive impact that CIM and digital twins had on operationalizing my dissertation research. Without these advances in technology, my research would not have been able to pool vast datasets – which represent large volumes of data – and extract conclusions from data overlays and patterns analysis at the block and parcel scales. Additionally, the development and deployment of interactive digital tools on my accompanying website represented the final step in the data analysis workflow. Because my research achieved this cohesive workflow, numerous conclusions and technical notes were recorded during my development of these technologies.

C.i. Distinction between CIM and Digital Twins

The professional literature does not adequately distinguish between CIM as a process and a digital twin as an interactive digital tool. In the architecture and urban design space, the two terms are, at times, used interchangeably. After conducting my research, I conclude that this is inappropriate. The

professional literature and public use of CIM and digital twins needs to be clarified to ensure that professional standards can be developed for each.

CIM is an analysis methodology for spatial and tabular datasets that allows for their digitization, pooling, and blending in desktop analysis. The analysis results and research conclusions can either be held for confidential use or made more publicly available to other stakeholders or partners. Importantly, CIM is a multi-disciplinary analysis workflow that can utilize a variety of technologies to provide accurate insights at the building scale. The workflow allows for a variety of scenario analyses: historical recreations of previous scenarios, point-in-time scenario modeling for contemporary conditions, or the analysis of potential scenarios considering a variety of factors.

Digital twins are interactive 3D models created using the results of CIM. They can be privately and publicly deployed on web-based applications with accompanying locator maps and data visualizations. This capability provides the researcher and members of stakeholder groups with 2D and 3D interactive tools to understand a neighborhood's built environment. While a basic digital twin can be built with parcel and structure files, a complete analysis is not possible without CIM. Thus, effective digital twins should be considered interactive tools deployable within the CIM workflow.

C.ii. Point-in-time Modeling versus Continuous Dashboards

My dissertation research lent itself well to point-in-time modeling because of the static nature of historical datasets. There was no current data source to be continuously updated about neighborhood conditions. However, similar to the need for professional clarification about CIM versus digital twins, there needs to be a differentiation between point-in-time modeling and continuous data flows made available on dashboards.

Point-in-time modeling is most appropriate when the datasets can be held in a controlled analysis scenario. Whether for historical research or scenario modeling given contemporary conditions, point-in-time analysis is limited to the data inputs. Given a set of spatial or tabular datasets, the extent of the data is known and quantifiable. Thus, the digital tools created from CIM can be defined and controlled. For real-time monitoring displayed using a continuous data flow, the nature of the data visualization and CIM changes substantially. The data being analyzed and visualized can display a variety of summary statistics and modeling results beyond what may have been hypothesized initially. There is a degree of uncertainty when a live data flow is being utilized. As a result, professional standards need to be developed to provide guardrails that clearly distinguish between a controlled environment of point-in-time modeling versus a continuous data flow of real-world information. This is especially critical when AI and machine learning are actively analyzing the real-time data flow to produce inferential statistics and probabilistic modeling. In a live environment, the ability to audit analysis results in an iterative process and manage safety controls is difficult. There needs to be a commonly accepted set of standards to ensure the reliability and validity of results and maintain the safety of the public.

C.iii. Schematic versus Rendered Modeling for Digital Twins

The potential of digital twins is in displaying varying levels of specificity in 3D models given the needs of stakeholders. Utilizing multiple software platforms, digital twins can be rendered at varying levels of detail. In my dissertation research, it became clear that schematic renderings of massing models were most appropriate for analyses at the neighborhood scale. However, rendered models at various levels of specificity are also appropriate given the needs of a project. This level of specificity is made possible primarily by generating the renderings in ArcGIS Online scenes or in CityEngine. For fully rendered models, the ESRI software can export to Unreal Engine and Twinmotion.

The ESRI suite of software provides a variety of tools to rapidly develop and deploy schematic models. For neighborhood renderings, ArcGIS Online scenes can visualize the block, parcel, and structures data of a given area in an easy-to-use and fully contained software environment. This facilitates easy access and deployment of digital twins for interactive use by stakeholders. These scenes visualize generic massing models where the buildings do not show discernible features other than height and bulk. For a greater level of detail, building characteristics can be defined in the CGA programming language in CityEngine. The environment can also add realistic features for roadways and public spaces. This level of customization facilitates the dynamic rendering of neighborhoods for a variety of purposes. It lends itself well to the housing research in my dissertation because it can quickly render a large volume of structures.

Within the design workflow, Unreal Engine and Twinmotion add the capacity for photorealistic renderings and animations. From a historical perspective, this creates an opportunity to accurately recreate urban conditions as they were at a given point in time. For my dissertation research, that level of photorealism was not necessary. The design studies I conducted utilized a variety of historic materials – focusing on primary sources – to analyze and discuss neighborhood conditions using schematic modeling. In future research, however, I would propose the use of Unreal Engine and Twinmotion to study specific aspects of block and building structure within neighborhoods.

C.iv. Scaling CIM Operations via Cloud Computing, Rest Services, & APIs

With smaller datasets, the desktop analysis of CIM is possible. However, as those datasets grow larger, the local management of data will no longer be feasible. As a result, CIM operations need to be integrated into cloud computing with data available via rest services and APIs for public access. This will be especially necessary as AI and machine learning become more prevalent and demand additional processing power in the analysis of urban environments. At present, ArcGIS Online can host an

organization's data and provide enterprise-level support for large bandwidth on data flows. However, as more live data feeds are integrated into CIM analysis workflows, organizations will need to independently manage their cloud computing for increased processing power.

C.v. Development of Deep Learning Models

The next step in CIM is the development and training of deep learning models to analyze, assess, and make recommendations about urban environments. The volume of data now available – whether historic or contemporary – about urban environments surpasses the analytical capabilities of human beings. Because of this complexity, we need to begin developing systems that leverage the analytical capacity of humans with data science.

Deep learning models present an opportunity to automate systems for urban pattern recognition and probabilistic scenario modeling. While humans have some ability to conduct this type of work at present, deep learning models will be able to analyze a variety of conditions and scenarios simultaneously to deliver results and propose solutions. In addition to predictive analytics, deep learning will also be able to engage in predictive design, risk assessments, and emerging threats identification. To achieve this level of automation, deep learning models will need to be taught with historic datasets. While existing datasets are available, they provide no benchmark to understand existing conditions compared with historic trends. The historic data will provide the context for developing predictive models based on current conditions.

While deep learning is a clear next step in the evolution of CIM, there are significant safety concerns about the deployment of AI in neighborhoods, specifically the risks associated with bias and discrimination. As a result, the deep learning models need to be augmented by human supervision and control to actively audit ongoing analyses and processes. This will require a set of professional

standards that govern the training of deep learning in urban environments and the broader use of AI to assess and monitor neighborhoods.

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C. Data Sources

C.i. Tabular Data

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C.ii. Spatial Data

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APPENDIX A. CITY INFORMATION MODEL TECHNICAL DOCUMENTATION

1. Purpose & Transferability

In building a city information model (CIM) and digital twin for Milwaukee, this accompanying documentation is necessary to describe how the models are built, their structure, the method of online deployment, and the relevant notes for their specifications and operations. The purpose of this documentation is to provide something of a user manual for the models that allows other researchers to review the research integrity, re-run analyses if necessary, and transfer the model to other cities.

While a single set of professional best practices does not yet exist for CIM and digital twins, there are standards that can be referenced. Specifically, these include ISO 37120, the CityGML standard, and the City Induction Research Project. In creating a CIM and digital twin for Milwaukee, aspects of these standards are adapted to the city and the available datasets. Additionally, the use of the standards is meant to facilitate transferability of this Milwaukee model to other cities.

2. Milwaukee Model Framework & Data Structure

2.a. Model Framework

Because this research utilizes a multitude of primary source reports and spreadsheet datasets, the model requires a structured workflow to ensure that the data is digitized, processed, analyzed, and managed correctly. The intent is to have the workflow be transferable from one city to the next, thereby facilitating both desktop analysis by researchers and public use of online tools. This transferability dictates that data is managed in formats that are readable across multiple software platforms.

To complete this research, the model framework creates a flow of data from the digitization process to the construction of the CIM and digital twin. The primary sources utilized for the historic datasets are the repository for the foundation of the CIM. The challenge in using these sources is that none of them

were digitized into point, line, polygon, or attribute tables that could be pooled and blended. The first step in this research was to digitize these datasets into shapefiles with joined attribute tables for analysis. These organized datasets then fed the CIM for analysis. To function within the digital twin, select datasets incorporated z values to indicate the height of spatial objects. Thereafter, the data and its accompanying documentation was made available for public use in an open data portal.

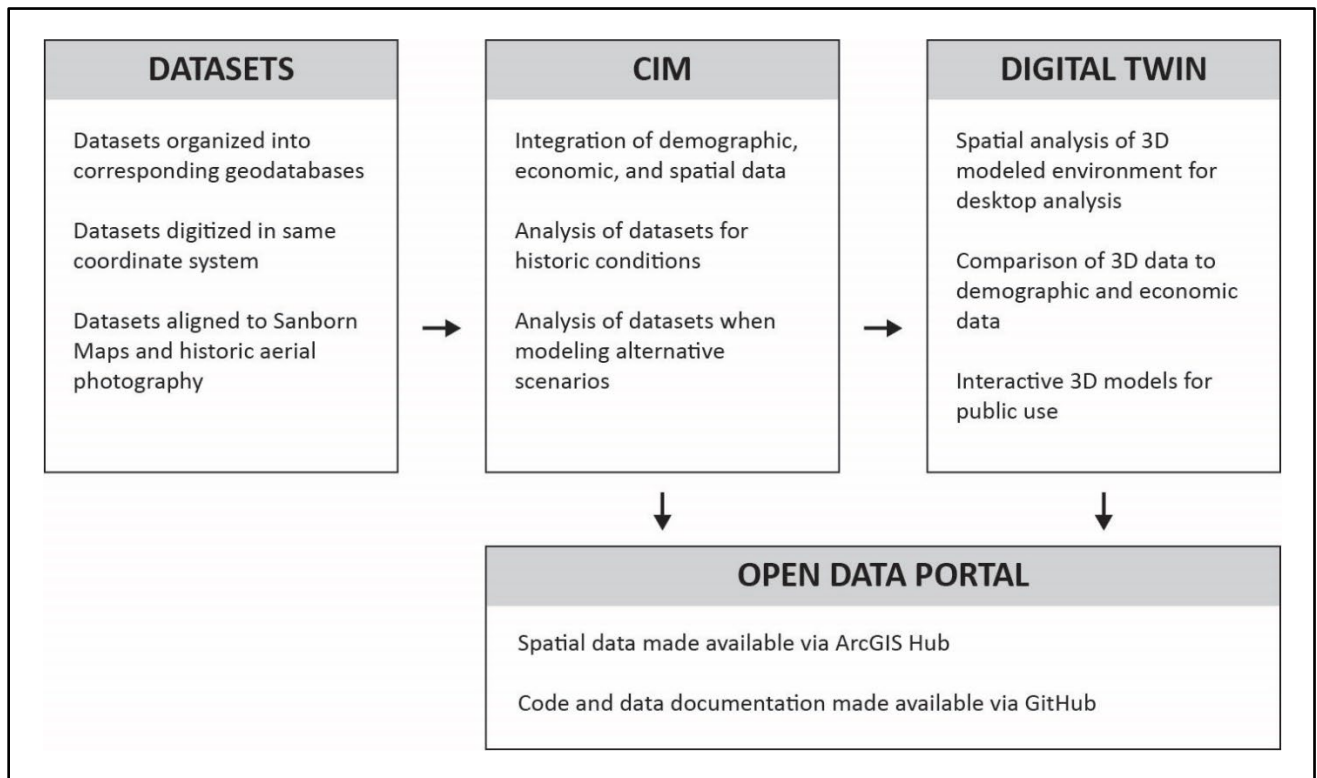


Figure A.1: Model Framework for Data Workflow

2.a.i. Aligning with Professional Standards

At present, there is no all-encompassing professional standard for CIM or digital twins. There are emerging best practices for cities implementing the technology, but there is no handbook or guidebook. This is an emerging field where a significant amount of experimentation is ongoing. However, because these tools are used by government officials and the general public, emphasis is placed on building high-quality models with data integrity and accuracy.

That said, three standards do exist that are substantially related to CIM and digital twins: International Organization for Standardization (ISO) 37120, CityGML Standard (v3.0), and the City Induction Research Project. The ISO standard proposes a set of data criteria to monitor smart cities; CityGML is a data structure and storage framework for 2D mapping and 3D models; and, the City Induction Project is a workflow for urban design analysis partially supported by artificial intelligence. The ISO and CityGML standards, specifically, are intended to facilitate the transferability of a model's framework and data storage from one city to another. The City Induction Project is a theoretical proposal for ongoing operations and the iterative growth and refinement of the CIM. When the three standards are used simultaneously, they provide a more complete approach to build, operate, and manage CIM and digital twins.

The intent of this research is to align the Milwaukee CIM and digital twin as closely to these standards as possible. This will be a good faith effort to develop an original model for Milwaukee as closely aligned as possible to existing standards given what is feasible within the constraints of available datasets.

2.b. Data Structure

For each georeferenced map and digitized dataset, separate file geodatabases hold the corresponding point, line, and polygon files. New geodatabases were created for each map or dataset that represented a different year or time period. For a singular dataset from one data source that had a direct relationship to other datasets from other data sources, those datasets were then organized into a common geodatabase for a defined time period.

Each geodatabase may contain multiple file types, but only represent demographic, economic, or spatial data. These data categories are not mixed in the geodatabases. For example, the digitized files from the Sanborn Maps are held as line and polygon shapefiles in their respective geodatabase, while Census

data is digitized based on historic ward maps for the city in a polygon shapefile joined to a .dbf attribute table in its own geodatabase. These datasets are stored separately, but can be overlaid on one another for a demographic and spatial comparison.

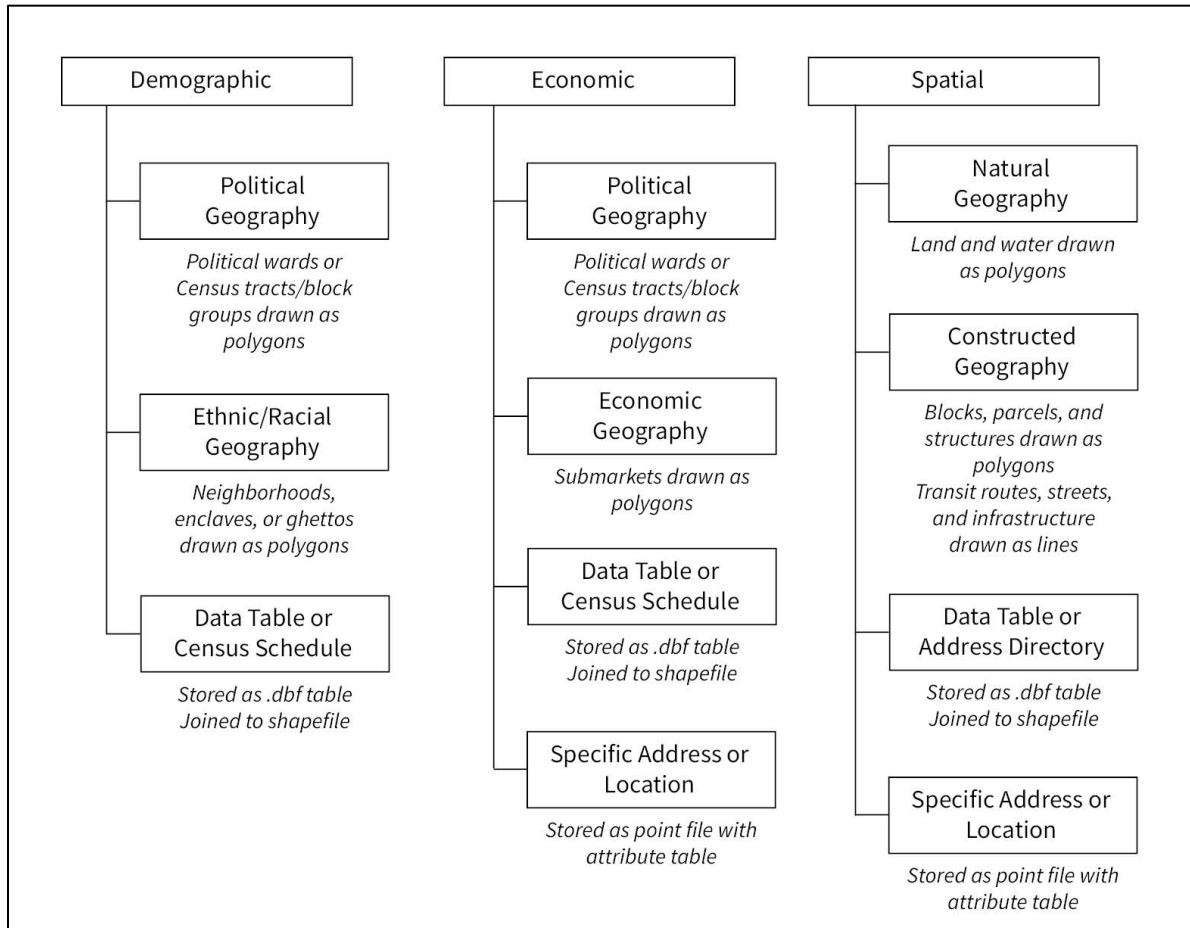


Figure A.2: Data Structure of File Geodatabases

All data used in this research has been projected into NAD 1983 HARN StatePlane Wisconsin South FIPS 4803 Feet. This coordinate system is the same system utilized by the Milwaukee County Land Information Office. Importantly, the georeferenced Sanborn Maps (1910) and historical aerial photography library are all georeferenced in this coordinate system. To follow Milwaukee County's practices, the research data was similarly digitized and stored in this coordinate system.

2.c. Public Deployment on Digital Platforms

The analysis workflow allows for data management across multiple digital platforms, which allows data sharing and hosting on multiple pieces of software. Fortunately, this hosting is largely made possible because of the variety of software available from ESRI. However, the data does need to be managed appropriately to ensure that 2D datasets can accurately be fed into the 3D visualizations.

The data workflow is generally broken into two components: 1) desktop analysis of 2D and 3D data by the researcher, and 2) online data sharing with interactive tools for public use. The desktop analysis is composed of numerous tasks that focus on data digitization, data management, quantitative analysis of attribute tables, and spatial analysis of attribute tables and 3D models. The public deployment of the data on the website enables any user to utilize the data dashboards, interactive 2D maps, and digital twin. In addition, the open data portal allows the public to download the data uploaded to these tools for their own analysis.

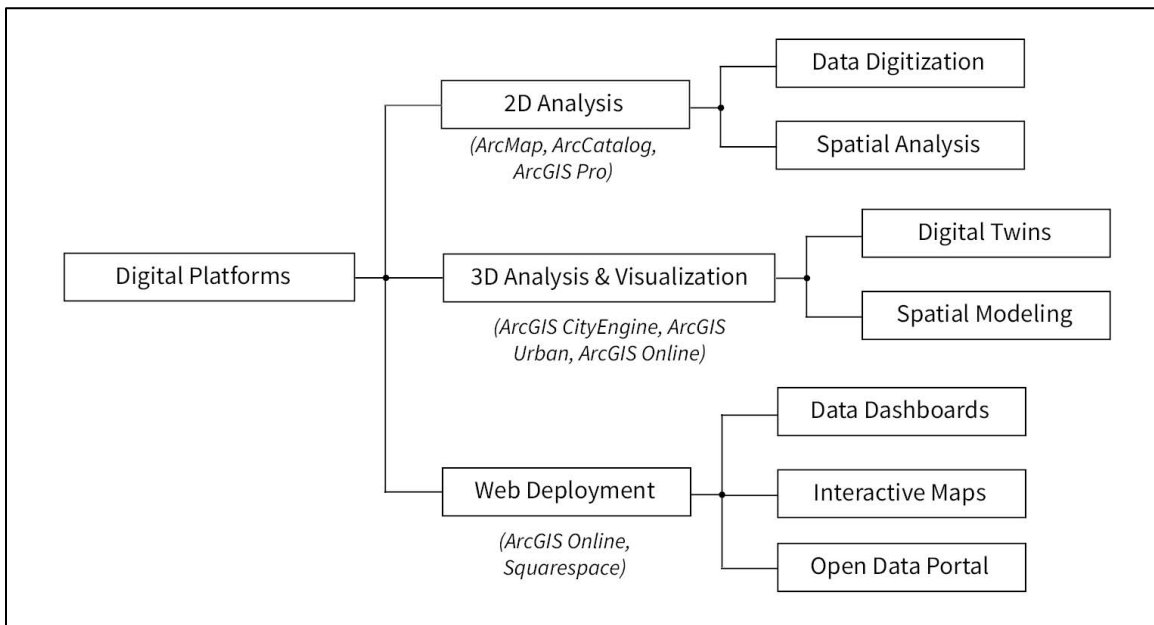


Figure A.3: Workflow & Software Management for Public Deployment of Data

2.d. Processes & Procedures

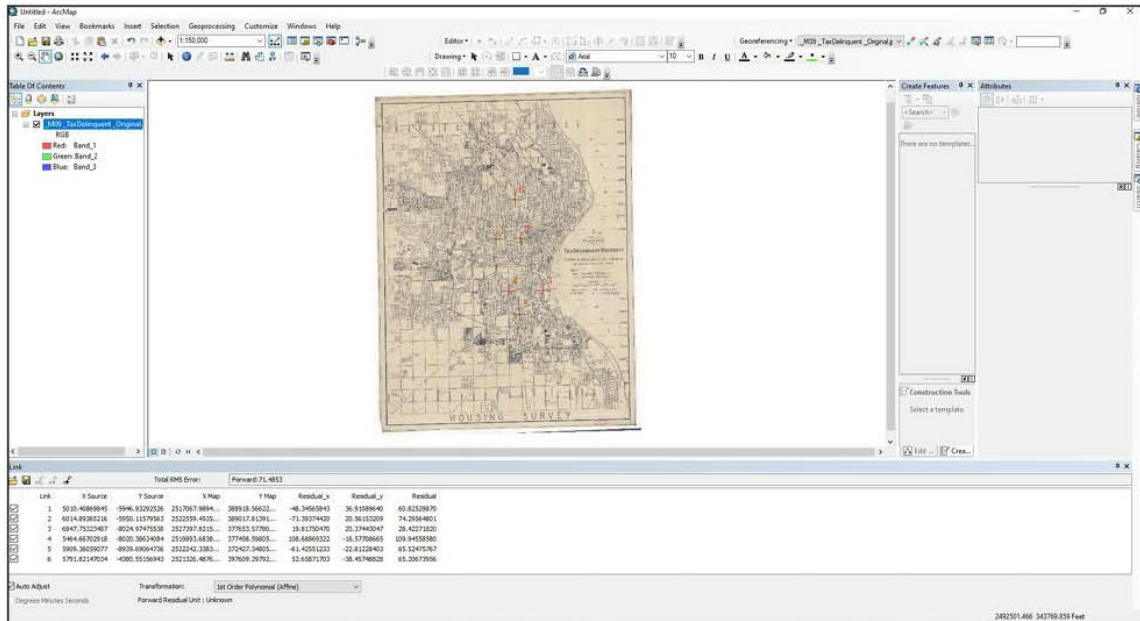
Within specific aspects of the model framework and data workflow, additional processes and procedures were implemented to manage the datasets and their analysis. The focus was on data integrity and ensuring the accuracy of digitized datasets. Because the historic data needed to be converted into modern storage formats, it was imperative that the historic data as it originally appeared be faithfully re-produced for contemporary software analysis. In maintaining the data integrity and accuracy, this thereby provided a greater level of certainty in the operation of the CIM and digital twin.

2.d.i. Georeferencing Maps

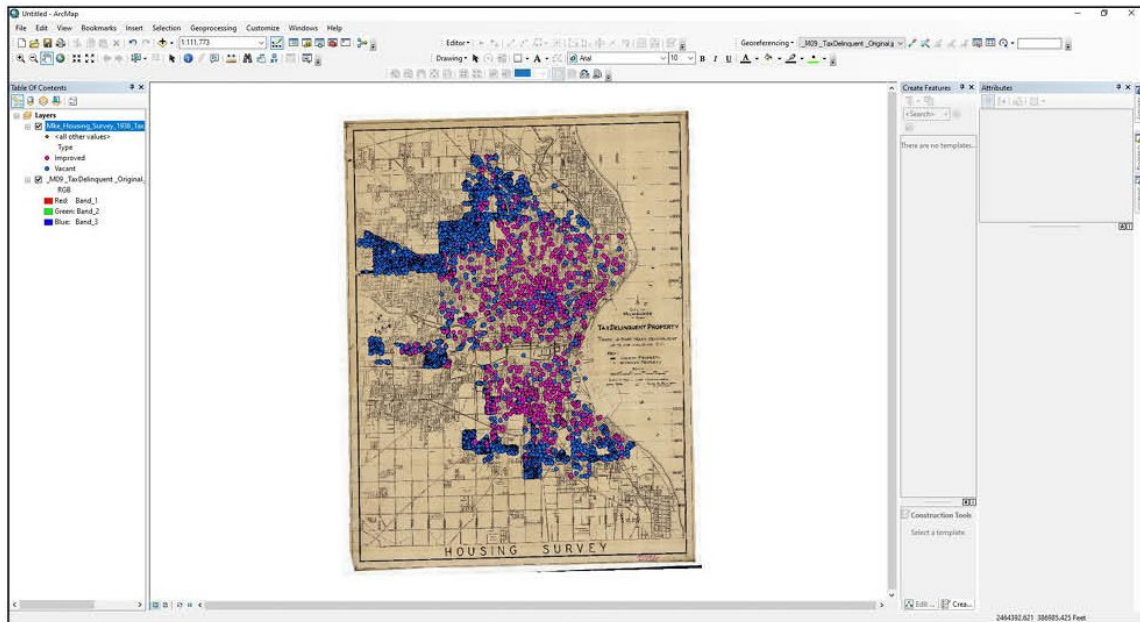
Archival collections of historic maps of Milwaukee provide critical insight into the spatial structure of the city at various points in time. Most importantly – and obviously, digitizing historic ward maps and then joining them to decennial Census data creates the foundation for this research’s data analysis. However, due to the volume of maps available, the opportunity existed to create custom databases from scanned maps. To achieve this, the scanned images needed to be georeferenced in ArcGIS. The images of these maps and the accompanying data provided important primary source material to further develop my research conclusions.

A key element in my research’s analysis methodology was pooling multiple datasets from different sources to create data overlays and draw conclusions. Throughout the course of the research, it became apparent that historic datasets had not been digitized for contemporary use. As a result, the majority of the data was available in primary source materials in their original format. While significant amounts of narrative and data were available in reports, a substantial amount was available on maps. The maps created two opportunities for analysis: 1) they could be georeferenced and their features digitized into standalone databases specific to that source; and/or, 2) the maps could be georeferenced, their features digitized, and then the data from one map could be related to another map for comparison. This process yielded the creation of numerous databases resulting from primary source maps.

Georeferencing is a digitization process that relates points on a source map to a reference map, thereby accurately placing and scaling the source map in real-world space. To be effective, the process requires high-resolution photos in JPG or TIFF format. In ArcMap, the coordinate system for the map space is set. Control points are placed on the source map and then referenced to a second set of control points on the reference map in real-world space. Once a sufficient number of control points have been placed, the georeferencing data for the image is updated. After the source map has been successfully georeferenced, its features can then be digitized as point, line, or polygon feature classes.



Georeferencing Tools: Control Points & Links Table



Digitized Data on Georeferenced Map

Figure A.4: Georeferencing Process & Data Digitization

2.d.ii. Digitization Process

For historic data sources, many have been scanned as PDF or high-resolution image files; however, the data, images, and maps they present have not been georeferenced or digitized into modern software. Thus, the data sources are valuable for research purposes, but they need to be modernized into contemporary systems to be useful. Each of these sources needs to be digitized into either spreadsheet data, a georeferenced map, or georeferenced point, line, and polygon files.

The digitization process can be categorized as one of two sub-processes for Milwaukee: 1) digitize data from historic narrative or first-person accounts onto an existing georeferenced map (i.e., Sanborn Maps or Milwaukee County historic aerial photography), or 2) georeference a map and then digitize its features into point, line, and polygon files. The georeferenced map is then saved as a TIFF image. The final output of this effort is the storage of the digitized data in file geodatabases organized by either the original data source or a broader theme or time period. This digitization process occurred for every primary source data, image, or map that is cited in the research.

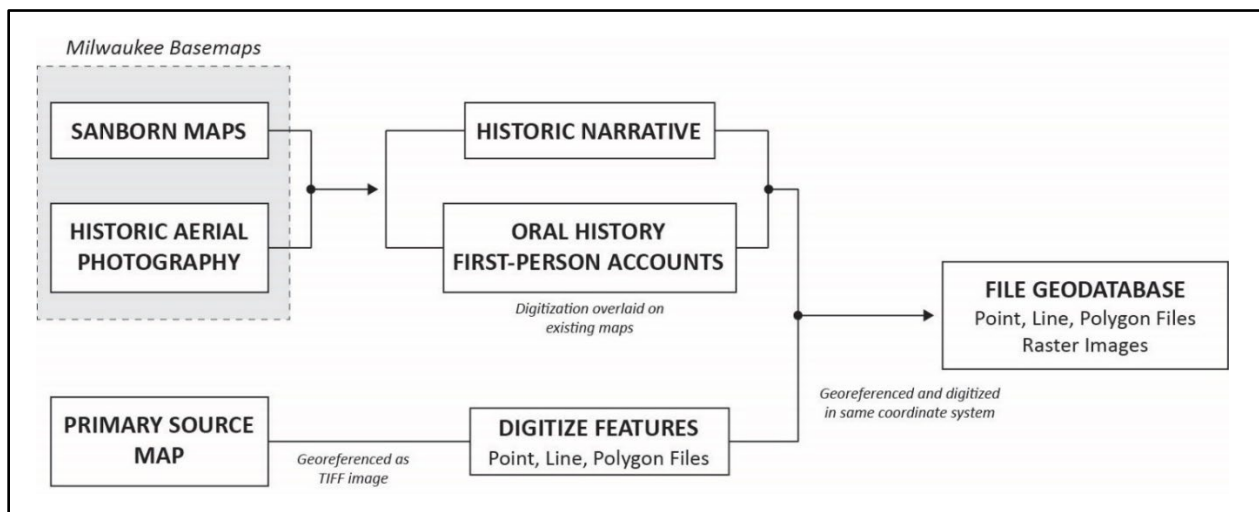


Figure A.5: Digitization Workflow of Primary Source Material

2.d.iii. Data Auditing Process

Following the digitization of a data source, the newly created dataset needs to undergo an audit for quality control. The purpose of the audit is to ensure that the newly-created dataset accurately reflects the data or map presented in the primary source material. This quality control process is required for every primary source that is digitized.

Two types of audits need to occur for each data source: an attribute audit, and/or a feature audit. An attribute audit is used for spreadsheet data when data tables from a source are digitized into .dbf tables that are joined to a shapefile or for standalone spreadsheets that are fed into a data dashboard. An attribute audit is focused on ensuring that the data is transcribed accurately from the original source to the new table. A feature audit is used on spatial data to verify that point, line, and polygon features are digitized accurately from a georeferenced map into a feature class stored in a file geodatabase. This type of audit needs to confirm that all features have been digitized and stored properly. Additionally, for features that need to be defined by attribute data, the corresponding attribute table for each feature class needs to be audited to ensure that the attributes were transcribed accurately. These two types of audits are integral processes in the construction of a CIM to ensure data accuracy, thereby ensuring its integrity. Without regular audits, significant errors can be introduced into the model at its inception, which can cause additional errors during analysis and scenario modeling.

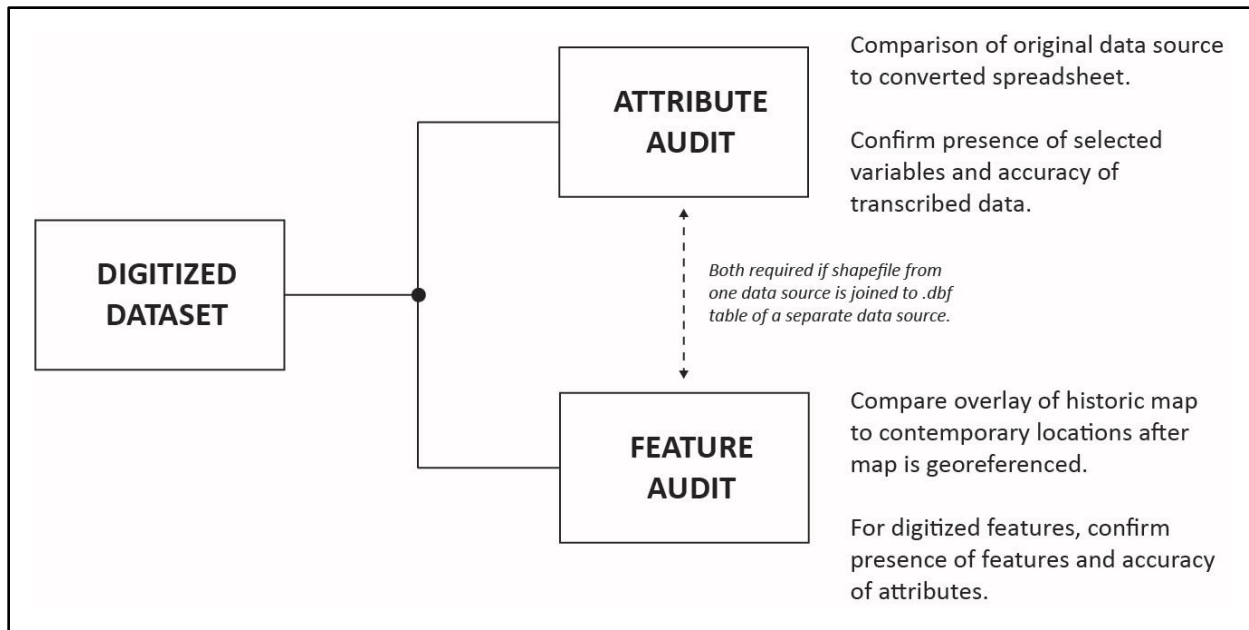


Figure A.6: Audit Process of Digitized Datasets

3. Milwaukee Model Specifications & Notes

The Milwaukee model contains datasets and attributes that are unique to itself. While the CIM’s framework and data structure are meant to be transferable to other cities, aspects of the model are Milwaukee-specific because of locally available datasets. To accurately document these unique attributes, the following discussion and notes identify elements and characteristics requiring further clarification.

3.a. Data Dictionaries

3.a.i. Sanborn Fire Insurance Map (1910)

The fire insurance maps from the Sanborn Map Company remain as arguably the most authoritative catalogue of America’s built environment in the late 19th century and the first half of the 20th century.

While historical research about Milwaukee benefits from the numerous mapping and cataloguing efforts that date to the city’s founding, there is no better resource than the Sanborn Maps to understand the city’s historical spatial condition. Thus, the maps should be utilized as a trusted resource, but researchers must understand the historical purpose of the maps contrasted with their current use.

The Sanborn Map Company was originally founded by D.A. Sanborn as the D.A. Sanborn National Insurance Diagram Bureau in 1866. The company's explicit purpose – and, by extension, the purpose of its maps – was to provide catalogues of maps to insurers to assist in risk management efforts related to fire protection in American municipalities. The company represented an early entrant into the burgeoning business of national insurance map publishing.¹ In an essay written for the Library of Congress' extensive collection of Sanborn Maps, the purpose of the maps is summarized well:

The maps were designed to assist fire insurance agents in determining the degree of hazard associated with a particular property and therefore show the size, shape, and construction of dwellings, commercial buildings, and factories as well as fire walls, locations of windows and doors, sprinkler systems, and types of roofs. The maps also indicate widths and names of streets, property boundaries, building use, and house and block numbers.²

At the time of their publishing, Sanborn Maps were not used by the general public. The maps were of specific use for the fire insurance industry as reference material when underwriting a policy. It was not until years later that the maps became of interest to professionals in other industries and members of the public.

Professional interest in Sanborn Maps has grown significantly by various groups in the engineering, surveying, urban planning, and historical research professions. In their contemporary use, the maps' value is well recognized because of their accuracy and detail. The maps provide a unique perspective for researchers because of their status as a near-complete catalogue of the spatial structure and building unit inventories of numerous American cities. Today, the maps provide important details about the platting structure of cities (parcels, blocks), urban transit networks (streets, alleys, railroads, waterways, ports/docking), fire suppression infrastructure (water mains, fire hydrants, fire alarms, building sprinkler systems), and characteristics of buildings (fire protection, height, windows, doors, building materials,

¹ Indiana University Libraries, "Sanborn Fire Insurance Maps History" (undated).

² Walter Ristow, "Introduction to the Collection: Fire Insurance Maps in the Library of Congress" (undated).

land use). Just as important, however, is what the maps lack; there is no discussion or data about land topography, property values, and land use regulations (i.e., zoning). In select instances, building attributes refer to a specific ethnic or racial community, but more detailed demographic information about residents is absent. Thus, the maps are a valuable tool to research urban built environments; but, they need to be used in conjunction with other, historical data sources to develop more comprehensive demographic and economic portraits of cities.

The digitization of Milwaukee's Sanborn Maps serves as a central element in the CIM's framework. Whereas contemporary Milwaukee already relies on multiple, detailed datasets to describe the built environment, historical data sources are disparate with different maps presenting a variety of spatial attributes and conditions in the city. Importantly, the Sanborn Maps accurately outline the city's spatial structure. The spatial structure is used in two ways: 1) to provide a dataset of attributes of the city's blocks, parcels, and structures for the CIM, and 2) to provide shapefile polygon data to extrude the blocks and structures for the digital twin. This thus provides spreadsheet and spatial data to create the CIM's 2D maps for spatial analysis and the digital twin's 3D renderings.

Table A.1 provides the attribute table for the structure characteristics of Milwaukee's Sanborn Maps as displayed in the CIM and digital twin. In addition to the written descriptions on the maps, multiple other legends were consulted to properly code the structure attributes. These primarily include details made publicly available by Environmental Data Resources, Inc. (EDR), California State University-Northridge (CSUN), and the Library of Congress.

Table A.1: Attributes of Structures in Sanborn Map Feature Class

<i>Name</i>	<i>Type</i>	<i>Field Length (number of characters)</i>	<i>Values</i>	<i>Description</i>
Company Name	Text	200	Unique	If identified, name of company located in the structure.
Building Name	Text	200	Unique	If identified, the type of building on the parcel.
Land Use Code*	Text	5	R – Residential RT – Residential-Transient C – Commercial W – Warehouse M – Manufacturing P – Public or Institutional U – Utility T – Transportation	The abbreviation used to identify the land use type of a structure.
Land Use Type	Text	50	Educational Entertainment Fire Police Streetcar Hotel Religious Railroad Residential Residential – Duplex Residential – Flats Residential – Tenement Residential – Boarding Residential – Secondary Residential – Mixed Commercial Commercial - Secondary Industrial	Identification of land use of a structure.

			Industrial - Elevator Warehouse Municipal	
Personal Transit Type	Text	20	Stable Auto	For buildings housing either horses or cars for transportation.
Bldg_Height	Short Integer	---	Unique	Height of a building in stories.
Bldg_Height_Feet	Short Integer	---	Unique	Height of a building in feet.
Abbreviations*	Text	25	*Refer to EDR abbreviation guide.	The abbreviation used to identify the use or business located in a structure.
Neighborhood	Text	100	Walker's Point Bayview Third Ward Lindsay Heights Halyard Park Brewer's Hill Harambee	Identification of a structure in select neighborhoods from Milwaukee's Neighborhood Identification Project and contemporary planning efforts.
Floor_Plate_Area	Double	---	Unique	Geometry area calculation in square feet of first floor of building footprint.
No_DU	Short Integer	---	Unique	Number of dwelling units per residential structure, as indicated by the number of addresses listed. Tenement buildings show one dwelling unit if the total number of dwelling units are not otherwise indicated on the map.
No_Bus	Short Integer	---	Unique	Number of businesses per structure. Determined by either counting the number of street addresses per building or counting the number of businesses identified in the building. If the two counts conflict, the lower number is indicated in the database.

Build_Mat	Text	100	Wood Wood, metal clad Wood, brick clad Wood, brick veneer Wood, brick veneer, iron clad Wood, iron clad Brick Cement block Concrete Concrete block Reinforced concrete Metal clad Concrete and brick	Type of construction materials used for a structure.
Alley_House	Text	100	Y – Yes N – No	Identification of a residential structure as an alley house. Alley and rear houses are interpreted as synonymous in this dataset.
S_by_S	Text	50	Y – Yes N – No	Identification of residential structures as side-by-side housing sharing a common wall.

Notes: *Indicates field documented by Environmental Data Resources, Inc. (EDR).

3.a.ii. Geographies of Ethnic & Racial Enclaves

There is no definitive historical reference for Milwaukee’s variety of ethnic and racial enclaves.

Additionally, the multitude of blight districts and study areas for market analysis are similarly unorganized. As a result, this research digitized the geographies from primary- and secondary-source material to build cohesive maps and conduct data analysis. The various geographies were organized into file geodatabases based on themes or relevant time periods and then made available on this research’s open data portal.

Because of the variety of geographies and their historical significance, it was important that the feature classes include relevant attributes to properly identify the source material. For researchers downloading the geographies from the open data portal, these details would inform them with the name of the geography, the relevant year of its establishment, and its source material. Including these attributes fulfills one of this research’s broader goals of providing researchers with the original source material to enable peer review and facilitate additional original research.

Table A.2: Feature Class Attributes of Digitized Geographies

<i>Name</i>	<i>Type</i>	<i>Field Length (number of characters)</i>	<i>Values</i>	<i>Description</i>
Name	Text	50-100	Unique	Name or title of geography.
Date	Double	- - -	Unique	Date geography established or relevant historical year.
Source	Text	50-100	Unique	Information source for geography.

4. Digital Twin Development in ArcGIS CityEngine

A hallmark of my dissertation research is the ability to blend and pool large datasets to draw conclusions from a variety of sources. This advantage is most clearly seen in maps, diagrams, tables, and interactive 2D tools on my research website. An added strength and emerging technology is the 3D rendering of these datasets in ArcGIS CityEngine. The data workflow for this relies on procedural modeling of 3D features that allows for dynamic data analysis and visualization of the built environment.

The data workflow for 3D renderings is reliant on the organization and quality of 2D datasets. As a result, the datasets need to be managed in a cohesive workflow that facilitates an efficient analysis of spatial and spreadsheet data in 2D space, which is subsequently transformed into 3D models. The central element of this workflow is data attribute fields in the individual database feature classes. The organized management of the data attribute fields operationalizes all subsequent analyses in this

research. To manage the digital twin development for my dissertation research, key aspects of the data attribute fields were organized to specifically fit within the data workflow.

4.a. Feature Class Management

Within the digital twin, each “shape” – or 3D feature – relies on data attributes to be called in the procedural modeling. This operation of “calling” visualizes the shape in 3D space. The shape not only visualizes itself based on its attributes, it also retains additional attributes that allow for further refinement in the modeling. However, this refinement is only made possible if the feature classes are properly designed with visualization and interactivity in mind. Because the digital twin can only visualize a certain number of attributes before the features become illegible, it must be decided which features will be visualized, how the attributes of those features are stored in the feature class, and how the attributes will be used in the procedural modeling to build the 3D environment.

During the course of my dissertation research, it became apparent that data attribute consolidation was necessary to create efficient lines of code in the procedural modeling. The challenge in this approach was that my dissertation research was based on deductive analysis, whereas the procedural modeling is based on inductive thinking. Because of this dissonance, the procedural modeling was an iterative process requiring deliberate and judicious management of the data attributes.

To illustrate this inductive process, an example of data attribute consolidation is relevant. In the structures feature class digitized from the Sanborn Maps (1910), each structure has two data fields for land use: “Land_Use_Type_General” and “Land_Use_Type.” “Land_Use_Type_General” is a consolidated data field generated from the specific attributes of “Land_Use_Type.” The field “Land_Use_Type_General” was designed specifically for the development of the digital twin to code the shapes of the buildings into one of six general land use types. This consolidation of data fields allowed

for two processes to occur simultaneously: 1) the visualization of the land use of individual structures in the digital twin, and 2) the storage of specific land use types in the data attribute table for all structures.

Table A.2 details the consolidation of these data fields.

Table A.3: Consolidation of “Land_Use_Type” into “Land_Use_Type_General” Fields

<i>Land_Use_Type</i>		<i>Land_Use_Type_General</i>
Residential Residential – Boarding Residential – Female Boarding Residential – Duplex Residential – Flats Residential – Tenement Residential – Mixed Residential – Secondary	→	Residential
Commercial Commercial – Secondary Hotel Office Office – Secondary	→	Commercial
Industrial Industrial – Elevator Industrial – Secondary Railroad	→	Industrial
Warehouse Warehouse – Secondary	→	Warehouse
Boat House Net House Pier	→	Maritime
Community Educational Entertainment Hospital Municipal Religious Religious – Duplex Religious – Secondary	→	Community

4.b. CGA Rule Files

Procedural modeling in ArcGIS CityEngine is built on the programming language of computer generated architecture (CGA). The basic structure of CGA is to extrude and manipulate shapes with functions that operate on data attributes. The simplicity of CGA lends itself to a variety of applications in 3D modeling.

Basic models extrude features to display massing, while others provide additional detail in schematic models or rendered models that display façade features and materials. To extrude features, a CGA rule file needs to be written for each data layer. These rule files specify the rendered display attributes of the features.

For the digital twins in my dissertation research, schematic modeling was used to provide a reasonable level of detail about the built environment. The CGA rules were written to be easily adapted to the display of a variety of feature attributes. As a result, the code was designed to be streamlined and efficient. Additional detail was only introduced when specific attributes were meant to be displayed. For example, land use models were developed for neighborhood analysis with the data field “Land_Use_Type_General” visualized with six colors representing the different attributes. Figure A.7 shows code excerpts from two different CGA rule files for various features.

```

Welcome  Massing_Blocks.cga X
/**
 * File:   Massing_Blocks.cga
 * Created: 14 Jul 2023 18:44:59 GMT
 * Author:  Kristian Vaughn, UW-Milwaukee SARUP
 */

version "2022.1"

@StartRule
Mass -->
    extrude(0.25)

# Extrude block at standard height of approximately 0.5 feet for all blocks. No distinction between blocks.

```

Massing of Blocks

```

Welcome  Schematic_Massing_Structures.cga X
/**
 * File:   Schematic_Massing_Structures.cga
 * Created: July 2023
 * Author:  Kristian Vaughn, UW-Milwaukee SARUP
 * Adapted from a CGA rule developed by ESRI R&D Center and Devin Lavigne, Houseal Lavigne Associates.
 */

version "2022.1"

### CONSTANTS
const unitScale = 0.3048          # Convert feet to meters
const areaScale = 10.7639        # Convert square meters to square feet

const Floor_Height = 3           # Floor heights are 3 meters (approximately 10 feet)

### ATTRIBUTES

@Group("Building Attributes",2)
@Description("Height of the building in stories; land use type; roof feature")
@Order(1)
@Handle(shape=SplitFloors, align=left)
@Range(min=0,max=200,stepsize=1)
attr Bldg_Height = 0
attr Land_Use_Type_General = ""

@StartRule
Generate-->
    color(.8,.8,.8)
    extrude(Bldg_Height * Floor_Height)
    comp(f){top:BuildRoof | all:x.}

BuildRoof-->
    case Land_Use_Type_General == "Residential":
        roofHip(45)
    else:
        x.

```

Massing of Structures

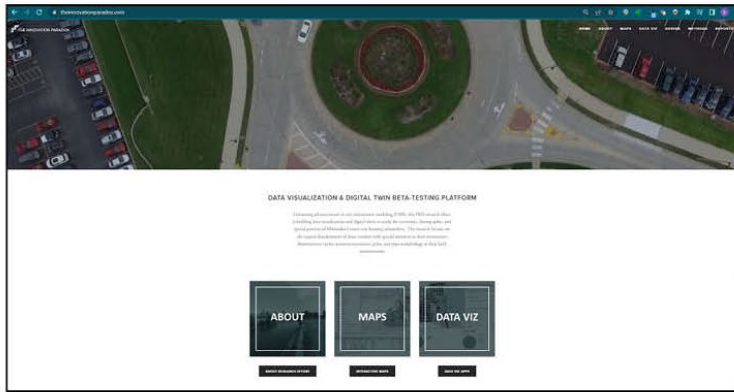
Figure A.7: Excerpts of CGA Rule Files for Schematic Modeling in ArcGIS CityEngine

5. Operational Website & Public Deployment of Digital Tools

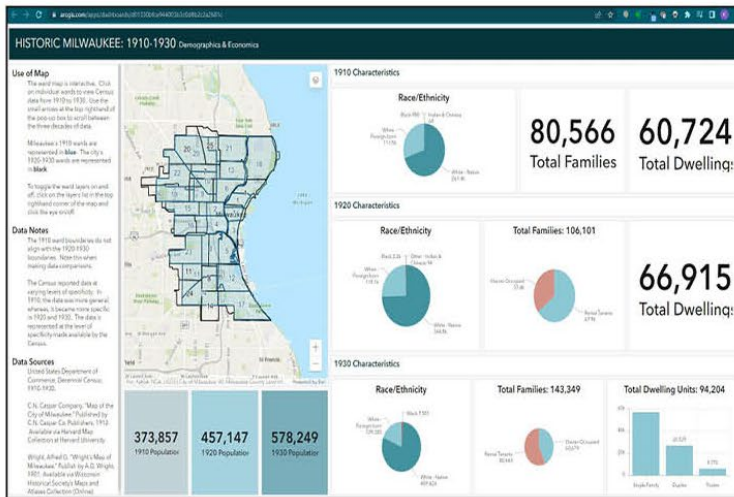
In pursuing research investigating CIM and digital twins, it became apparent during the dissertation process that public access to the tools was necessary. It was not sufficient to simply develop the tools on a private server, excerpt graphics into the dissertation research, and then delete the developed technologies. With this realization, the public deployment of the tools on a website was developed under the auspices of three general ideas:

1. To establish the technologies as viable proofs of concept, they needed to withstand use by and criticisms from the public.
2. The public access would facilitate public education about pressing urban issues, raise public consciousness about historical events, and assist in community engagement.
3. By achieving Ideas 1 and 2, the website would create an accountable and transparent research endeavor that made data publicly available and democratized the information.

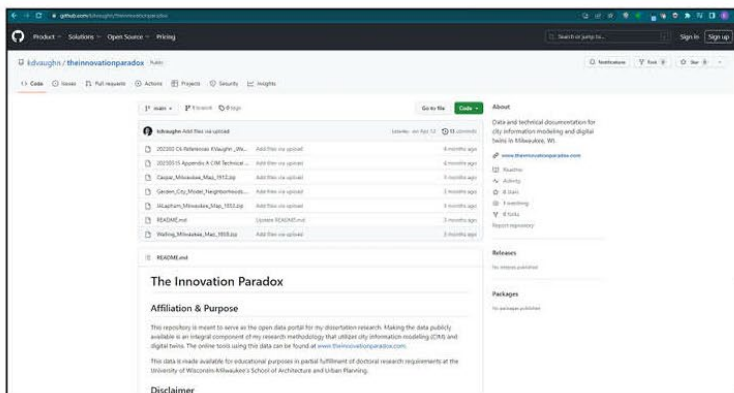
As a result, the website was launched in an initial beta-testing capacity at the onset of the research at the URL www.theinnovationparadox.com. As the research progressed, the website's content became more detailed and nuanced with maturing digital tools. The website presented users with research content in multiple formats: 2D interactive dashboards and maps, 3D digital twins, reports in PDF format, and an open data portal via GitHub. The purpose in providing this diversity of information in these formats was to present research conclusions, demonstrate the methods and sources utilized to arrive at those conclusions, and make datasets available for peer review. While the website did not qualify as an acceptable deliverable of the dissertation in its final format, it was a key element in the research process proving the capability and efficacy of CIM and digital twins.



Website Home Page



Data Dashboard



GitHub Open Data Portal

Figure A.8: Snapshot of Publicly-Available Digital Tools on Website

APPENDIX B. HISTORIC MATERIALS ANALYSIS

To achieve my research goal of recreating Milwaukee's historic housing submarkets, a variety of data sources were needed to develop the 2D mapping and 3D models. Because these historic materials originated from a variety of sources, each needed to be analyzed independently and then overlaid or pooled with similar resources for comparison. Secondary-source historical research and narrative provided the framework for understanding the characteristics of Milwaukee's housing from 1910-1970. However, to conduct a detailed analysis, primary-source documents, maps, and photos were needed to build a more complete portrait of the city's neighborhoods. The individual analysis of each of these sources revealed nuances in the housing submarkets; and, when analyzed collectively, the various historical narratives and datasets provided context for one another enabling cross referencing and verification.

The collective analysis of the various data sources presented a series of challenges. While some of the sources were readily identified and clarifying context information was available, others had previously been identified as authentic with no additional information provided. As a result, multiple methods of historic materials analysis were undertaken to place these primary sources in the appropriate context.

1. Map Inferencing

Historical research about Milwaukee benefits from an ample supply of maps drawn since the city's founding in the 1830s and 1840s. Additionally, 90 years of Milwaukee County aerial photography is available beginning countywide in 1937 that a) accurately represents a plan view of the city in as-built condition, and b) provides a valuable overlay for comparison with the maps collection.

While these maps create the foundation for the 2D mapping and 3D modeling in my dissertation research, challenges existed during the digitization process. Because some maps were drawn to scale

with highly accurate land survey methods while others were drawn in a schematic way, inferences needed to be made during the digitization process. To ensure accuracy, the Sanborn Maps for Milwaukee (1910) and Milwaukee County aerial photography (1937-1970) were used as foundational references to confirm land features, water features, block structure, and building attributes. Data from other map sources were then overlaid onto the digitized Sanborn Maps and aerial photography to build feature class databases. At times, conflicting information was identified between the multiple map sources. To clarify these conflicts, multiple information sources – including primary- and secondary-source written narrative and historic photographs – were utilized as cross references in conjunction with the maps to appropriately digitize the data. When these conflicts were assessed, a good faith effort was made to make the most judicious decision that was reasonably accurate given information sources.

An illustrative example of this process is the analysis of Milwaukee's slum wards during the 1910s. Primary-source written narrative from Thompson (1910) and Hegemann (1916) identify and describe the wards with additional information provided by McCarthy (2006). The Sanborn Maps (1910), C.N. Caspar Company ward map (1912), Milwaukee Bureau of Public Land Commissioners' zoning map (1920), and Milwaukee County aerial photography (1937) provide the map references for digitization of the city's land features, water features, block structure, and building attributes. The Women's Club of Wisconsin racial map (1918) and the U.S. Department of Commerce Decennial Census (1920) provide demographic data about the neighborhoods. These sources were utilized in conjunction to build an as-accurate portrait as possible.

These digitization and analysis processes revealed ambiguities across the data sources in examining the city's slum wards. At various points, the conflicting data indicators were examined and attempts were made to rectify the incongruities.

- The Sanborn Maps and Milwaukee County aerial photography accurately depict the city with reasonable land survey precision. However, hand drawn Sanborns differ in accuracy with the aerial photography, specifically with respect to street centerlines and block layout. Corrections were made only when a serious discrepancy was identified. In contrast, the aerial photography served an important purpose in clarifying omissions in the Sanborns. The Sanborns are incomplete in certain areas for unplatted lands in the city, as well as areas that were never surveyed.
- The Milwaukee Bureau of Public Land Commissioners – the precursor to the City’s contemporary Department of City Development – published a variety of maps beginning in the 1920s. The maps typically adopted a more schematic approach to the city’s block structure. When compared to the Sanborns and aerial photography, some discrepancies exist.
- The racial map from the Women’s Club of Wisconsin has a largely unknown provenance. The Milwaukee Public Library has confirmed basic details about the map as authentic. However, the survey methodology used to build the map has never been identified. As a result, while the map is a primary source document, it should be interpreted with critical thought and some skepticism.

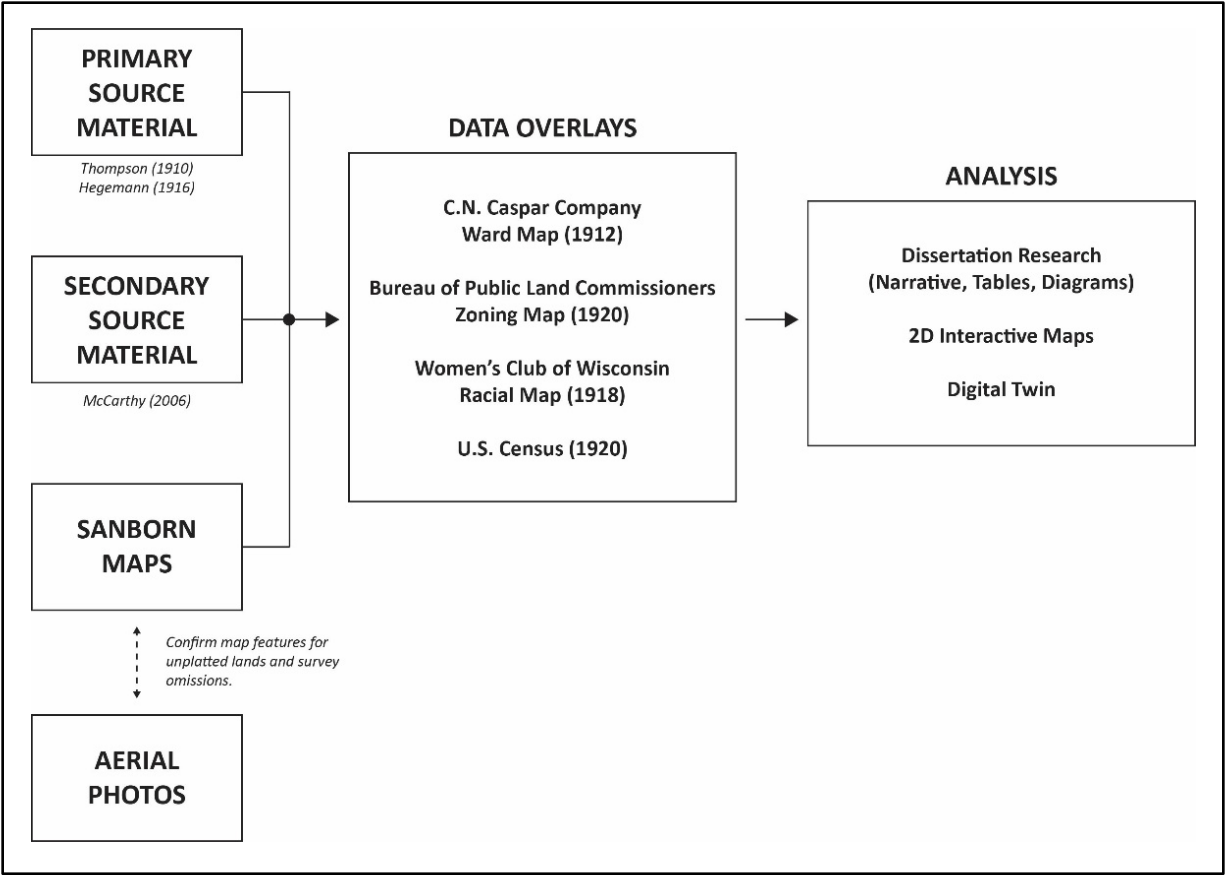


Figure B.1: Example of Map Inferencing – Milwaukee Slum Wards, 1910s-1920s

2. Geolocating Photos

Historic aerial photography and first-person photographs proved to be some of the most valuable primary source materials for my dissertation research. These data sources accurately captured moments in time that depicted the realities of conditions in Milwaukee with no pretense or bias. To use these photos correctly in my research, the location (i.e., street address, perspective) of each photo needed to be identified and placed on a map. This process is known as geolocation. To achieve this, multiple data sources needed to be used to identify features in each photo, identify those same features on historic aerial photography, and then successfully place the photo at an exact location in the city.

In my research, the geolocation of photos became an increasingly important component of the analysis of primary source materials. Historic maps, oral histories, government documents, newspaper clippings,

and other primary source materials provide the written narrative of Milwaukee's housing. While this narrative is valuable, it lacks the critical element of visual analysis. Photographs provided the first-person account of life in Milwaukee's neighborhoods. To analyze and understand this perspective, the historic photos were geolocated and analyzed in conjunction with other available resources.

2.a. Kaszub Fishing Colony Spatial Analysis, 1840s-1940s

The Kaszub Fishing Colony on Jones' Island represented a unique opportunity to conduct a comprehensive historic materials analysis because of the volume of materials available about the community. The analysis was a beta test for the broader effort my research undertook to analyze multiple neighborhoods. The type and number of historic photos available provided longitudinal perspective about the community from approximately the 1840s to the 1940s. This perspective was central to the understanding of the spatial structure of the community and how its physical architecture related to its demographic profile and economic activity.

Initially, each first-person photo was examined to identify general features and common factors that were easily verifiable with other information sources. With the aid of historic maps and aerial photography, the structure of Milwaukee (i.e., streets, blocks, topography, landmarks) was well understood. With that base of information, first-person photos that clearly depicted certain scenes in a confirmed location could be easily verified. These photos typically provided a broader perspective that created a visual context for the community.

For photos that captured a more detailed scene, additional analysis steps were necessary to accurately verify the information. In a detailed first-person photo, the foreground and background were analyzed to identify distinctive features. These features typically included landmark structures, unique topography, and/or distinctive design characteristics of neighborhood structures. With these features

identified, historic aerial photography was consulted to cross reference the photo's features with those present from the aerial perspective. With these common points identified, the image location was then triangulated.

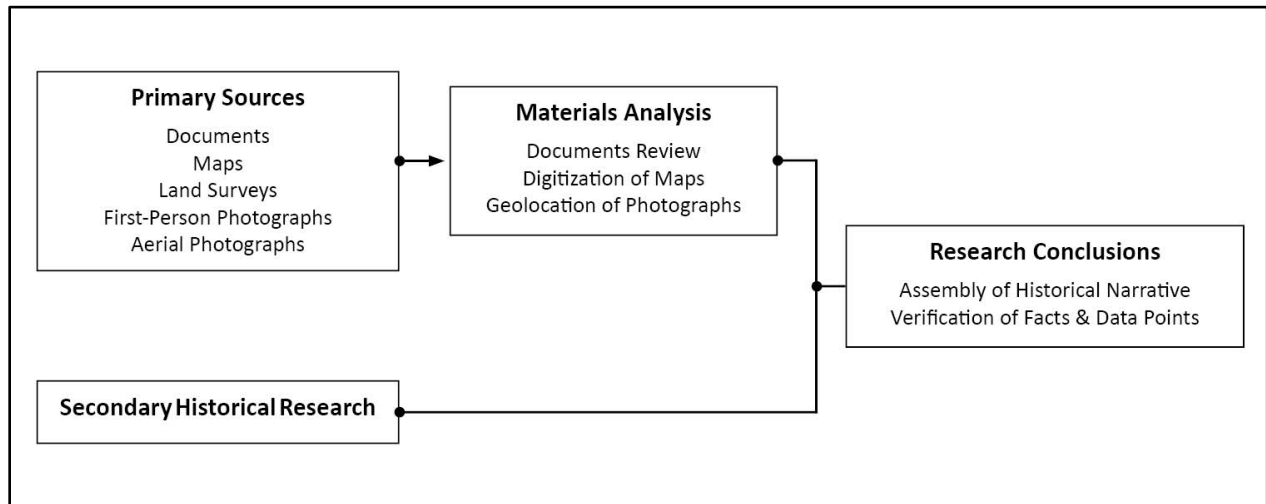


Figure B.2: Analysis Workflow for Geolocating Photos



MILWAUKEE COUNTY AERIAL PHOTOGRAPHY, 1937 PORT OF MILWAUKEE

The development of Milwaukee's harbor from its original state as a sandbar peninsula and fishing community to a fully industrialized port reveals a striking evolution over a short period of time. In less than 20 years from 1920 to the late 1930s, Milwaukee's harbor was transformed by a series of large-scale engineering projects to create a deepwater, Great Lakes port. Once only a little over 35 acres as the Kaszub Fishing Colony, the port rapidly grew to almost 210 acres – space that would eventually accommodate multiple marine freight terminals.

Over multiple decades, dredging and filling operations created the conditions suitable for deepwater freight vessels to dock at Milwaukee's port within the breakwater of Milwaukee Bay and within the Milwaukee Municipal Mooring Basin at Kinnickinnic Bay. The expanded port included engineered dockwall construction, railroad sidings and yards, large cranes, fuel tanks, shipping terminals, and a small network of gravel and paved roads. The City coordinated this work with the construction of a new sewerage treatment facility on the northern end of the port.

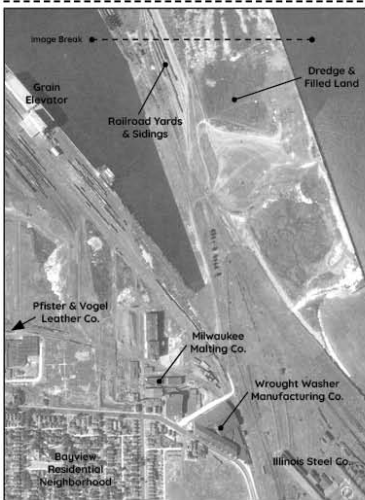


NORTHERN FOCUS - INDUSTRIAL USERS

Dock wall construction and the ongoing dredging and filling operations expanded the width of the port to create a contiguous, level area: to the west was the Milwaukee Municipal Mooring Basin, and to the east was dock wall that would become freight terminals. To support this expansion, multiple railroad yards and sidings were built to carry freight cargo to the various terminals. Additionally, a road network and fuel tanks supported daily operations.

The City's sewerage treatment facility anchored the northern end of the port. Far larger than the facilities that occupied the space previously, the new treatment facility was designed and built to accommodate Milwaukee's growing population. Remnants of the original garbage crematory and Coast Guard Life Saving Station stood to the west.

The remaining members of the Kaszub Fishing Colony occupied a small inlet on the western side of the port. Still able to launch boats into Kinnickinnic Bay, the fishermen continued their daily work by sailing up the Kinnickinnic River, through the harbor inlet and breakwater, and out into Lake Michigan.



SOUTHERN FOCUS - INDUSTRIAL USERS

By the late 1930s, the southern area of the port was still under construction. Dredging and filling operations were ongoing with the eastern side requiring additional work. Multiple railroad lines emanating from Bayview pushed northward into the port.

On the southern edge, the industrial operations of multiple companies employed a significant number of Bayview residents. Presumably, these companies would be direct beneficiaries of an expanded port with improved rail and marine access for cargo freight. The companies included the Pfister & Vogel Leather Co., Milwaukee Malting Co., Wrought Washer Manufacturing Co., and the Illinois Steel Co.

Figure B.3: Geolocation of Notable Features at the Port of Milwaukee on Milwaukee County Historic Aerial Photography, 1937

2.b. U.S. Resettlement Administration Milwaukee Photo Survey Analysis, 1936

The historic materials analysis for the design study of the U.S. Resettlement Administration photo survey (1936) required a multi-disciplinary approach to utilize a variety of data sources to develop a complete portrait of neighborhood conditions in the late 1930s. The ability to conduct this analysis represents a historically unique moment because sufficient primary sources existed to build accurate re-creations of housing patterns and draw conclusions from the models. To achieve this level of detailed analysis, multiple methods were utilized to analyze each photograph in the Library of Congress collection.

The primary sources referenced in the analysis included historic photographs, maps, and aerial photography. The evidence was further supported by details provided by historic narrative from secondary sources, oral histories, and neighborhood geographies identified in primary and secondary sources. The analysis included the geolocation of the housing photos, the plan analysis of maps and aerial photography, the analysis of the housing photos for significant features, and the schematic modeling of neighborhood conditions.

Geolocation of Housing Photos

The analysis included only those photos identified by a street address that could be placed on historic maps and aerial photography with confidence. The address indices on the Sanborn Maps (1910) and the address conversion files at the Milwaukee Public Library were used to compare and confirm addresses from 1910 and 1936. With a confirmed address, the location of the photo was then placed on a map.

Plan Analysis of Maps & Aerial Photography

The Sanborn Maps (1910) provided important details about spatial attributes in the neighborhoods. Because the maps were developed with survey-level accuracy, the digitized spatial data can be analyzed with a high degree of detail. The digitized data included block

structure and dimensions, parcel structure and dimensions, and structure attributes (including building orientation, floor plate area, height, land use, and building materials). The 1937 aerial photography provides a comparison to track changes in neighborhood conditions and confirm attributes from the housing photos.

Features Analysis of Housing Photos

The housing photos are rich primary source materials that give important clues to how structures and dwelling units were utilized and adapted by residents. Because the majority of the housing photos are located in Milwaukee's original inner core neighborhoods, multi-decadal changes can be tracked in the built environment. Additionally, demographic attributes of residents are relevant because certain groups utilized housing in distinctive ways.

Schematic Modeling of Neighborhood Conditions

Utilizing the digitized spatial data from the Sanborn Maps (1910) and 1937 aerial photography, schematic models of the neighborhoods were built in ArcGIS CityEngine to visualize the built environment. These 3D models provide valuable insights into the texture of neighborhood density and the massing of buildings.

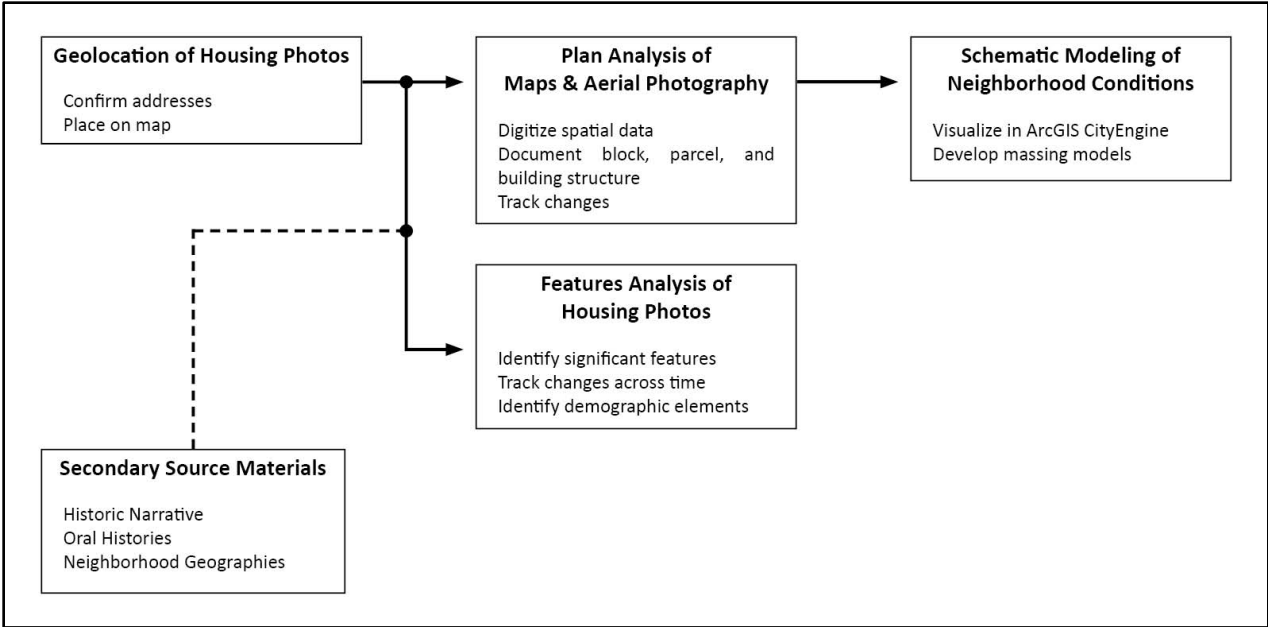


Figure B.4: Analysis Workflow for Design Study Utilizing Multiple Primary Sources