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Strategic Housing and Vacant Land Development Plan for a More Viable Detroit

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Strategic Housing and Vacant Land Development Plan for a More Viable Detroit

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Summer 2016

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A graduate capstone presented in partial fulfillment of a Master of Science Degree in
Political Science–Applied Community and Economic Development for the Stevenson
Center of Applied Community and Economic Development

Illinois State University, Normal, IL

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Abstract

In recent years Detroit has seen the beginnings of a revival with coordinated blight removal efforts from the city and large downtown development investments from foundations, such as the Kresge Foundation, and key players in the corporate sector such as Dan Gilbert, founder and chairman of Quicken Loans. While these efforts have led to tremendous changes and revitalization in the downtown and midtown areas, as well as along the riverfront, much of the city's neighborhoods remain left to solve their housing and land use crises. What follows is an attempt to build upon the work of others in finding creative solutions to Detroit's housing and vacant lot issues. This plan is intended to assist the city of Detroit in developing its newest Master Plan of Policies for Detroit, as well as supplement the strategies of corporate, nonprofit, and philanthropic actors, with a specific focus toward housing and neighborhood development.

Introduction

As the heart of the American automotive industry, host to the busiest international border crossing in North America by trade volume, and with professional sports teams in nearly every sport, Detroit is one of the great American cities. It's a place known for decades as "The Motor City" because the three largest American auto manufacturers, General Motors, Ford, and Fiat-Chrysler, call the region home. It's the musical mecca that produced Motown Records, Stevie Wonder, Techno music, Eminem, and The White Stripes. However, in the 1980s and 90s the city was known as much for crime and drug use as for anything else. In 2005, TIME magazine named then-Mayor, now convicted felon, Kwame Kilpatrick one of the worst mayors in America. From 2000 to 2010 it was widely reported that Detroit lost 25% of its total population. For one reason or another, Detroit is never far from the public eye.

The city was featured prominently in the national media in the devastating wake of the national housing crisis of 2007-08. In 2013, after years of decline,

Detroit became the largest American city to file for Chapter 9 bankruptcy. More recently, the city found itself featured in media coverage of the national recovery out of the Great Recession, as property values and jobs began to return to something resembling pre-crisis numbers nationally. Detroit has come to symbolize the great American comeback story. People are rooting for Detroit now in ways that just ten years ago were unthinkable.

Detroit was formally released from court protection on December 10, 2014, thus ending the city's approximately 17-month bankruptcy period (Davey 2014). Though it has emerged from bankruptcy, a great deal of the coverage from the period 2008 to early 2016 has portrayed Detroit as the poster child for political corruption, corporate greed and detachment, widespread civic failure, the decline of the American manufacturing industry, the failure of public education, suburban disconnect, and as a daily example of how a major American city could completely *collapse* under the weight of its own debts and mismanagement.

Detroit's modern decline has been so meticulously recorded precisely because just two or three generations ago it was the nation's 4th largest city and its automobile-centric economy accounted for one of six jobs in the entire country (Martelle 2011). Now, with a population below 700,000, a figure representing just 40% of the city's 1950 peak population of 1.8 million, and a geographic footprint of nearly 140 square miles, Detroit faces immense housing and property challenges; primarily: steep decline of home values, widespread blight from abandoned or foreclosed upon properties, and large tracts of vacant land separating neighborhoods where blighted homes and businesses have been demolished or parks are no longer serviced. "More people have left Detroit since 1950 than [currently] live in San Francisco" (Martelle 2011, xii).

Methodology

This research focuses on the city's response to housing and land use challenges, as well as offers strategies to help Detroit move toward a more economical and environmentally sustainable housing future. It is with humblest acknowledgment that this author recognizes the tremendous work happening in Detroit every day to solve these issues. Any omission or duplication of strategies and initiatives without due credit is unintentional.

For purposes of this report, the phrase *city's response* takes on a holistic meaning, referring not just to the geographic location or municipal government, but to the corporations, non-profits, artists, activists, and other residents also working to address housing and land use issues in Detroit.

The information herein comes from three visits to Detroit by the author throughout 2016, as well as a broad overview of literature and other materials focused on these challenges, the historical context, possible solutions, examples from other communities, and as much of the work being done to address the issues in Detroit as the author could find. The author's 2015-2016 professional practice fellowship with Housing Action Illinois in Chicago also contributed to many ideas discussed in this plan. A visit by the author to Earthship Headquarters outside Taos, New Mexico in 2015 contributed additional information.

Inherent in this plan is the idea that housing does not simply refer to the physical dwellings in which people reside. Issues facing housing, and thus strategies addressing those issues, necessarily involve a variety of components outside of the housing itself, including, but not limited to: surrounding property conditions, responsible access to credit, availability and quality of jobs, schools and public transportation, appropriate taxation, reasonable insurance, and freedom to innovate.

An Exceedingly Brief History of Detroit

Detroit is a city rife with historical significance. In the time before European settlement, it was home to the Anishinabeg. The Anishinabeg were a group of Native Americans from three different tribal backgrounds: Ojibwe, Ottawa, and Potawatomi, which shared a common language. After the Europeans arrived, the area became an important French colonial outpost, built around the fur trade and the logistical wealth of the Great Lakes. Antoine Cadillac founded the French settlement of Fort Ponchartrain du Detroit in the summer of 1701. By 1760, with the capture of Montreal, Detroit became a British colonial settlement. In 1796, the United States military overtook the British settlement, and by 1802, Detroit was officially incorporated as a city in the United States (Martelle 2011).

Throughout the 1800s, Detroit was an important city for southern African Americans who migrated north to escape the toxic culture of slavery. It became a prominent city in the fight against slavery due to its close proximity with Ontario, Canada, where abolition had existed since the 1790s. In 1833 there was a race riot in the city after a number of Black Detroiters helped a fugitive slave couple escape into Canada. This event however is credited with starting the anti-slavery movement within Detroit, and over a 30 year period more than 45,000 slaves utilized the Underground Railroad to secure their freedom in Canada (Detroit Historical Society 2016).

As the 19th century rolled on, Detroit became an increasingly important transportation center, connecting the Great Lakes and the ever-expanding railroad system. This geographic significance paved the way for manufacturing industries to set up shop in and around Detroit (Martelle 2011). By the end of the century it was a leading manufacturer of heating and cooking stoves, ships, beer, rail cars, and foundry products (Detroit Historical Society 2016).

By the early 20th century, Henry Ford and Ransom E. Olds set the stage for Detroit to become the home of America's auto industry. In the first decades of the 1900s, over 120 automobile companies were based in Detroit. Henry Ford set the

gold standard though with the Model T and after his introduction of the \$5 work day in 1914, people came from all over the country and the world to work for Ford. Ford's workforce was diverse and integrated. By the 1940s, Ford was one of the largest employers of African Americans in the nation. In the 1950s, the three major auto manufacturers of today emerged as the leaders in the American auto industry: Ford, General Motors, and Chrysler (Sugrue 2007).

It was during this golden era where so much of Detroit's workforce was employed in the auto industry that the industrial unions gained traction. Through years of strikes, demonstrations, and negotiations, the United Automobile Workers union (UAW) fought to make auto industry jobs a respected and sought after profession, associated with generous wages and comprehensive benefits. The wealth of the auto industry and its solidly middle-class employees helped shape the architecture and character of Detroit, swelling the city to its peak population of over 1.8 million in the 1950s (Martelle 2011).

However, beginning in the 1960s, the auto manufacturers began to fundamentally shift the production of vehicles from its centralized factories in Detroit to scattered factories throughout the Midwest. This process of decentralization continued over the following decades with auto plants moving further and further from Detroit, some eventually moving to other countries where wages and benefits were much lower. It was also during this time that automation found its place in the industry. Assembly workers were replaced with machines. Increased production by fewer workers meant fewer and fewer jobs, especially entry-level, were available at each plant. Throughout the 1980s and 90s large plants such as the Dodge Main, Fisher Body, and River Rouge either closed or severely reduced the number of workers (Sugrue 2007).

The auto industry, and its peripheral industries, dominates a large chunk of the economic fortunes of the city to this day. All of this turbulence has contributed to the unique character and challenges facing the city in modern times. Both General Motors and Chrysler required billions of dollars in federal bailout money

through the Troubled Asset Relief Program (TARP) following the financial crisis of 2007-08. Ford narrowly avoided bankruptcy. All three made sweeping cuts in production and thus had a direct negative impact on the regional economy of Detroit. Chrysler has since entered into a partnership with Italian automaker Fiat Automobiles to become Fiat-Chrysler Automobiles (FCA).

Both auto manufacturers have since paid back those bailout funds and the auto industry has been on a solid recovery with the sharp drop in oil prices over the past few years contributing to strong sales of new cars and trucks. As the personal transportation industry shifts, Detroit's auto manufacturers have made significant investments in and formed partnerships with disruptive technology companies in transportation such as Uber and Lyft. While the companies are doing well, they still employ far less people than during their heyday.

The Modern Era

Detroit in early 2016 is not just the product of decades of disinvestment in the manufacturing industry. Globalization has driven down labor and international trade costs and allowed companies to relocate factories overseas or across the border in Mexico. And many smaller manufacturing operations that once provided parts and accessories to the major auto manufacturers were forced to adapt, relocate, or shut down. It's no surprise then that many Detroiters left for greener pastures; those who could at least.

The decline of industry, coupled with other socioeconomic issues such as falling property values, lack of adequate tax revenue for public services such as schools, sanitation and transportation, and unemployment/increased employment opportunities in the suburbs, led to a further population exodus. This was especially true among middle class and upper-middle class residents who could better afford to take losses on their homes and relocate in more prosperous communities; sometimes just to the nearby suburbs in Oakland and Macomb counties.

The result is that those who remained in the city have seen their home values erode and many of their neighborhoods deserted, leaving behind blighted homes or unkempt vacant lots, unmaintained parks and shuttered businesses. These abandoned homes and lots are magnets for criminal activity including: drug use, scrapping, arson, and dumping. Official unemployment hit a peak of 27.4 percent in July 2009, and continued over 20 percent through the first half of 2011 (Martelle 2011).

In October 2009, during its peak unemployment period, the City of Detroit received \$15.2 million in federal economic stimulus money. They decided to use these funds to help up to 3,500 city residents avoid foreclosure, eviction, or if homeless, to help them secure housing. Because of the level of poverty and the auto manufacturers' financial woes at the time, the expectation was that demand would be high. However they never expected that over 50,000 people would show up, desperate for these services. Some stood in line overnight and fighting broke out in the lines (Martelle 2011). This isolated incident serves as a metaphorical representation for how dire the situation had become for Detroit as a whole, and a stark contrast to what was once a vibrant city with a high-revving economic engine.

It's not all doom and gloom in Detroit in 2016 though. In fact, the city is experiencing an influx of innovation and financing to address all of the issues mentioned thus far.

The city's Chapter 9 municipal bankruptcy played a key part in setting the stage for its current path to revitalization. Governor-appointed Emergency Manager Kevyn Orr steered the city through the bankruptcy process and toward a settlement referred to as the "Grand Bargain" in 2014. The Grand Bargain forgave \$7 billion of city debt, cut the city's future pension obligations, cut payments to city bondholders, and allowed the city to invest over \$1 billion into its severely neglected public services. An innovative solution to prevent the city's creditors from monetizing the artwork from the Detroit Institute of Arts, as well as to reduce cuts to the city's pensioners, included \$800 million from a combination of state and foundation funds

from regional philanthropic organizations (Bomey 2016). This contentious deal allowed Detroit to escape the weight of its worst financial woes so that the city could begin to look forward.

Dan Gilbert's Quicken Loans has relocated over 10,000 employees from the surrounding suburbs to its new Detroit headquarters since 2010 and over 3,000 now live within the city limits (Gallagher 2016). And he's not the only one. Six major companies in Southeastern Michigan: Blue Cross Blue Shield of Michigan, Compuware, DTE Energy, Marketing Associates, Quicken Loans, and Strategic Staffing Solutions, have joined together in supporting an employee relocation incentive program called "Live Downtown" administered by the Downtown Detroit Partnership, a collection of corporate, civic, and philanthropic affiliates.

Mike Illitch, owner of both the Detroit Redwings and Detroit Tigers professional sports franchises, is also driving downtown development with the construction of a 50-block area being billed "The District Detroit", anchored by the Little Caesar's Arena where the Redwings will play starting in 2017. Illitch has also committed \$40 million to Wayne State University to construct the "Mike Illitch School of Business" (Shea 2015). Dan Gilbert's umbrella entity for his portfolio of companies, Rock Ventures LLC, occasionally in tandem with other Gilbert enterprise Bedrock Real Estate, has also worked to renovate abandoned historic buildings downtown into housing, office, and retail spaces.

While the development work downtown is a crucial and important first step, one of the biggest obstacles in Detroit's housing comeback is that there is no "light at the end of the tunnel" for potential investors in housing throughout the city. This applies to both large development companies and individual buyers. Even though property values remain low city-wide, Detroit remains a highly risky investment environment as long as many other factors remain such as: population decline, hidden property acquisition costs (ex. previous years' unpaid property taxes), high crime rates, high unemployment, zoning and land use restrictions, and under-funded public services (ex. police, fire, emergency, and transportation). All of

those factors have combined to form a large liability risk for insurance companies operating in the city. This increased cost has been passed on to the people living in Detroit in the form of high insurance premiums, thus adding one more financial disincentive for choosing to live, work, and play in Detroit. The high prevalence of theft and vandalism in blighted areas has made reinvestment increasingly difficult because repairing a house can open it up to said theft and vandalism if it is unoccupied during the rebuild. The strategy below will outline specific steps that can address housing and land use issues throughout the entire city.

The Plan

The strategies outlined below represent potential solutions to Detroit's multitude of issues surrounding housing and land use. They are grouped into separate sections, but all are connected in their ultimate goal: to set the stage for healthy growth and neighborhood development. No single strategy is meant as a stand-alone-cure-all. The first focus is blight.

Demolition and Deconstruction: Working in Tandem to Tackle Blight

When examining the issue of blight, it is important to acknowledge the tremendous efforts the city has put forth over the past few years. As part of both the previous and current mayor's strategies, the city of Detroit, by way of the Detroit Building Authority, has been pursuing blight removal through an ambitious demolition project to clear away as many of the city's worst abandoned homes and businesses as possible. "The city has been allocated more than \$120 million from the federal government's Hardest Hit Fund to help tear down 40,000 houses" (Guillen 2015). The Hardest Hit Fund is a neighborhood stabilization program operated through the US Treasury that was created in 2010 in response to needs of the areas in the country that were disproportionately impacted by the housing crisis.

Removing unoccupied and decrepit structures has been shown to measurably improve property values in adjacent occupied buildings (Voith and

Furio 2016). Property values have eroded, especially over the past decade, to the point where homes that were once valued over \$200,000 can be bought for as little as \$20,000 today, even less if they have been unoccupied or have tax liens against the property. Homes have sold at land bank auctions for as little as \$500. The average selling price of a single-family home in 2011 was \$7,000 (Hodge, Sands, and Skidmore 2015). Many of these are not move-in ready homes however. The market for homes not in need of major renovation is performing considerably better, however access to formal financing and accurate appraisal values remains an obstacle.

Detroit also has a high prevalence of abandoned or foreclosed properties becoming centers of criminal activity, most often involving scrapping, drug use, squatting, vandalism, or arson. Scrapping refers to an illegal activity whereby trespassers gain access to vacant homes or businesses and proceed to remove all items of value, including, but not limited to: appliances, furniture, copper piping, wiring, water heaters, doors, trim, and anything else that can be reused or sold. A house that has been vandalized by scrappers requires an inordinate amount of capital resources to become inhabitable again, essentially condemning the structure and possibly attracting additional blight and crime (LeDuff 2013).

With overburdened and underfunded police and fire services, removing sources of this criminal activity is a highly valuable proposition. While the city has aggressively pursued demolition, limited funding and an ongoing federal investigation of demolition contracts means there are still thousands of vacant properties (Guillen 2016).

Where the city's efforts have fallen short, nonprofits and private coalitions of citizens have stepped in to assist. A powerful force in the mission to address issues of blight was the Obama Administration's Detroit Blight Removal Task Force, a coalition guided by Dr. Glenda D. Price, Linda Smith, and Dan Gilbert, and community and business leaders from across multiple sectors of Detroit. The Detroit Blight Removal Task Force compiled a comprehensive blight removal report in the

fall of 2013, which outlined numerous strategies for removing and preventing blight in the city. A wider coalition-style effort was suggested including the following partners:

“the Mayor’s Office, the Department of Neighborhoods, the Detroit Future City Implementation Office, the Detroit Land Bank Authority, Wayne County, the State of Michigan, the Detroit Economic Growth Corporation, and business and community leaders to work closely together to realize many strategic opportunities for investment in Detroit’s employment areas and neighborhoods” (Detroit Blight Removal Task Force, 2013).

In some cases, residents around the city have taken matters into their own hands, boarding up abandoned properties to discourage squatters, and in rare instances, going so far as illegally burning these buildings down themselves to prevent future criminal activity (Kinder 2014). This has potential consequences both legally and physically. As such, it is discouraged and officially sanctioned blight remediation efforts need to be further expanded.

This plan encourages the city to continue its work in demolition, but to structure its strategy in a way that targets buildings in the worst condition, in the most promising neighborhoods, first. “Most promising,” in this instance referring to neighborhoods on the brink, where investment in blight removal has the greatest potential to revive or simply save a neighborhood from losing further residents. In neighborhoods beyond saving or those in which demolition is postponed, another blight removal strategy; deconstruction, should play a greater role in rebuilding the city.

A big part of sustainable development is lengthening the lives of products. Instead of widespread demolition, deconstruction and renovation should also be considered (Minter 2013). These services could be accomplished by using a combination of public and private initiatives, volunteers, and paid laborers. Diverse and innovative initiatives such as this involve numerous community partners and would require flexible funding sources to enact. Hardest Hit Fund dollars have

funded a great deal of demolition work, but the funding is federal, and as such has strict guidelines for how the money can be allocated. This plan advocates for the availability of “unrestricted” or much less restricted Blight Removal Funding. This funding would ideally not be the “pet project” of an agency, government representative, or private investor, but is instead unrestricted in its use to address blight removal. As the City of Detroit continues its investment in blight removal over the coming years, its mandate should be adjusted to incorporate deconstruction and renovation into the funding of the overall mission. An example from Colorado’s National Center for Craftsmanship {NCC} illustrates some of the possibilities of partnering with, and supporting deconstruction operations in the blight removal process.

The NCC is a nonprofit based in Fort Collins, Colorado. The NCC’s mission is to “further the practice of quality craft skills” (Zaffros 2009). The organization works primarily with area students and at-risk youth, and partners with experienced contractors to mentor the participants and share sustainability tactics.

They were able to begin the curriculum when a local developer donated 8 blighted homes for NCC to deconstruct and sell the salvaged materials. NCC has aided the city of Fort Collins by deconstructing structures on city land, land that was then turned into protected open land. While from an environmental and a skilled jobs perspective, deconstruction makes sense, financing a successful deconstruction program is generally the largest hurdle to getting a capable program going.

Deconstruction typically costs anywhere from 10 to 35 percent more than a standard demolition (Nesterowich 2014). The NCC was able to successfully mitigate some of the cost prohibitions by petitioning and winning designation as an enterprise zone project. A winning combination of tax breaks makes it much more likely that a developer will donate a building to NCC for deconstruction because it is then a fiscally sound alternative to demolition. This combination of tax incentives includes the standard appraisal value of the property, which the developer can deduct as an in-kind donation, NCC’s non-profit status contributes an additional 40

percent to the building's appraised value, and the enterprise zone credits which are worth "12.5 percent of the in-kind share and 25 percent of any cash donation" (Zaffros 2009). Deconstruction has many degrees and even a relatively superficial deconstruction diverts waste from landfills without dramatically increasing costs or timeliness.

There are a handful of nonprofit deconstruction organizations currently operating in Detroit. A notable example is Reclaim Detroit, a small deconstruction organization that was founded in 2011 through assistance from a Detroit-based nonprofit environmental incubator called EcoWorks. Reclaim Detroit hires almost exclusively local Detroiters and trains them in the skills necessary to properly deconstruct a house. These are skills that are transferrable to other sectors of the construction and building trade.

Organizations like Reclaim Detroit have recognized that there is a national and international market for old-world American hardwood products salvaged from historic structures. The quality of this wood and its unique characteristics make it highly valued on the resale market. Deconstruction can not only provide additional jobs for the community and revenue for the organization, but it can also spawn peripheral businesses. An example of a small business formed around the deconstruction industry is Evanston, Illinois-based Urban Wood Goods, a custom furniture company that uses exclusively old-growth wood for its projects. This wood can only be found as salvaged material from existing historical structures.

Detroit's private businesses could orchestrate volunteer deconstruction/demolition days modeled after the way many businesses volunteer for Habitat for Humanity home-building projects around the country. An issue with volunteer labor in this case, and something such projects would need to consider, is the potential exposure to asbestos and lead in older buildings. These substances pose both serious health and environmental risks and require specific procedures for safe handling and disposal. However, for properties not containing asbestos or lead paint, or after any asbestos and lead has been removed, each single-family

home demolished by a crew of volunteers could potentially save the city thousands of dollars.

Recent observations by the FBI and the Office of the Special Inspector General for the Troubled Asset Relief Program, or SIGTARP, have shown average demolition-cost-per-house increases from \$8,000-\$10,000 under former Mayor Bing to as high as \$16,400 under current Mayor Duggan, sparking an investigation that is currently pending (Guillen and Baldas 2016). Regardless of the underlying reasons, demolition costs are increasing and there is a prime opportunity for coordinated volunteer efforts and partnerships with deconstruction organizations to step in and decrease the financial burden on the city while providing meaningful volunteer and employment opportunities.

Another opportunity within deconstruction is the possibility of hiring and training those who were involved in illegal scrapping activity in the past. Those previously convicted of vandalism or theft experience considerably higher rates of unemployment than the general population (Raphael 2007). Aside from the personal benefits of a paying job for an ex-offender or person experiencing unemployment, this could offer such people a chance to utilize their skills in a more productive way that contributes to the greater good of the community instead of adding to its detriment. Deconstruction creates skilled jobs, reduces landfill waste, preserves historical value, reduces resource consumption, and spurs economic activity. The increased cost of deconstruction working in tandem with demolition produces greater value for the community than simply removing all blighted structures through demolition.

Increasing Value and Access to Current Stock of Liveable Homes

Detroit represents a unique situation in regards to its current housing stock. It has far more homes than people who are willing, or able to buy them at the moment (Hodge, Sands, and Skidmore 2016). There are numerous reasons for this. Unlike cities such as Denver, Minneapolis, or San Francisco, which have recovered

almost entirely from the burst of the housing bubble, Detroit's home values remain very low compared to similar homes in the rest of the state and suburbs surrounding the city.

Denver saw a steep decline in new construction for a few years during the recession, corresponding with reduced market demands for new housing, similar to Detroit. But as the national and regional economy strengthened, demand for homes returned and drove up prices. Denver also became a hub for a niche industry: marijuana, furthering housing demand as people from around the country relocated to the Denver area (Bernardo 2015). Detroit has not seen this type of recovery.

Detroit's decline began decades before the most recent housing crisis and it is saddled with tens of thousands of properties that have fallen into disrepair, driving down surrounding property values (Martelle 2014); (LeDuff 2013). So even as the city draws more people in recent years, they are largely flocking to three areas of concentrated investment: Downtown, Corktown, and Midtown (Davey 2014).

The living structures in these places are mostly apartments, condominiums, and townhouses. There's nothing inherently wrong with this type of housing, but it does represent a real possibility that Detroit may need to consolidate its population near its commercial center in order to productively grow in the coming years. Cities around the country have realized that a denser population lends to the development of walkable cities with restaurants, retail, groceries, and entertainment made accessible without a car. These environments have attracted businesses back into the cities from the suburbs in places such as: Durham, NC, Indianapolis, Oklahoma City, Chicago, and even Detroit (NSG Detroit 2013).

However, Detroit has traditionally been a city of single family homes and many of them remain liveable, but are not selling because of location, condition of surrounding properties, high tax-to-value ratios, inaccurate tax assessments, neighborhood crime/perception of crime, or lack of access to credit from traditional lenders (Martelle 2014); (Bomey 2016); (Davey 2014).

An innovative program has been set up to begin addressing this last issue. It's called Detroit Home Mortgage and it allows the participating banks to grant mortgages for the full value of a home including cost of repair or renovation. This may solve the problem many otherwise qualified applicants were facing in Detroit, who were not granted mortgages because appraised values of the home were too low relative to the proposed mortgage amount (Wilson 2016).

This program grants a mortgage for the appraised value, plus an additional "soft" second mortgage to cover the cost or value of renovation work. The second mortgage value can be up to \$75,000. This program is supported in part through funding from the Community Reinvestment Fund, the Kresge Foundation, and the Ford Foundation, the City of Detroit, the Michigan State Housing Development Authority, and local nonprofits. This foundational and public support is necessary because it really is a gamble to finance these purchases for a number of reasons: the new owners might not follow through with all the needed repair work to bring the home up to code, the home might not build enough equity to cover the cost of renovation if the surrounding area doesn't also improve, and they are still subject to the same risk of default as any other mortgage in a risky environment. If the asset being used as collateral--the home, won't be worth enough money to cover the loan in case of default, then there's very little incentive for a bank to finance that asset. The philanthropic funding mitigates this risk and allows the banks to responsibly grant more loans.

It is a revolutionary pilot program that if successful, will allow 1,000 more people to get mortgages than would not otherwise under current appraisal and lending conditions. 1,000 mortgages might at first not seem like all that much in a city of 700,000, but when you consider that only around 500 mortgages were granted in the city of Detroit in all of 2015, it becomes a much more substantial figure in moving Detroit toward normalcy in the housing sector (Wilson 2016).

Some of the country's largest mortgage lenders have started offering products targeted at lower income clients that could potentially lead to more

traditional financing options for Detroiters. Within the past year Wells Fargo, Bank of America, and JP Morgan Chase have begun offering 3% down payment mortgages. Quicken Loans has unveiled a 1% down payment mortgage, and Fifth Third Bank has rolled out a zero down payment mortgage. Each of these products has a lender-supported grant component such as Quicken's 2% grant and Fifth Third's 3% grant to give borrowers a minimum level of equity on the loan. These mortgage products are structured in partnership with federally-backed Freddie Mac's Home Possible Advantage program, which requires a 3% down payment (Freddie Mac 2016).

The loans come with eligibility restrictions that, while necessary to prevent a slide into the predatory subprime lending that contributed heavily to the recent housing and financial crises, will likely exclude many potential Detroit homeowners (Lewis 2010). For example, Quicken Loans' program requires a FICO score of 680 or above, coupled with a debt-to-income ratio of 45% or less (Lane 2016). There are also income restrictions, unless the home is in a designated underserved area. The loan cannot be used to refinance a home loan. Loans are limited to single unit homes and cannot be manufactured homes such as a mobile home. Some products offer lender-paid mortgage insurance premiums. Adjustable rate mortgages, or ARMs, are not permitted under the Home Possible Advantage program. And finally, for first time home buyers, prepurchase housing counseling is required (Freddie Mac 2016).

While it is far too early to determine their impact, these mortgage products seem to have made an effort to address many of the complex issues in subprime lending. However in an area such as Detroit, offering 30 year mortgages with so little money down might just lead to more foreclosures in the years to come. It might well come down to the details in the underwriting of the loans. While ARMs are excluded, the interest rate still matters. Borrowers approved for mortgages on loans with a high loan-to-value (LTV) ratio most often pay more to offset a portion of the increased risk taken on by the lender compared to a borrower with a low LTV

loan. So it costs more to borrow the money the higher the LTV ratio. If interest rates are too high, likelihood of default increases because equity becomes harder to build. This is how many households ended up underwater on their mortgages leading up to the housing crisis.

Another factor that will affect the success rate of these mortgage products is the specific details that each lender qualifies as debt and income. If student loans, auto loans, medical debts, or financed furniture and appliances, for example, aren't included in the debt-to-income ratio when approving the loan, the borrower may be more likely to default. The same is true for income. If any sort of temporary or sporadic income is included in the calculation, it may be inflated to make it appear as though the buyer can afford more than they really can. All of these factors must be considered when honestly attempting to grant responsible credit access to low and moderate-income borrowers.

All of the loan products described above might help many of the incoming migrants to Detroit, mostly the young, educated, and childless, to purchase a home in the city. They offer less opportunity for those low-income, less formally educated, Detroiters with families, or the elderly, to keep or purchase a home. It is for this reason that financing options, coupled with zoning law and building code changes, need to be available for alternative mortgages such as houses valued less than \$50,000, tiny houses, manufactured or mobile homes, and earthships or other natural building material homes, as well as refinancing options that reduce the economic burden on the borrower while meeting the needs of the lender. Further sections of this plan will go into greater detail on the needs these proposed options might meet in the community and possible strategies for enabling them.

Historic Preservation and Green Renovation

Much like a desktop computer allows easy upgrading and repair of worn out components when compared to a sealed MacBook laptop, existing structures can be refurbished using less materials than new construction, as well as keeping excess

waste out of landfills (Minter 2013). Despite the widespread blight and daily demolition of homes, Detroit still contains many hundreds of structures that are possible candidates for historic preservation or green renovation.

The National Trust for Historic Preservation supports many initiatives in the city and offers competitive grants for preservation projects. Detroit's own Preservation Detroit works specifically on historic preservation initiatives within the city. The city's corporations have shown an interest in funding preservation projects as well.

HGTV's Nicole Curtis has brought national attention to the potential benefits of restoring or rehabilitating historic Detroit homes. On her popular television show *Rehab Addict* she renovated the Ransom Gillis house, built in 1896 in Detroit's Brush Park neighborhood. Detroit-based Quicken Loans financed the project and its subsidiary, Bedrock Real Estate has plans for further housing development and preservation. Curtis' renovation set the stage for further preservation and development in that neighborhood, which saw many of its beautiful homes fall into disrepair over the preceding decades.



Ransom Gillis post-renovation, 2016. Image credit: HGTV.com

Green renovations are an alternative for those looking to rehabilitate a property with outside funding assistance, especially for those looking to do so in a way that minimizes the environmental impact of their renovation activity. Chicago-based Elevate Energy offers homeowners and businesses affordable energy audits and efficiency consultations. A representative from the organization will visit the home or business and offer strategies and resources for reducing energy consumption or implementing renewable energy into the structure. The company helps clients secure funding and will sometimes even donate energy efficient lightbulbs and power strips to low-income households. Elevate Energy currently only operates in the state of Illinois, but there is a similar resource in Detroit.

EcoWorks is a Detroit-based community development nonprofit that works specifically on sustainability issues. EcoWorks also offers residential and commercial energy efficiency consultations as well as public energy consumption education classes. Additionally, the organization operates a Youth Energy Squad, where participants engage in service learning projects to further expand their knowledge of sustainability and energy efficiency. EcoWorks is also the parent company for the deconstruction firm, Reclaim Detroit mentioned earlier in this report.

If EcoWorks could draft a memorandum of understanding with Elevate Energy, the two organizations could share knowledge and better serve each of their respective communities. Elevate Energy has more programs directly focused on helping individual homeowners and renters make energy efficiency upgrades to their housing. Elevate Energy also has experience drafting legislation to ease the process of green retrofits in Illinois. In a similar vein, EcoWorks has valuable knowledge as an incubator of sustainability-focused businesses and Elevate Energy could expand its impact by starting a similar initiative. Cross-state and cross-community partnerships need to be given more attention instead of each place operating in a silo.

Mortgage Assistance Programs for Public Employees

The state of Michigan passed legislation in 1999 that eliminated the city of Detroit's, and all other cities', residency requirement that all police officers live within the city limits. By 2011, over half of the city's police force lived outside Detroit. Project 14, proposed under Mayor Bing in 2011 was an incentive program that aimed to draw more Detroit police officers back to live within the city limits. The effort was primarily targeted at the Boston Edison and East English Village neighborhoods. These are historic and traditionally stable neighborhoods. Project 14 was generous in its financial incentives for housing, offering police officers a mortgage with \$500-\$1000 monthly payments and a forgivable down payment, along with a federal renovation grant up to \$150,000 to repair any damages to the homes (Chapman 2011).

Detroit neighborhoods would greatly benefit from attracting these community members back into the city, but too many officers still felt the city was unsafe in 2011 or refused to move for other reasons. Project 14 drew few officers back into the city and when the municipal reins were handed over to the state-appointed Emergency Manager, Kevyn Orr during Detroit's bankruptcy process, the program was dropped (Bomey 2016); (Chapman 2011). Perhaps after the concerted efforts to remove blight and redevelop the greater downtown area, the program could be reinstated in 2017, with a more effective set of incentives targeted not just toward police officers, but firefighters, first responders, teachers, and other public employees as well. With the decline of the pension for public servants, housing assistance programs could fill some of that gap.

There is a precedent for such a program. The US Department of Housing and Urban Development (HUD) has a federal mortgage assistance program called "Good Neighbors Next Door." Through this program, any full-time police officer, firefighter, or K-12 school teacher, public or private, can qualify for 50% off the HUD-appraised value of a home. So if the home is valued at \$200,000, HUD will

cover \$100,000 and the applicant will owe the remaining \$100,000 provided they live in the home as their primary residence for a 36-month occupancy period. HUD is able to offer this by having applicants sign a second mortgage for the value of the discount in case of default or breach of the terms of the agreement. Should this occur, the owner is on the hook for a prorated value of the discount. However, if payments are made and the home is occupied for at least 36 months, then the second mortgage is forgiven (HUD 2016).

In March of 2015, Mayor Duggan and the city undertook a second effort at attracting city employees back into Detroit with the creation of a 15-year fixed rate mortgage program in partnership with Flagstar Bank. This new product is targeted at all full-time city employees, retirees, and their immediate families, and offers a 50% discount on homes purchased through the Detroit Land Bank Authority. Additionally, the loans can be written for up to 300% of the home's loan-to-value ratio to cover needed/desired renovation costs (Johnson 2015). There are minimum credit score requirements and maximum loan limits, 620 and \$417,000 respectfully, and Flagstar Bank will hold all of the loans. The program will also utilize prepurchase housing counseling and require all applicants complete it through Southwest Housing, an agency in Detroit. This program is a step in the right direction for attracting public servants back into the city in which they serve.

Moving forward however, the program should be expanded in scope and opportunity. This author would call the new program **The Rendezvous Project**. Mayor Bing's program from 2011 targeted specific neighborhoods for police officers and first responders to relocate. The Rendezvous Project would open all neighborhoods within the city limits to eligibility. Mayor Duggan's program only offers homes for sale through the Detroit Land Bank Authority. Rendezvous Project applicants could choose any home in the city under \$400,000. HUD's Good Neighbor Next Door program base their discount off of the HUD-appraised value of the home. However, Detroit is unique in that accurate home values are difficult to obtain and many homes are priced above their listed assessed values.

For this reason Rendezvous Project mortgages would utilize a similar strategy of both HUD and the Flagstar Bank program. Second mortgages would be issued for up to 300% of the assessed loan-to-value of the property for renovations. However this program would expand the number of partner lending institutions to offer more flexibility for homebuyers. Similar rules would apply to prospective applicants with a few adjustments. All full-time police officers, firefighters, first responders, K-12 teachers, city employees, retirees and their immediate family members would be eligible to apply. Only individuals or families can qualify. No corporations, LLC's, joint ventures, or other legal entities are eligible for the program. All applicants would be required to complete prepurchase housing counseling through any HUD-approved housing counseling agency. All mortgages would be 15-year fixed rate. The basic idea behind this is to offer a fair deal to both the homebuyer and the mortgage holder, but to also set the homebuyer up for success. A 15-year mortgage keeps the buyer honest about what they can afford and eliminates a lot of the risk associated with the subprime loans that contributed to the financial crisis of 2008. There would be a clawback mechanism in place for instances where borrowers fail to make payments or honor the 36-month occupancy requirements, in which the borrower would be responsible for a prorated amount of the discount received on the home.

The Rendezvous Project would have a three year application period. At the conclusion of the program, its successes and failures would be evaluated by participating lending institutions who would determine if the program should be renewed for another term. It is the hope of the program to attract and retain Detroit's dedicated public servants and their families that would strengthen neighborhoods throughout the city.

New Construction?

Much of the strategy thus far has focused on renovating or removing the current housing stock. But what about new construction?

Some areas are seeing new construction for the first time in many years. Most notably, the historic Brush Park district, along the riverfront, and Woodward Avenue where new luxury homes and condominiums are being built (Cannon 2016). There are a number of luxury apartments being built in renovated skyscrapers and warehouses in and around the downtown as well.

However, new and affordable housing development has largely taken a back seat, especially downtown. Apartment buildings in and around downtown that once housed seniors or low-income tenants are being redeveloped in ways that either price out or phase out current residents in favor of market-rate housing. Detroit has no prohibitions against discrimination based on form of payment, such as Section 8 housing vouchers or social security. One such example is the Elmwood Park Plaza building and much of the surrounding neighborhood.

One strategy that was tried before the recession that has more or less failed to deliver anything outside of a handful of newer units of affordable housing, was scattered new developments such as Maxwell Place, a 30-unit low-income housing structure completed in 2007 (Ferretti 2016). Part of the reason it has failed is that the new construction was sited in an area still dealing with unremediated blight, public dumping, and untended vacant lots. In order to facilitate successful new development of both market-rate and affordable housing, the neighborhoods need the tender loving care that has been neglected for decades. It is all connected and it must all be done in order to effectively move forward with new construction.

A strategy currently being tested is that of non-profit developer, Develop Detroit concentrating its single family and multifamily housing development efforts in neighborhoods outside of the Downtown, Midtown, and Corktown areas. The organization is new and its success will depend on the outcome of a theory that Develop Detroit will act as a catalyst, developing in areas that for-profit developers

might not be willing to invest in, in hopes that their projects will attract further investment from the private sector. The organization received a start up grant from JP Morgan Chase and hopes to transition to financial independence through their own real estate development activities (Pinho 2016).

One organization testing the waters can pave the way for multiple non-profit developers to emerge. The advantage of these organizations, if they can secure adequate funding from outside sources, is that they can afford to be more mission-driven than profit-driven at the beginning stages, and can incorporate more mixed-income developments into their portfolio. If a handful of them were to concentrate on neighborhoods with the greatest need, assuming the risk of being “first” to invest in an area of prolonged disinvestment, it makes it more likely that other investment will follow.

Zoning

Archaic and restrictive zoning codes are a continued hindrance to Detroit’s revitalization. Michigan State University found that poor zoning laws can actually be worse than having no zoning laws at all (Schindler 2012). The city has taken steps toward addressing some of the simplest concerns, but there is more work to be done. An example of movement in the right direction is a recent provision that allows homeowners to more easily acquire a vacant lot adjacent to their property. The city has removed many steps in the process to encourage lot purchases. Allowing this increases the likelihood that the land will be maintained and the property taxes will be paid.

There are other amendments to the zoning that would benefit the city and Detroiters. Two housing specific solutions that would require the city to amend zoning law in order to facilitate these innovative designs are: tiny houses and earthships. The ways in which the zoning code would need to change are outlined in each section below.

Tiny Houses

A tiny house is often described as any house smaller than 500 sq. ft., but more generally includes any unconventionally small home (Kahn 2012). Tiny houses have grown in popularity over the past five or so years as a way to downsize, live more sustainably and in a more economical way. They are most notably popping up in the countryside and in small towns outside of metro areas with high property values and dense populations such as San Francisco, Seattle, and Portland, OR. *Outside* because most municipal zoning codes prohibit their construction within cities. Unlike traditional homes, the biggest barrier to tiny house proliferation isn't access to financing, but legality due to zoning restrictions on lot and unit size.

Modern tiny houses can range from little cottages on wheels to homes on solid foundations to cabins, refurbished shipping containers, tree houses and hobbit holes. Some people build and design their own tiny homes. Some build them from designs they've purchased. And others buy them as a finished product just like a regular house. Tiny houses can be built from any material any other residential structure is built with, but are most often built with a combination of conventional building supplies, salvaged pieces, and/or natural building materials such as timber, straw bale, cob, clay, etc (Snell & Callahan 2005); (Williams 2014). A person can build a standard tiny house with relatively simple contemporary carpentry methods. Though it can take many hundreds of labor hours on the part of the owner, the financial cost of ownership is much less than a conventional home, thousands to tens of thousands as opposed to hundreds of thousands of dollars, making this an excellent opportunity for those unable or unwilling to purchase a home through a standard 30-year mortgage.

It is not difficult to see how a tiny house addresses environmental and economic sustainability issues as well. In a world of finite natural resources, smaller space means less resource consumption as they are more efficient to heat and cool than much larger homes. The insulation materials and methods are often the same

as conventional homes and thus rely less on fossil fuels to maintain comfortable temperatures. Some tiny house owners take it a step further and install solar panels to take care of their electricity needs. Coupled with electric or wood fire heating and cooling systems, this step can sometimes remove tiny houses from conventional power grids. Such a system, if managed properly, can also feed energy back into the grid when the house isn't using it. This reduces demand on the utility provider or allows them to provide energy to additional households without increasing emissions. It should be noted that a smaller space generally means less physical accumulation of things as well (Kahn 2012);(Williams 2014).



Solar and propane powered shipping container tiny house on an urban farm in Detroit, 2016.
Image credit: Ryan Hebert

City officials around the country have taken a conservative stance on the progression of tiny houses because of fears of negatively impacting surrounding

property values or negative reception of these structures from the community. The same arguments are used to fight every other type of affordable housing development in cities around the country. It is one reason why mobile homes are often relegated to segregated areas on the outskirts of a city. In Detroit, minimum square footage requirements for residential properties should be lifted or reduced to accommodate tiny house designs. The same is true for minimum lot sizes because a tiny house owner might not need or want a lot zoned for a two-story, 3,000 sq-ft home. Smaller lot sizes and sensible planning could allow adjacent tiny house properties on reduced lots, thereby avoiding some of the concerns about preserving neighborhood character and appearance.

Detroit has enough areas where any development would increase surrounding property values and is thus a perfect candidate for tiny house development. The laws need to be amended to accommodate a segment of the population for whom large single-family homes are no longer the primary driver of homeownership. Detroit already appears to be recruiting this population by way of a sharp rise in construction of apartments and condominiums within the core of the city. However, there are those who want to live in smaller spaces, but without neighbors above or below, a landlord, or a condo association. For these people, tiny houses represent freedom and all of the positive things that homeownership brings. Even as rental units, tiny houses offer many of the same advantages of an apartment, but without the hassle of sharing floors and walls with strangers.

The only major US city to formally allow the construction of tiny houses within city limits is Philadelphia. That city has a tradition of trinity houses, a three-story row house with one room on each floor, built two centuries before the current movement gained momentum (Nosowitz 2016). Perhaps because of the existence of tiny houses throughout its history, Philadelphia residents and officials were more receptive than other large cities have been.

There are a number of smaller towns and a handful of counties that allow tiny houses. The first municipality to officially proclaim itself tiny house-friendly

was the 1,300 person, west Texas town of Spur. In July 2014 the Spur city council voted to remove minimum foundation square footage requirements to legalize tiny house construction. Like many small towns in rural parts of the country, Spur's population was declining. By seizing an opportunity to welcome a niche market for housing, the town hopes to reverse the trend of population decline (Musico 2016). 3,000-person Walsenburg, Colorado and 64,000-person Pulaski County, Kentucky are among the other places that currently allow tiny house construction (Walker 2016).

Tiny houses serve two major purposes from which Detroit would benefit. First, they are a form of affordable housing for those unable to comfortably afford more traditional housing. This could allow more renters to make the move to ownership. Additionally, tiny houses attract exactly the sort of young, educated, and also retired and experienced people that the city is hoping to draw in from around the country.

The concept of a starter house or a downsized retirement home is nothing new. All that has happened is that the definition has shifted to include homes of smaller square footage. The zoning laws need to shift along with the times. At the end of the day, those concerned about property values and safety need to consider that every new tiny home constructed is a new taxable property whose tax contribution is used to support public schools and services.

There are a number of ways to accommodate tiny houses without simply opening the floodgates and allowing them to be built anywhere. In Detroit, certain sections of vacant or under-occupied land could be zoned specifically for tiny house development. The city could grant prospective owners and developers a tiny house permit to build in designated areas of the city. In the way that "Chinatowns" have formed in cities throughout American history, "Tinytowns" could offer a unique neighborhood character.

As of the first half of 2016, Detroit-based Cass Community Social Services is piloting a program, using extra land owned by the organization to construct a tiny

house neighborhood of rent-to-own homes for those currently experiencing homelessness. Cass Community Social Services is attempting to fund the project almost exclusively through crowd-sourced fundraising. While it is reasonable for them to raise a portion of the funding using this method, projects like this have difficulty securing enough funding through crowdsourcing, especially when attempting to raise amounts as high as \$100,000. Crowdsourcing can be a way to demonstrate community support for an idea, but something this innovative in Detroit needs the support of larger entities such as the city itself, foundations, or private businesses.

Community development projects of this magnitude cannot happen in a silo anymore. It's too expensive and funding for such organizations is insufficient to complete and/or sustain the project. Collaborative partnerships are the keys to unlocking the potential in these ideas. JP Morgan Chase's philanthropic commitment could potentially support a project such as this.

JP Morgan Chase, in partnership with the Detroit Land Bank Authority, has committed \$25 million to combat blight in Detroit as part of a \$100 million, five-year investment plan on JP Morgan Chase's behalf. \$5 million dollars of the total was allocated to directly supporting the work of the Detroit Land Bank Authority. \$1 million of their investment supported the Detroit Blight Removal Task Force and their Motor City Mapping project, an effort to track and map all of the blight in the city using mobile mapping technology that residents can update to reflect the most current status of properties. It is within the scope of this initiative to increase access to homeownership, and so these funds could potentially be used for tiny house initiatives in Detroit

In the same way that fuel-efficient, affordable, 4-cylinder hatchbacks can act as either entry-level automobiles for those on a tighter budget or as a simpler alternative for those of higher means, tiny houses are suitable options for any person, or persons, across a broad range of economic circumstances.

Earthships



Earthship, Taos, New Mexico 2015. Image credit: Ryan Hebert

Earthship Biotecture is an innovative construction and design company headquartered on the outskirts of Taos, New Mexico. The company was founded by architect Michael Reynolds after he began experimenting with methods of home construction that would better incorporate waste products and traditional building materials into the design than what other designs at the time offered. For the past 40 years, the Earthship company has been improving upon these original ideas, resulting in nearly completely self-sustaining homes made up of a high percentage of recycled, repurposed, and local materials (Kinney and Dodge, 2015).

A standard Earthship home requires much less raw building materials than a typical timber frame home. In fact, many of the home's crucial construction elements are materials that would otherwise end up in landfills or recycling facilities. For example, the 2,300 square-foot, three-bedroom, two-bath *Kinney*

Earthship built in southern Alberta, Canada utilized 800 old tires and approximately 12,000 aluminum cans in its construction (Kinney and Dodge, 2015).

Due to the adaptable nature of the designs, the homes can be replicated in virtually any climate and can serve a wide range of socioeconomic circumstances. These homes collect and treat their own water, produce their own electricity, treat their own sewage, regulate their own temperature, improve local soil & air quality conditions, and even grow some of their own food.



Earthship Interior Garden, Taos, New Mexico, 2015. Image credit: Ryan Hebert

What started in the desert of New Mexico has now been replicated at least once in every state in the United States, most of the provinces of Canada, at least ten European countries, and in recent years in India, Sierra Leone, Malawi, Mexico, Guatemala, Jamaica, Haiti, northern Canada, and the Philippines.

Standard zoning laws generally restrict or prohibit the construction and utility provision techniques involved in Earthship construction. Earthships have met Universal Building Code guidelines since 1998, but many American cities have further guidelines and restrictions. Because of this, the vast majority of Earthships in the United States have been built on private land outside of the jurisdiction of cities, such as The Greater World Earthship Community roughly 15 miles outside Taos, New Mexico.

However, in recent years Earthship projects have been completed or proposed in closer proximity to cities and towns. A 400-acre area just east of Colorado Springs, Colorado has been designed by real estate developer Dave Hatch as “Earthship Village Colorado” and is set up to host 65-75 sustainable homes, prominently featuring Earthship designs. The village will also allow for other aspects of sustainable living such as raising chickens, beekeeping, and small scale farming. In working with the county to allow the construction of this type of home, the developers had to agree to abide by the county’s restrictions against residential properties harvesting their own water. With this concession in place, the necessary permits were granted (Cloos, 2015).

Philadelphia is pioneering the urban Earthship movement by authorizing the first full-size Earthship within a major city. *Earthship Philadelphia* began construction in West Philly in September 2015. The project has been delayed for funding reasons, but the completed structure will serve as a public education facility for all things sustainability related. Not long after *Earthship Philadelphia* began construction, another Earthship project broke ground in Philadelphia: *One Art Community Center*. The two groups have struggled to complete their projects, but if more funding could be secured, the legal battles have been won and the way paved for future sustainable housing projects (Geringer 2015).

On a smaller scale, a group of sustainable home enthusiasts began a ‘proof of concept project’, a 120 square-foot Earthship structure in Seattle, Washington in the

summer of 2014. The group got around zoning restrictions by building the structure as a shed on a private lot (Earthship Seattle, 2015). This sidestepping might not be necessary to bring earthships to Detroit.

The city has already dabbled in allowing Earthship construction with the approval of a small Earthship structure built by Priest Elementary-Middle School in southwestern Detroit in 2013-14. The miniature Earthship was built on the front lawn of the school and now serves as an outdoor classroom (Parson, 2015).

In an era when utility services throughout parts of the city are strained due to the infrequency of use and improper population density, an earthship home provides its own potable water without the need to connect to a municipal water supply. Earthships collect and treat their own water through a cleverly engineered system of drinking water, gray water, and black water. This system is designed to assist in food production, air quality and reliance only on what water is naturally available.

After the last major earthquake hit Haiti a few years ago, Earthship developed an extremely affordable, quickly constructible home model called the Simple Survival Model. This home was originally designed for international disaster relief, but after the successful construction of the Haiti house, the company began working on applications for those seeking a home without the incredible burden of a traditional 30-year mortgage.

Detroit has a prime opportunity to offer incentives, ease regulations, and streamline the permitting process for construction of alternative homes for people who want to live in these areas. The city's experimentation with "Pink Zone" permitting, where zoning restrictions are suspended, in its Department of Planning and Development for Businesses could open the door for innovation in housing as well. Even state-supported, low-income housing could be constructed using sustainable methods. What sort of precedent would that set? The Earthship Biotecture model is one of a number of alternative housing models attempting to

address a wide variety of environmental and social issues in ways which are also economically efficient. Detroit's recent agricultural ordinance could facilitate this and other types of alternative housing. The city has already paved the way for these initiatives through allowing the construction of alternative housing on formerly vacant land, such as the solar and propane powered shipping container home at Food Field Detroit; pictured in the **Tiny Houses** section above.

Property Taxes

Detroit needs to start fresh with property tax levies and forgive all unpaid properties up to the previous tax year. Detroit has the highest property tax rates in Michigan at a time when real-world property values are incredibly low (Wilkinson, 2014). Revising this would allow those struggling to pay backlogged property taxes a chance to save their homes. It also opens up additional possibilities for people to purchase homes, safe in the knowledge that they will not owe more than one year's worth of property tax. The more homes occupied, the more likely the property taxes will be paid moving forward. The more stable the tax base becomes, the more reliably the city can predict its annual tax revenues.

Property taxes also need to be lowered considerably to reflect the reality of the people living in a less populated, economically depressed, city. Wayne County has a precedent for this in its yearly property auctions, where any property not sold on the first day of the auction has its back taxes forgiven (Wile, 2013). There's no reason the city and county couldn't run a one or two year program of tax forgiveness on blighted properties to encourage buyers with a more transparent purchasing process. The status quo of taxing a low income population is not a sustainable way to fund a government.

Housing Counseling

The city of Detroit could benefit tremendously from increasing support for the work of US Department of Housing and Urban Development (HUD)-approved housing counseling agencies. A housing counseling agency is a nonprofit organization whose counselors provide education to prospective home buyers, tenants, landlords, homeowners, and those facing foreclosure or eviction. These services are offered in the form of one-on-one or group sessions covering topics such as: prepurchase, postpurchase, resolving or preventing mortgage delinquency, foreclosure mitigation, fraud prevention, financial literacy, fair housing/discrimination, renter's rights and responsibilities, homelessness prevention, and home maintenance.

Counseling beneficiaries in Detroit could perhaps benefit the most from home maintenance counselling, followed by counseling for those facing foreclosure or eviction. Much of Detroit housing research has focused on removing blight, rehabbing or building new homes, amending zoning, and getting people into those homes. However something of equal, if not greater, importance is assisting those who are on the brink of losing their homes in keeping them. Detroit's economic realities, coupled with its relatively high property taxes, have caused thousands of households to fall behind on property taxes. Property tax foreclosures are exceedingly common in Detroit. The national housing crisis is most often associated with households getting underwater on their mortgage, and that has also occurred in Detroit, but as home values have recovered somewhat since the darkest days of a handful of years ago, unpaid property taxes remain.

Wayne county had nearly 30,000 tax-foreclosed properties up for auction in 2015-16 and 10,000 were still occupied by homeowners owing three or more years' worth of back taxes. These numbers are down from 67,000 properties that were served foreclosure notices in the fall of 2014. The reason for the exceptionally high number of occupied homes facing foreclosure was that the county ended a policy of avoiding foreclosure on properties with tax debts less than \$1,700 (Kurth

and MacDonald 2015). While the county has perfectly justifiable reasons for foreclosing on homes that owe tax debts, namely that the city and county cannot continue to provide services without the income needed to provide them, there is an economic and social case to be made for helping as many as possible to keep their homes, especially if delinquencies are less than \$1,700.

Mass foreclosure effects neighborhood stability. In a city where habitable homes quickly become uninhabitable when left vacant, keeping homes occupied and families stabilized has multiple social and economic impacts. Costs of demolition on homes that do not sell at auction can run as high as \$10,000-\$16,500 each. Housing counseling can serve as the intervening force by which debt settlements and payment plans can be reached. Housing counseling can counter feelings of resentment and hopelessness by giving homeowners facing foreclosure additional knowledge with which to keep their home.

According to the HUD housing counseling website, there are 12 HUD-approved housing counseling agencies within the city. For a comparison, the city of Chicago, four times the size, has 36, and Cleveland at half the size, has 11. Detroit residents experience a wide range of circumstances that complicate homeownership such as: real estate speculation, predatory lending, lack of access to standard mortgage services, high property tax-to-home values, poor public school and transportation systems, mass foreclosures from mortgage and tax delinquency, and a large stock of aging homes in need of renovation and repair to pass building inspections. In each of these cases, housing counseling has potential to be an effective tool in streamlining the process of becoming a successful renter or homeowner in the city of Detroit.

A summary of research published by HUD in December 2014 as well as a report published by the Federal Reserve Bank of Philadelphia in April 2014 each cite a number of studies demonstrating the effectiveness of housing counseling services for improving metrics of homeownership, mortgage delinquency resolution, client credit scores, and rates of homeownership. For instance, one

study reviewed outcomes from 240,000 loans that received counseling services under the National Foreclosure Mitigation Counseling (NFMC) program and found that clients who attended counseling were 2.83 times more likely to receive a modification of their loan and were then 70% less likely to redefault on the modified loan. The Federal Reserve Bank of Philadelphia study showed total debt balances for control homeowners decreased by \$1,447 over a five year period, while the total debt for counseled homeowners who attended one-on-one sessions decreased by \$3,109. The difference between homeowners attending one-on-one counseling and control participants was \$1,662 (Smith, M. and Daniel Hochberg and William H. Greene 2014). While these represent just a handful of studies and are hardly exhaustive, they build a strong case for the effectiveness of housing counseling.

Detroit knows better than most places the impact of widespread foreclosure and flight of its residents to suburban communities or other cities such as Chicago or New York. Housing counseling strengthens the community by helping homeowners, landlords, and tenants to utilize all of the tools at their disposal to increase resiliency to shifts in economic circumstances, and to be able to purchase, maintain, or retain a home or reliable rental housing.

There is an organization based in Chicago, IL called Housing Action Illinois (HAI) that is, among other things, a HUD-certified Housing Counseling Intermediary. Federal housing counseling funds are distributed to two types of counseling agencies: local housing counseling agencies (LHCAs) and affiliates of housing counseling intermediaries. In its role as an intermediary, HAI provides pass-through funding from HUD as well as training and technical assistance to housing counseling agencies throughout the region. Training and technical assistance comes in the form of classes on client management systems, individual train-the-trainer courses for housing counselors, consultation for HUD compliance, and general operational assistance.

HUD is encouraging counseling agencies to operate through intermediaries and is rewarding intermediary affiliates with higher fund allocations than if they

were to apply as local housing counseling agencies. The reasoning behind this is due to the added advantages of a coalition of agencies as opposed to a single local agency. In addition to the potential financial incentives for joining an intermediary, affiliated agencies have increased access to training for their housing counselors, quarterly reporting assistance, and a network of regional agencies for networking and referral of services.

Housing Action Illinois' housing counseling intermediary began in 2014 with certification from HUD. In 2015 it formed an affiliate network of 12 housing counseling agencies, with 10 in Illinois and 2 in Indiana and \$307,000 in funds to distribute to its affiliates. In 2016, the network was expanded to 26 affiliates with 21 in Illinois, 4 in Indiana, and 1 in St. Louis, Missouri and the funding award expanded to \$698,000.

Housing Action Illinois has made a commitment to reserve its services for only Midwestern housing counseling agencies. HAI could, and should, expand its affiliate network to serve counseling agencies in Detroit. As the geographic footprint of the affiliate network increases, it becomes more feasible to include Detroit agencies. HAI already has an affiliate in Fort Wayne, IN, not far outside the metro-Detroit region. Affiliation with Housing Action Illinois would give Detroit housing counseling agencies access to greater funds, training & technical assistance, and a wider network of experience and support across the Midwest.

Wayne County and the city of Detroit can recommend HUD-approved housing counseling agencies to those facing foreclosure or eviction when they serve the foreclosure or eviction notices. A recent change in legislation allows the county to retroactively lower interest rates on tax debt to 6%. This is an important first step towards reducing the burden on homeowners and forming a realistic framework for them to pay off the tax debt. However, if payment plans aren't realistic for homeowners, the success rate will likely be low. The payment plans (multiple) should offer options in the way of student loan repayment plans. Those at the bottom of the socioeconomic spectrum could qualify for tax debt repayment

plans of no more than 10% of their monthly income. Monthly income in this instance would include all sources of income, including social benefits. The goal is to pay off the debt without creating undue hardship on the homeowner, but also to actually pay off the balance in full. If interest rates on the debts are lowered to 6%, these low-income repayment plans have a chance to succeed for both parties. The county currently has payment plans for as little as \$150/month, but that won't work for everyone. If a homeowner currently earns less than \$1,000 per month, that represents at least 15% of their monthly income, not accounting for other expenses and debts they may owe. Increased flexibility is required in the tax foreclosure process. Housing counselors can serve as the intermediary on behalf of both the homeowners and the debt collectors.

Vacant Lots

The vast tracts of open space throughout the city of Detroit could become so much more. Some of these are sections of former neighborhoods or small businesses. Some are former parks, industrial sites, schools, or retail locations. As efforts to eradicate blighted structures have been sweeping and impressive, efforts to clean up and/or repurpose vacant lots all over the city need to be just as robust. Individuals and grassroots collectives, such as the Detroit Mower Gang, have taken on basic lot/park maintenance in the city's absence. The city of Detroit owns far too many vacant lots to maintain in an economically responsible way. As a result, the sites are subject to illegal dumping activity and many are overgrown, unsightly, and potentially unsafe. Citizen volunteer groups such as the aforementioned Detroit Mower Gang have taken it upon themselves to cut the grass at a number of parks and vacant lots around the city to allow children a safe space to recreate. It's time for this public service to be restored. Over 6,000 vacant lots were identified by the Detroit Blight Removal Task Force as in need of serious attention in 2014.

As it stands, a very basic level of lot maintenance consisting of mowing one to three times per year is projected to cost the city \$25 for each of its approximately

45,000 lots (huduser.gov 2014). Detroit has relied too heavily on private donations and volunteer labor to offset some of these costs. Instead of simple maintenance with vacant lots acting principally as a drain on the city's financial resources, lease or sale of lots, or special permit grants for various uses, could serve as an additional funding mechanism for blight removal activities and neighborhood development s.

A proactive strategy for vacant lot use that Detroit has instituted so far is a program that streamlines the process of homeowners acquiring vacant lots adjacent to their properties. Before this program was implemented, that process was overly cumbersome. This plan proposes that the city continue to offer options for residents to utilize vacant lots. It also proposes that the city begin leasing or selling vacant lots to residents, private industry, and nonprofit organizations to allow a wide variety of uses for these spaces. This plan does not advocate selling city-owned park properties. It also does not advocate the sale or lease of large tracts of land to private industry.

Over the past few years, over 1,400 lots have been developed into a community or private garden (Dwyer 2014). Urban agriculture and community gardens have played a valuable role in the community as a source of local fresh produce, decorative plants, trees, nuts, and eggs. They also provide educational opportunities for students of all ages to learn where food comes from, how animals are raised, and how agricultural businesses operate. Internship, volunteer, and even job opportunities through urban agriculture can teach values and discipline as well as instill pride in one's work and a sense of duty. For these reasons, agricultural repurposing of vacant land should be facilitated by the city in a way that respects surrounding communities, but doesn't place undue obstacles in the way of prospective urban agriculturalists.

A basic problem with many of the vacant lots around Detroit is the cost of soil remediation. These lots are known as *brownfields*, a term describing an area where future use is affected by environmental contamination. Removing the affected soil and filling in the space with new topsoil is costly in both time and labor.

Additionally, there is the issue of where to dump the contaminated soil after it has been removed, as anywhere that soil is relocated would then also be contaminated. A possible solution could be that the city lease brownfield lots on a yearly basis for the growing of crops such as pennycress “weeds” to act as a soil remediation crop on lots damaged by heavy metal contamination. Pennycress has the added advantage of being suitable for use as a biofuel crop.

This process of using plants to cleanse contaminated soil is called *phyto-remediation*. Different plants are better suited for different types of chemical contamination, but the duct-tape-fix-it-all of the phyto-remediation world is the willow tree. Willow trees are exceptionally adept at absorbing heavy metals and chemicals from the surrounding soil. Examples include copper, zinc, cadmium, selenium, silver, chromium, uranium, petrochemicals and others (Leung 2013). In addition, they provide shade, oxygen, habitat for birds and squirrels, and if one day the trees are harvested, the wood has many uses. While nothing close to a quick fix, this approach can proceed without large financial commitments from the city or the involvement of industrial machinery.

Phyto-remediation is just one strategy for addressing vacant land in Detroit. There are a number of ways to approach urban agriculture. Community gardens have paved the way as a productive use of formerly vacant land within the city, have important social impacts, and have been around for many years. These garden plots are used to grow hay for farm operations, and fruits and vegetables for sale, personal consumption, and/or distribution to social service food programs. Due to its unique characteristics of having a geographically large city with many unpopulated pockets of land, it has allowed for the creation of larger urban farms such as the 4-acre Food Field located on the former site of Peck Elementary School. Within urban agriculture, there is a particular practice that Food Field utilizes, but that has not yet gained a strong presence in Detroit. This practice is however showing up in other upper Midwestern cities such as Minneapolis and Madison and it is called *permaculture*.

Permaculture

In various states of disrepair, toxic contamination from heavy metals and industry, and overgrown with unproductive vegetation, nearly all of the vacant lots could make use of a natural practice to return the land to productive use in a way that is much less labor intensive than regular mowing or traditional annual agriculture: permaculture.

“Permaculture[is]...a blending of nature, tradition, and scientific knowledge in order to create an ecologically sound and socially just human culture” (Shepard 2013, 37). In its simplest terms, permaculture describes the cultivation of edible plant species that need only be planted once and that require minimal follow-up care. The resulting vegetation forms an ecosystem in which the plants and animals coexist and support the successful growth of the system.

Detroit sits in a part of North America that was traditionally an *oak savanna*. Incidentally, the savanna is “the biome that has the widest distribution across North America....It was and is the biome that supports the most mammal life and is the historic biome into which we, the human family, were born as a species” (Shepard 2013, 72). That means there is a tremendous variety of edible perennial plant species that would thrive in Detroit’s geography and climate.

Plants typical of an oak savanna are: oak, chestnut, beech, apples, hazelnuts, cherries, plums, peaches, raspberries, blackberries, gooseberries, currants, grapes, mushrooms, and various grasses (Shepard 2013, 73). Nearly all of these can be eaten with little processing or have valuable commercial uses as biofuels or industrial flours.

Mark Shepard, owner of a 106-acre permaculture farm in southwestern Wisconsin and author of *Restoration Agriculture: Real-World Permaculture for Farmers*, says of his farm:

"[H]ere is the 'brush' that runs through the middle of New Forest Farm .In this 'mess' are: hickories, black cherry, mulberry, elderberry, grapes, staghorn sumac, wild plum, raspberries, stinging nettles, goldenrod, Queen Anne's lace, common milkweed, dandelions, violets, gooseberries, morel mushrooms, chanterelles, chicken of the woods and turkeytails, and puffballs .Nobody plowed this land. Nobody planted this system. Nobody did any weed control or spraying for pests and diseases .That's sustainable agriculture! All of the above plants are edible, many are medicinal, and all are perennial, never having to be planted again" (Shepard 2013, 256-257).

Ordinarily the acorns that fall each year from oak trees in public parks litter the ground, eaten and scattered about by squirrels, are viewed as an unsightly nuisance. But these nuts are actually highly nutritious and can be used as hog and poultry feed as well as for human consumption. They cost only the one-time fee of purchasing the sapling and planting the tree. After that, they produce yearly crops of nuts without any additional tending. As the collective desire to eat more locally continues to gain momentum, acorns represent an almost completely untapped market. Eating acorns, like kale or chia seeds, is nothing new in the history of humankind. It just has yet to break through and become an 'it' food. Acorns were once consumed in societies spanning the globe. Today the only cuisines to regularly feature acorns are certain Native Americans and Korean. In the simplest form of processing: leeching the tannins out in water, cracking the shells, separating the nut meat, grinding into meal, and then drying, the resulting product is a flour that can be used much in the same way as wheat, corn, and rice flours (Prichep 2014). A small company out of Houston, Texas called Mighty Wild has commercialized acorns and sells artisanal crackers made from acorn flour. There are opportunities for Detroit to take advantage, through its own commercialization or through permitting others to harvest and utilize the acorns throughout the city.

Chestnut trees can be very valuable in urban settings. Detroit is in USDA Plant Hardiness Zone 6a, making it a perfect candidate for Chinese Chestnut (Shepard 2013, 80; USDA 2012 Plant Hardiness Zone Map). Chestnuts have many advantages over other nut-bearing trees. For instance, a chestnut can go from sapling to nut-producing in eight years where an oak tree might take as long as

twenty years. Chestnuts also benefit from an already established market for the nuts as an edible crop. Many people only think of chestnuts around the winter holidays, roasting over open fires, but chestnuts can be preserved and eaten all year round.

American chestnuts were decimated in the early 1900s from a blight that drove the species to the brink of extinction. However, imported varieties of chestnut tree such as the Chinese chestnut and a hybrid of Japanese and European chestnut have successfully taken root in the United States. Chinese chestnuts are immune to the blight that wiped out their American cousins, but produce reduced yields of nuts. The Japanese-European hybrids produce high yields, but are susceptible to the blight. Many chestnut producers grow both varieties alongside one another as a way to increase immunity and produce a sufficient yield.

Much of this research and growth activity has actually taken place in Michigan. Michigan State University conducted the early trials of chestnut recovery. As of 2013, Michigan was the nation's leader in chestnut farmers and acreage. Michigan State University operates an Italian-made chestnut commercial peeling line that is open for use by Michigan chestnut farmers. It is the only such peeling line in the western hemisphere (Bricault 2013). With Michigan acting as the chestnut capital of the nation, Detroit is well-positioned to incorporate the industry onto its open lands.

The Knight Foundation, a philanthropic organization which has funded many projects in the past in Detroit, awarded funds to a project by the City of Boulder, CO for 2016 to train community members to repurpose diseased or debris trees into furniture and art (Knight Cities Challenge 2016). A similar program could be supported in Detroit, but with the addition of permaculture farming training, especially a practice known as *hugelkultur*.

Hugelkultur was developed in Austria and translates from German as "hill or mound culture." The form of growing involves piling up old logs, branches, leaves and grass clippings. Sometimes manure is added. Soil or inverted sod is then placed

on top and the resulting mound planted with seeds or saplings. The decaying organic matter underneath the soil provide nutrients and moisture regulation for many years, allowing the gardens to flourish with little regular maintenance (Palmer 2013).

This type of gardening is a natural fit for Detroit's vacant lots with higher levels of soil contamination. Instead of having to pay to remediate the soil, a process the USDA describes as "extremely expensive and difficult," fresh food can be grown above the contaminated soil.

Permaculture makes economic sense as well. Typical community gardens, a collection of raised bed plots, require regular attention and maintenance to produce crops each season. This is most often accomplished through volunteer labor or through renting of garden plots. The sustainability of these initiatives raises concerns for long-term land use strategies. Permaculture techniques take advantage of participants' excitement and energy at the outset, but then produce mostly perennial crops, eliminating the need to replant each growing season. It can be an affordable and educational way to productively forest an area that will also produce a local source of fruits, nuts, and/or vegetables, an industrial food crop or livestock feed year after year, with diminishing costs.

Detroit has set a precedent in urban forestry with the approval in 2013 of Hantz Woodlands, a 140-acre urban oak and maple forest planted on land that contained 50 blighted structures. Hantz Farms, developer of the forest, agreed to remove all of those structures and pay approximately \$500,000 in exchange for permission to reforest the land with over 15,000 trees. In essence, 140 acres of land within the city will become a productive agricultural enterprise with opportunities to employ locals, with the added benefit of a well-maintained green environment. As soon as the sale was approved, it returned those 140 acres to the property tax pool, many sections of which hadn't paid property taxes in years (Goodyear 2013). Hantz Woodlands is an ambitious first step, one that can be improved upon for the

benefit of a greater slice of the population through the application of gardening, permaculture and hugelkultur.

Hantz Woodlands' land acquisition didn't happen without controversy though. There was concerted resistance from a coalition of urban farmers, many African American, who felt that it was unfair that Hantz Farms could acquire so much land at a below-market rate price of around \$300 per lot, while many of them struggled to gain access to much smaller plots of land to farm (Guzman 2016). There is a problem of access, especially among African Americans, but there is also a solution to the question of how to help more urban farming volunteers and interns to become independent farmers with their own land.

Mark Shepard utilizes a strategy on his permaculture farm in Wisconsin that produces what he calls "enterprising interns." Instead of the common arrangement of one or two paid farmers and a large number of volunteers who receive room and board in exchange for their labor, Shepard offers his interns neither and instead both challenges and teaches them to provide for themselves. His farm acts as an incubator by allowing interns to set up their own business and then teaching them how to grow food and tend the farm. But when it comes to shelter, food, income, and the tax system, it is up to the intern to figure it out through trial and error. They have access to all of the knowledge and information that comes with living and operating on a successful permaculture farm, but nothing is handed to them. After a summer or season of living on the farm and building their own business, many of his interns go on to successfully start their own enterprises. Shepard describes the process in greater detail here:

“Our model is, that you are a collaborating enterpriser. As such, you learn how to do [something] by actually doing it. Your pay depends on your success. It is a model of the real world that businesses and farmers face every day. You have your enterprise going on at this location and I have mine. We design our enterprises to be mutually supportive. When we do business-to-business transactions it's done at current market rates. We are real businesses. We produce real goods and provide real services. We exist within the current economy while we create the productive systems of the future.

The model is, that what you would call “interns” start their own businesses and earn whatever they can. They are self-supporting entrepreneurs. We help them get their biz started, then get out of their way. Eight out of 12 of our past summer folk have gone on to create their own Permaculture ventures. We collaborate however we can, to create synergies between the businesses. We don't have staff interns. We have independent, collaborative relationships with individuals who freely choose to associate.”-Mark Shepard

2010

Operations such as Hantz Woodlands and Food Field could offer similar opportunities for would-be urban farmers. Lack of capital, whether financial, social, or educational, doesn't have to limit access to opportunities for growth. Detroit has embraced and cultivated urban agriculture culture. In order to fully realize its potential, it must continue to take progressive steps toward increasing diversity of crops and farmers (Guzman 2016); (Kleppel 2014).

Microparks and Solar Arrays

Two other possible ideas for activating disinvested vacant land are microparks and solar arrays. A *micropark* is any unconventionally small public space that operates as a park. San Francisco is credited with having first implemented the idea of a micropark as a way to increase pedestrian traffic and economic development to overlooked areas of the city. Any sort of public space can be converted into a micropark. For example, simple green spaces with seating have been placed along the sides of streets, in place of a couple parking spaces. Public workout microparks might be located along a walkway and offer a few pieces of equipment and a bench with some plants nearby. It could be a chess table and chairs, or a bistro set for two with some landscaping. Microparks are an affordable way to encourage people to spend time in an area (Littke 2016).

Detroit already has a micropark of sorts with its “beach” at Campus Martius Park in the heart of downtown. This has created a high-traffic public gathering

space in the warmer months where there was once only car traffic. It incentivizes people to stay downtown, to meet friends, to hold meetings, to patronize surrounding businesses. In short, it was a simple way to activate that space and set the stage for community growth. The same strategy can be carried out into neighborhoods around the city.

Detroit's vacant land, especially at the outer fringes and least densely populated areas of the city, represents a unique opportunity to pursue renewable energy production through the installation of solar arrays. A solar array is simply a collection of solar panels used to produce electricity. A major energy provider for southeastern Michigan, DTE Energy, has already begun implementing large scale solar arrays on businesses and residential properties through its utility-owned solar pilot program. That program currently has 22 solar installations producing an average of 9.9MW of power. The program allows DTE to obtain easement rights to install solar arrays in southeastern Michigan with a goal of producing 15MW in total (dteenergy.com 2016). They will soon pilot a 10-acre solar array on a stretch of vacant land that used to be O'Shea Park. Both programs are designed for large solar installations. Perhaps a separate program could be created to utilize smaller spaces connected to the grid. Such a program would work with homeowners and multifamily apartment building owners to implement solar energy in their properties. Such a program would integrate efficiently into tiny house or Earthship projects as well.

Financing Some of These Initiatives

Each of these strategies outlined above could have wide-reaching positive impacts on the city of Detroit, especially in combination. However each of them also has an associated cost and a city with Detroit's financial history can hardly afford to fund each and every one, in full, on its own. For this reason, private industry, nonprofits, philanthropists and foundations, and state and federal grants must all be mobilized to address these issues.

The most notable example of this in Detroit's recent past is the Grand Bargain, where foundations such as the Ford and Kresge Foundations, nonprofits, and the State of Michigan came together to inject over \$800 million to preserve the Detroit Institute of Arts and to reduce pension cuts for public employees in the bankruptcy proceedings. This was the lynchpin that finally allowed Detroit to begin reinvesting in its long-neglected public services. Without the outside support from the community and state government, the city would have been unable to exit bankruptcy without much harsher cuts and loss of public amenities (Bomey 2016).

The Grand Bargain was a collaboration of large powerful entities in the community. Not all funding strategies need to be so large in scope. Sometimes a single philanthropist or nonprofit or private business can fill the need. The efforts of billionaires Dan Gilbert and Dennis Kefallinos, through their respective companies, are widely publicized in the Detroit media. Whether each media outlet labels it positive or negative, their impact is large in the redevelopment of the city. JP Morgan Chase's \$30 million Detroit Neighborhoods Fund will support the construction of mixed-use and multifamily housing across a handful of neighborhoods in the city. These developments are meant to be a combination of affordable and market-rate units.

JP Morgan Chase's investment falls under a federal policy for financial institutions known as the Community Reinvestment Act (CRA). The Community Reinvestment Act was signed into law in 1977 as a way to be sure that financial institutions worked to meet the credit and banking needs of the communities in which they operate. CRA emphasizes credit and banking services access for low to moderate income households especially. While JP Morgan Chase dove in with a multi-million dollar investment, other financial institutions with a Detroit footprint can meet their CRA requirements in smaller ways that also help the community.

There is a federal program that has been in place for over 20 years called Assets for Independence (AFI) that banks can implement to reach unbanked or underbanked members of their community. AFI is an Individual Development

Account (IDA) matched-savings program in which a combination of bank and federal funds are used as a 2-to-1, 3-to-1, or 4-to-1 match for every dollar the participant saves. The funds can only be used to pay for education, purchase a home, or capitalize a business. There is generally a cap of four or five thousand dollars in the account, so it does not represent a large financial commitment from participating financial institutions. Funds cannot be withdrawn early or for any other reason unless authorized by the AFI administrator, generally a nonprofit community partner. AFI is a yearly federal grant open any part of the United States. Detroit neighborhoods could benefit from this program.

Detroit's private industry has already recognized this need and Detroit Venture Partners has invested in its own program that is similar to AFI. The program is called BoostUp. BoostUp was founded by John Morgan in Chicago, but after DVP's investment relocated to downtown Detroit in 2013. BoostUp is also an incentivized savings account, but with some key differences. The first is that the account can be linked to social media platforms where the account holder can advertise the intended savings goal to friends and family. Anyone who is authorized by the account holder can then deposit funds into the account. Only the account holder can withdraw funds. A BoostUp account can be used to save funds for a house, move, vehicle, business, vacation, education expenses, basically anything the account holder wants. Setting up an account is free for the user and BoostUp earns money through charging companies a fee to pitch their incentives to account holders. For example, if an account holder sets up a BoostUp account with the goal of purchasing a new car, Hyundai will offer a 1-to-1 match up to \$500, for a total of \$1,000 in savings, if they decide to purchase a Hyundai. For a home, mortgage provider Quicken Loans will match up to \$750 in downpayment assistance funds if the home is purchased through Quicken Loans (BoostUp 2016). Other partners offer different matched savings incentives.

A key disadvantage to this program is that it lacks the flexibility of funds use that the federal AFI program provides. AFI though is subject to congressional

funding and as such there's always the possibility that the program will be defunded; a serious possibility this year actually. However there's no reason both programs can't be used in tandem to offer savings assistance for major purchases for more households in Detroit. Financial security is paramount to stabilized communities (NeighborWorks America 2016).

Another possibility for funding neighborhood redevelopment initiatives is to engage Corporate Social Responsibility divisions of companies to better direct philanthropy dollars and volunteer efforts. Corporate Social Responsibility (CSR) refers to initiatives by a corporation to address issues of environmental and social well being (Lindgreen and Swaen 2010). CSR activities often involve short-term financial losses for a company, but can have long-lasting environmental and social impact. Many large and medium-sized corporations now have CSR divisions within their company whose job it is to coordinate with community partners to engage employees and/or capital from their business in community projects. It is common for CSR divisions to donate time, money, and volunteer resources to large, national or international NGOs. They have credibility and name recognition that the corporation can use to bolster the appeal of their CSR efforts. While the work of large NGOs is important, for corporations looking contribute to the well being of the community in which they operate and which is home to many of their employees, directing those resources toward local initiatives could achieve greater impact.

While General Motors' GM Foundation directs its funds all over the country, GM has focused its GM Student Corps program on communities in and around Detroit. The GM Student Corps hired 106 paid high school interns last summer to work on community revitalization efforts such as cleaning parks and schools, planting bushes and trees, and repainting faded equipment (General Motors 2016). The purpose of the program was to engage local students in positive activities in their own communities while connecting them with professional mentors and business contacts in the area to further their own futures. There are countless other

examples of this and the potential to direct these efforts to address housing and land use issues in Detroit is immense.

A Side Note: Rethinking Old Industry

While this project focuses on housing and lot use issues, it must be noted that Detroit has a cornucopia of former manufacturing sites that can be repurposed into the innovation centers, art studios, and “smart factories” of tomorrow. What was once an abandoned factory or warehouse can now be reborn as a mixed-use structure containing apartments/condominiums, restaurants, store fronts, studios, education centers, and possibly even a smaller, more specialized manufacturing center (Agtmael, Antoine van, and Fred Bakker 2016). An example of this in modern day Detroit is Shinola.

Shinola is a manufacturing company founded in 2011 that produces high quality watches, bicycles, leather goods, and other miscellaneous gift products. For the bicycles, the frames are designed and manufactured in Waterford, Wisconsin, but the assembly of each bicycle happens in Detroit. The watches, are produced almost entirely at the company’s Detroit headquarters. Shinola set up its watch factory in 30,000 square feet inside the historic Argonaut building in the New Center neighborhood. It shares the building with the College for Creative Studies, a private, fully accredited art and design school.

The only part of the watches not produced in Detroit are the Swiss-made movement components from Ronda AG. The company has hired many local Detroiters and created around 400 high quality, stable manufacturing and design jobs in the city. Some of Shinola’s watchmakers and bicycle assembly workers are former auto industry employees who lost their jobs in the contraction and outsourcing of that industry in Detroit.

Conclusion

One incredibly important thing to consider with any element of this plan is that none of it will be sustainable or successful if the community is not involved from the earliest stages. As Detroit works toward a brighter future, it can't leave behind the hundreds of thousands of residents who have lived through decades of disinvestment. Permaculturist and educator Mark Shepard said it best:

“Undercompensated populations trend toward social unrest, strikes and rebellions. Deprived populations trend towards revolution. In both cases, care of the earth is far from the consciousness of most people because the ‘prime directive’ of those that are hungry becomes providing oneself with the basic necessities of life. When economic systems are designed so that they result simultaneously in abject poverty and superfluous wealth (oftentimes existing side-by-side on the other side of a locked gate) problems arise that are destructive to the entire system, and not just to the individuals involved. It doesn't matter whether the rich or poor are conservatives or liberals, wealth and poverty separated by a gate only leads to trouble”
(Shepard 2013, 36)

Housing and land use are big issues in Detroit, but they are not isolated and they are far from the only issues facing the city. Without adequately functioning public schools, Detroit will have tremendous difficulty attracting and keeping young families in the city. Schools are critical to so much more than the education of a city's children. They affect the quality of life and community of the neighborhoods where they are located. With over 100 public schools closed in recent years and many more floundering through administrative scandals and underfunded educators, sustainable development will not happen until these circumstances undergo significant change.

Unemployment among Blacks in metro-Detroit stands near 20 percent. For Whites it is between 7 and 8 percent (SOBA 2015). No community can sustain itself when so many of its citizens are out of work. The decline of traditional manufacturing means that workforce development solutions will be necessary to bridge the skills gap between potential workers and the higher-tech manufacturing

positions available such as welding. In addition, public transportation across the city remains sub-standard. Low-income households are disproportionately economically affected by reliance on personal automobiles or ride-hailing services. The QLINE rail project, under construction at the time of publication, will largely service the central corridor of the city, an area already receiving significant investment in infrastructure. Transportation options for residents on the east and west sides of the city, as well as the surrounding suburbs, remain slim.

The narrative of Detroit as the comeback city where anyone with a dream can come and build it has a ways to go to become reality. Initiatives aimed at welcoming new residents into the city such as *Live Downtown* and *Live Midtown* have already lost some enthusiasm as their websites contain housing listings from 2014 that have long expired. Attracting new educated and skilled residents from around the country and around the globe can do many things to strengthen Detroit's economy and community. This is critically important and needs to be pursued with constant vigilance by the entire community. However, until school reform, workforce training, and public transportation are given much-needed attention, there will remain an opportunity gap between many longtime residents and newcomers.

All of the ideas outlined in this proposal are meant to act as a collective strategy for moving Detroit toward a more environmentally and economically sustainable future, a future where opportunity exists for all in the community to realize their potential; a future where a new community composed of recent residents and longtime residents live together without a clear division between "New Detroit" and "Old Detroit" and instead simply form "Detroit".

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