

| Abstract4 |
|----------------------------------|
| Introduction6 |
| Early Abstractions10 |
| Reconstruction of an Idea |
| Deconstruction of an Idea26 |
| Housing of the Last Century34 |
| Analysis of Data42 |
| The Creation of Space50 |
| Interventions |
| The Occupation of Existing Homes |
| Works Referenced84 |

Abstract

Without question we live in an interesting time for the city of Detroit. Those who live here, or spend significant time here, know that major shifts are well underway. Yet, we also know the problems of the city run far too deep to be fixed by one individual. Of the many problems that face Detroit, the one that concerns this project most is housing.

Detroit is a singular place in the world, especially in regard to the single family detached residence. In the not so distant past Detroit arguably had more single family houses than any other city on earth. Today it still sits high above the national average with more than 65% of housing in this form.

This project has become a series of explorations, with each tangent related to issues of the typical, middle class, single-family home of the last century. This thesis questions the role of finished woodwork, while encouraging individuals to actively participate in the redevelopment of existing houses.

Introduction

The process of an architectural education has the unique ability to pull an aspiring designer in a number of opposing directions. Many that take on the process begin with noble goals, and grand ideas of helping people. In fact, the argument can and should be made that it is at least partially the responsibility of designers of the built environment to improve the quality of life for the many. However, it seems too often that the collective "we" ends up working for the few. And too often those who "we" work for are more concerned with return on investment, in lieu of focusing on what really matters: the people who will be impacted by the space.

For many designers working in the city of Detroit today, the primary issue is redevelopment. It is easily understood that there has long been a need for adequate resources for the remaining (and, in some neighborhoods, growing) population of the city, including roads, bridges, city infrastructure, but even, or perhaps especially, housing.

Another strong interest for designers with a desire to work in Detroit is the viability of deconstruction, that is, of course, for those whom redevelopment is not viable. Deconstruction is often considered preferable to demolition and it is a great way to open up otherwise occupied land. It is also a wonderful way to develop a potentially valuable resource stream of building materials.

2015 was an especially interesting time to be involved with the city of Detroit. That year there were approximately 62,000 properties in the Wayne County Tax Foreclosures. Nearly 37,000 of these were thought to be occupied households (Loveland). In comparison to the national average of 2.582 persons per household, the city of Detroit has as many as 95,000 individuals with properties in foreclosure. (Census) In a city of about 700,000 we are talking about some 13% of the population. By some estimates, these are conservative numbers.

The point of all of this, is that there couldn't possibly be a more crucial time to be involved in the redevelopment of the city. The real challenge of the situation for any designer is to be someone who approaches this issue with diligence and respect. How can there be hope for Detroit without considering the strength that can come from building diverse communities?

The ideas represented here have really become a brief, nine month exploration of American housing in Detroit over the last century. This examination focuses on the details present in single-family homes from each decade and ultimately explores what defines a home. Though understanding the evolution of the single-family home in a city that has experienced a tremendous rise and fall, insight has been gained as to what it actually means for an American to feel "at home." The idea of housing is deeply tied to the abstract understanding of the American dream, but this dream has shifted over time. The goal of this thesis was to provide detailed research that shows exactly how this mentality has changed over the years, and, more specifically, how the architectural detailing actually impacts the cognitive understanding of home.

This examination is helpful to understanding how to craft an appropriate approach to the ongoing foreclosure crisis and contribute to the greater architectural discussion regarding the importance of both preservation and conservation. It will likely prove to show the importance of examining our past while at the same time looking forward to new, creative solutions surrounding housing and neighborhood development. Additionally, special attention will be paid to understanding the variation of housing type in the city of Detroit, particularly how housing type relates to class and race and the availability of each type.

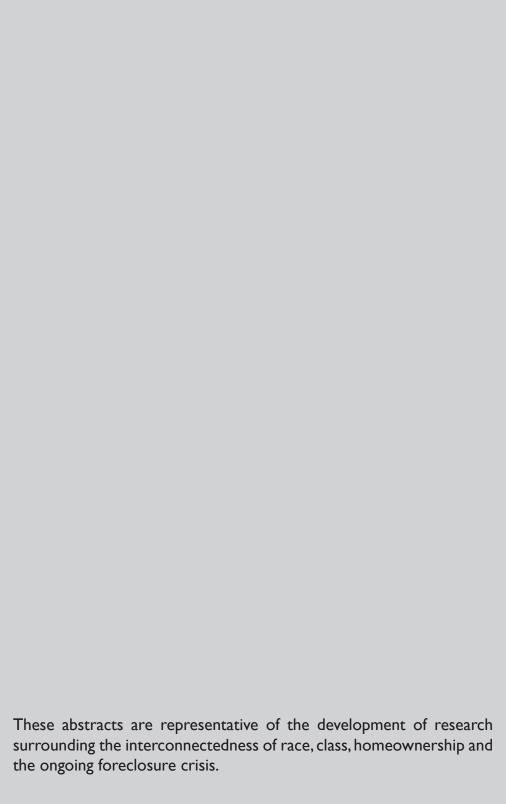
There is a hidden story to the city of Detroit that can be told through architectural detailing. Through an examination of housing typologies of the city with an emphasis on the millwork of single-family residences, an attempt can be made to uncover this story. The interconnectedness of industry, capitalism and the people who helped shape this country can all be examined by looking at the details. These details were and continue to be effected by a huge number of influences. From the development of industry through the interest of prefabrication to a focus on sustainable and green techniques, architectonic details have been shaped to the cultural will of the people. Often left unexamined, with the exception of preservation, the history of millwork in this country speaks to technology, culture, class, and economy. Most importantly, architectural details offer information about the people of Detroit, their dreams, their desires and their sacrifices.

There is a history of the city of Detroit that can be told through an examination of architecture. However, it isn't necessary to look at the entire city or even an entire building to uncover this story. Much of the story of Detroit can be understood through a close examination of housing. Through a process of uncovering the details that are built into single-family houses over the last two centuries, many aspects of the rise and fall of Detroit can be revealed. By developing an understanding of built-in space, from bookshelves, to breakfast nooks, from bay-window seats to workbenches, these interstitial spaces have the ability to fill-in the details of the development of material use, advancements in technological development and the implications and effects of enforced codes and zoning ordinances. Most importantly, these spaces offer information about the people of Detroit, their dreams, their desires and their sacrifices.

This type of space holds a special value in architecture. Built-in constructions become the human interface with the architecture of the house. As such, people are naturally attracted to them. Because of this attraction these spaces can offer immeasurable character to the house. Built-in construction lies at the intersection of permanent structure and the impermanence of furniture. These spaces are not necessarily essential; they are not generally integral to the structure of the house. That is, the house itself will continue to function as a shelter with or without their presence. These constructions, however, are often implemented as a way to save space when a freestanding piece of furniture with the same function would be overwhelming or simply to large to serve its purpose. Additionally, the creation of built-in architecture adds the value of function to space that would otherwise be considered wasted. Finally, this type of construction has the ability to offer a psychological boost to the value of the property by making it "unique" and "custom."

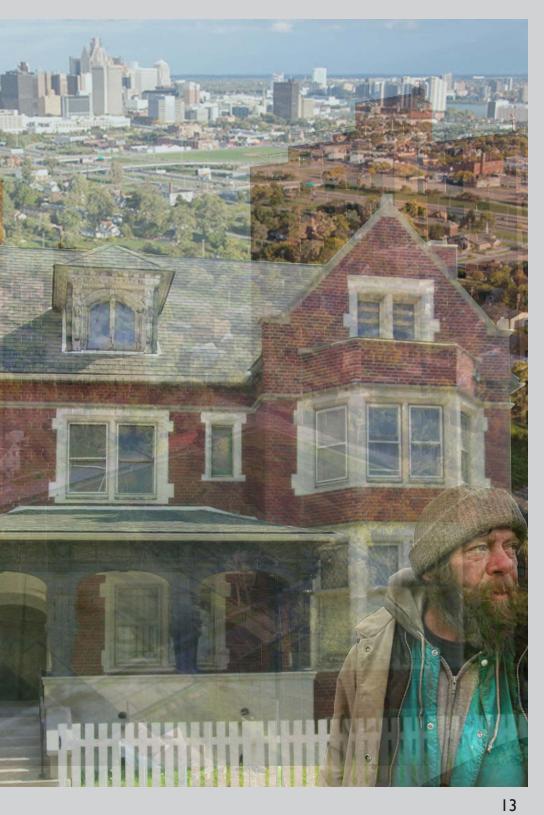
One of the best examples of this type of architecture is the workbench. Until the 1950s nearly every house had a space set aside specifically for maintenance of the house itself and small appliance repairs. These spaces were often built into the corner of a garage or shed, part of a carriage house, located in the basement or kept in areas reserved for a furnace or wash basin. As our housing stock ages and our technology evolves there is a greater and greater need for adaptation. For example, as technology evolves so does our standard of living and the adoption of new appliances becomes inevitable: the fireplace becomes the space for an entertainment system; the washbasin becomes the washing machine. Through adaptive reuse of existing turn of the century homes, often upgrades need to me made to accommodate such technological changes. Conveniently, designing appropriate built-ins can be a great way to update and add additional value to an old home, while also providing an opportunity to finish with detailing that is appropriate to the age and style of the house.

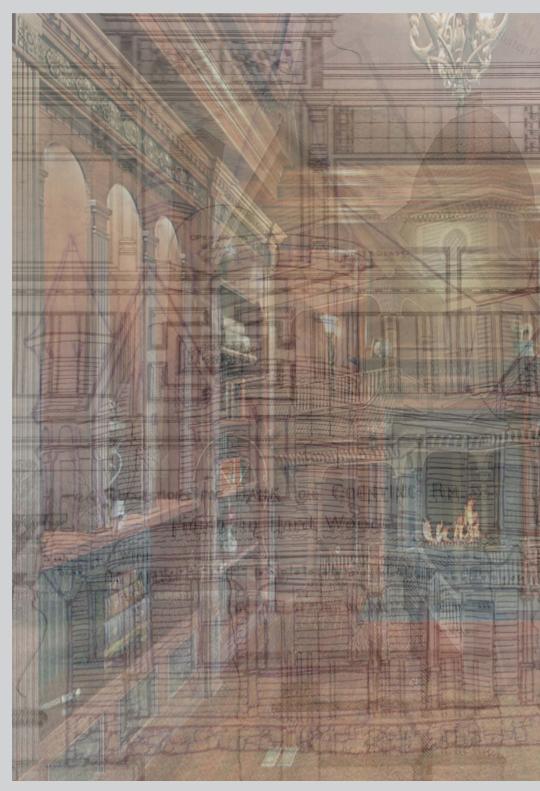
Early Abstractions





This image indicates the importance of housing to neighborhood stabilization, and by extension, the overall stabilization of the city, while at the same time questioning the changing nature of the American dream.

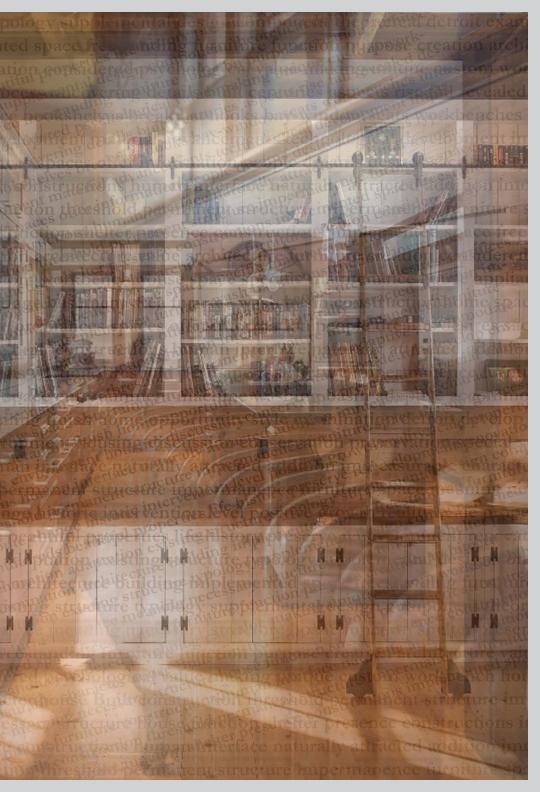






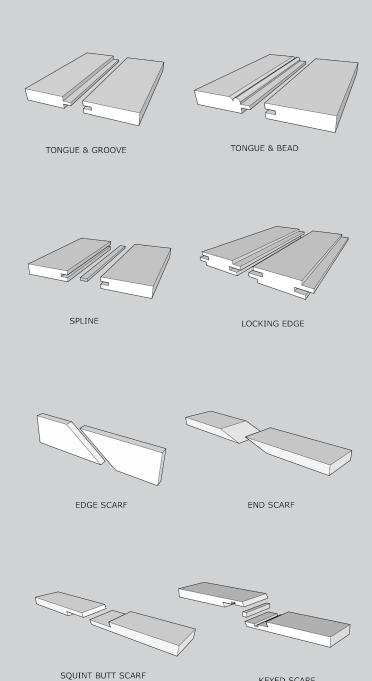
This image is meant to ask questions at the scale of the house, the impact of one occupied home at the scale of the neighborhood, and the role of designers and architects in the development and redevelopment of the single-family home.

This image is meant to be an examination of the details of the house, the impact of finished woodwork, and a questioning of how finished woodwork helps to enhance the human experience: is there something innate that attracts us to that warmth? This image is also an individual examination as to how it is possible that an entire generation can feel nostalgic for a place and time that they have never personally experienced.

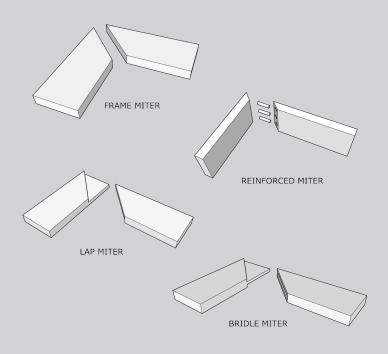


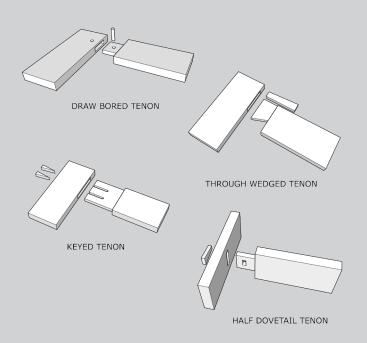
Reconstruction of an Idea

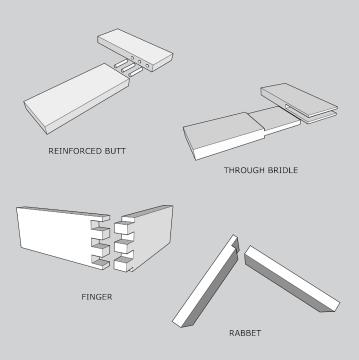
The classification and categorization of wood joinery is an attempt to not only further the researcher's understanding of wood working techniques, but is also representative of an ongoing effort to build a visual library of connections at the smallest scale and in the simplest form. Though this information has little to do with the final decision to focus on finished wood trim, it does lay the foundation for looking at the scale and ultimately the materiality of finished wood trim.

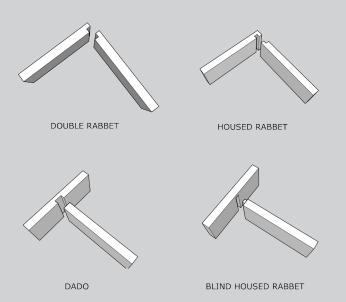


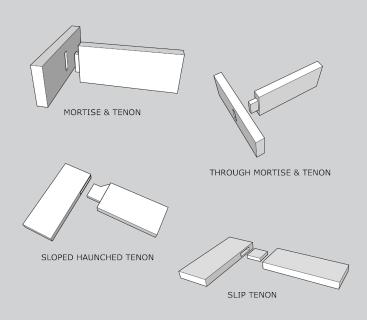
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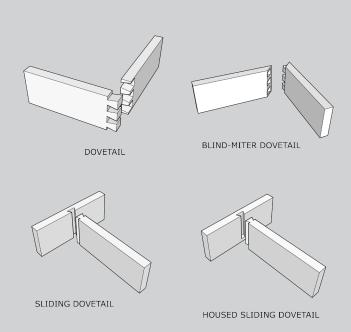


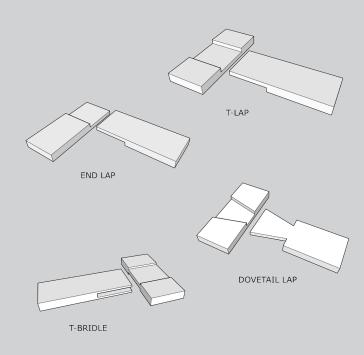


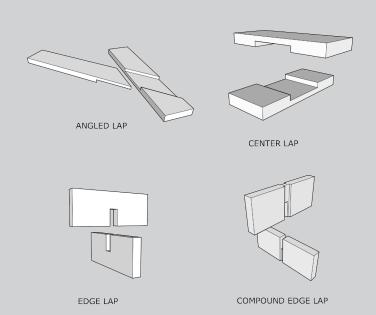


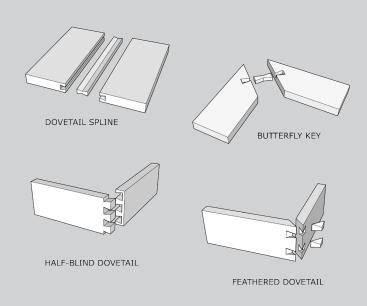


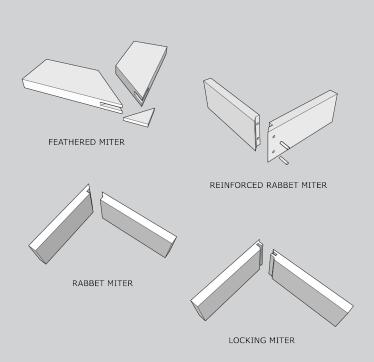












Deconstruction of an Idea

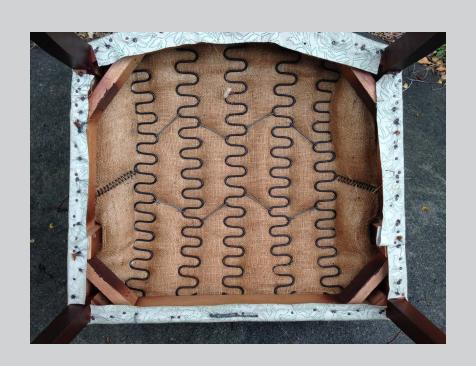
The deconstruction of objects is often a good place to start thinking about reconstruction. This process was an attempt to further understand the means and methodology of small projects for the uninitiated. The process of deconstruction and documentation ultimately served two purposes: first this process is akin to the beginning of any number of small residential repairs, and second it served to establish a framework of documentation for ongoing projects.

























Housing of the Last Century

Many designers begin their educational pursuits with the desire to shape a career with a focus on humanitarian effort. It is important to remember, though sometimes difficult, that it is not only the privilege, but also the responsibility of designers to help make our communities and neighborhoods into better, stronger, more desirable places to be.

The spaces we grow up in are often fascinating to students of architecture. The places in which we dwell are some of the most intimate and personal spaces where we spend our time. Of particular interest to this discussion is not the houses we occupy but the more specific role of millwork and other built-in constructions in these spaces.

Detroit has an incredible housing stock, much of it approaching 100-years old. Though many of these houses are in severe disrepair, many still contain the original finished woodwork.

The questions that fuel the imagination of designers in Detroit concern how this type of built-in construction adds meaning to the spaces we occupy. For a short while, the millwork typical of the early 20th century was standard in middle class housing. Today, however, it is considered a luxury only available to those of high class. Even then, due to the increasing size of our houses, it is often prohibitively expensive.

There are a number of reasons we rarely see the expansive mill-work of times past. Of course, availability, cost, and the size of housing are obvious reasons, but our desires as Americans have changed. For many, the purchase of a home is not a viable financial option; for others, wealth is better expressed in the automotive realm, or in a newer, larger, albeit hastily built, house in the suburbs.

(Images by Loveland & Trulia)



1909 - 339 Josephine



1918 - 2447 Glynn Ct.



1921 - 2215 Glynn Ct.



1931 - 16538 Normandy



1940 - 16661 La Salle



1953 - 16536 Princeton



1963 - 16531 Linwood



1971 - 20450 Northlawn



1980 - 20241 Briarcliff



1998 - 385 Parkview



2000 - 4814 Wayburn



2015 - 4228 Aretha

Analysis of Data

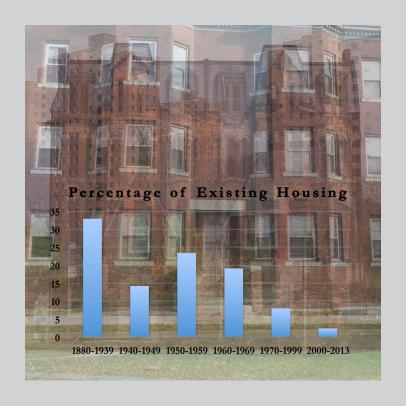
Detroit is a singular place in the world, especially when considering the single family detached residence. In its not so distant past Detroit arguably had more single family houses than any other city on earth. Today it still sits high above the national average with more than 65% of its housing stock in this form. (Model D)

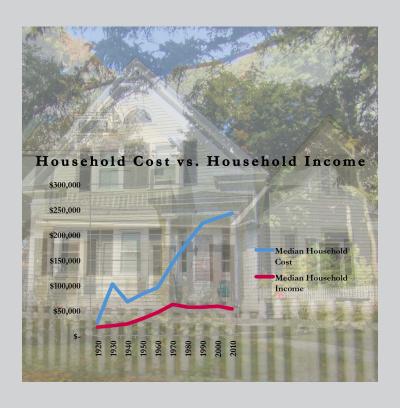
This project has really become a series of explorations, with each tangent being related to issues of the typical, middle class, single-family home of the last century. The fact is, the issues related to American housing are incredibly complex including the problems of economics, race, class, psychology, technology, and politics just to name a few. The point is that it can be extremely difficult to make any hard and fast claims about causal relationships and it is nearly impossible to examine one aspect without considering the simultaneous effects of other variables, especially in the short span of nine months.

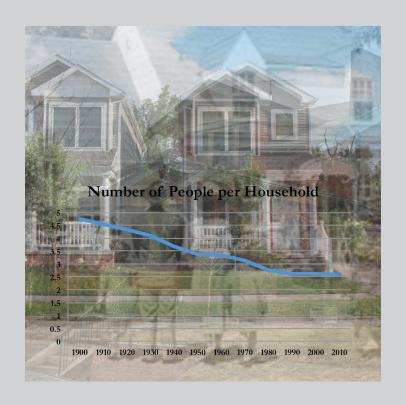
However there are a few things to be confident about.

The Median cost of a single-family residence has risen disproportionately to the median household income. The result? It is more expensive for middle class young people today to own a home. Coupled with rising student debt and the difficulty of earning a living wage without a college degree and it can seem very near impossible.

In the last hundred years the average number of people per household has fallen from nearly 5 to under 3, while the average size of houses has risen from under 1000 square feet to almost 2500 square feet. This equates to a nearly 400% increase of square footage per person. (Census)









This is all to say that there are a huge number of existing houses that are still standing, many of them in great shape, and many more with the remains of disappearing trades hiding inside their often neglected shells.

The most valuable resource is the one we already have. On average it will take a 47 tons of material, that is combined new material and construction waste, to rehab an existing house. That is a small fraction compared to the 182 tons of material needed to build a new house and it is even less compared to the 351 tons of material needed to demolish and rebuild a comparable house. Fighting blight by demolishing houses may be a noble goal, however the media doesn't often stop to talk about the thousands of tons of waste produced by this process (Knibbe).

As the data shows, the obvious choice of housing during Detroit's history was the single-family residence. This can be attributed to a number of things, but it is undeniable that well paying jobs and the availability of land resulted in a rapidly growing middle class.

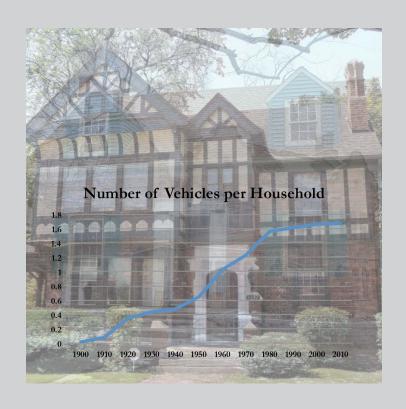
Interestingly, there is still a wealth of open land in Detroit. Depending on who you ask and how they count, there is somewhere between 20 and 40 square miles of Detroit's nearly 140 that are vacant and the density of the city is low. (Michigan Radio) In most other cities this would be considered a waste of valuable resources, but luckily Detroit is not most other cities.

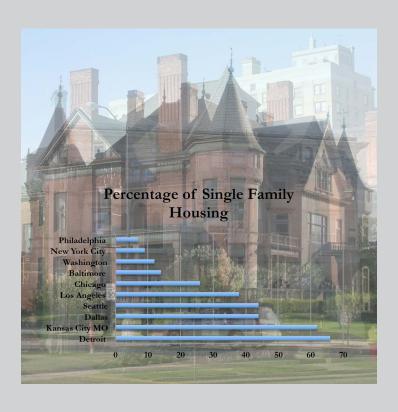
In Detroit, the space and availability of single-family homes can actually work in its favor, allowing for the creation and stabilization of a huge variety of residential neighborhood typologies.

Though it can be difficult to find hard data on the subject, anecdotally is it clear that young people are moving back to the city. Clearly, the desires of the millennial generation are shifting away from the manifest destiny of suburbanization expressed by the baby boomers; young people have an increasing desire to be close to where they work.

Millennial's have a strong desire to make something for themselves, to take part in the revitalization of homes and by extension the neighborhoods they choose to occupy. Despite what the media says about the lazy generation, millennial's have a fascination with interesting spaces, and what better way to create a diverse city then through the redevelopment of the varied residential landscape that is Detroit and so many other post-industrial cities in this country.

Even when considering a feasibly substantial cost of rehabilitation, given the opportunity to personalize an old home, to draw out the character hiding behind the dust of neglect or to live in a newly built, lifeless impersonal, cookie cutter home, no hard headed hipster of today would choose the latter.





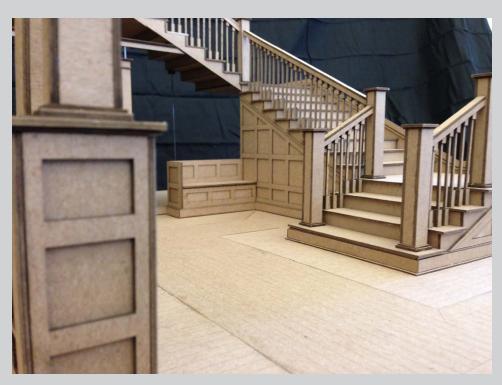
The Creation of Space

This model is an attempt to see just how powerful one single trade can be on shaping the experience of a space. The model is constructed to be viewed from the interior and is meant to illustrate the predominance of finished woodwork in the typical century old home. In this example, there is about hundreds of square feet of hardwood, though today it would likely need some elbow grease to bring it back to life, many times much more effort is not necessary.

This model is an exploration into the nature of finished wood and its presence in the turn of the century middle class home. It was developed from a single sketch of a dining room sideboard, into a three-room scale representation of such a home.

The driving idea behind the model pictured was to create a space using only the elements crafted in finished wood. This particular study lends weight to the significance of materiality. In this particular subset of homes, nearly every element to be interacted with is composed of finished wood. Additionally, when modeled in this fashion the finished wood trim becomes the sole definer of volume. As such the trim is the indicator of space.

























Interventions

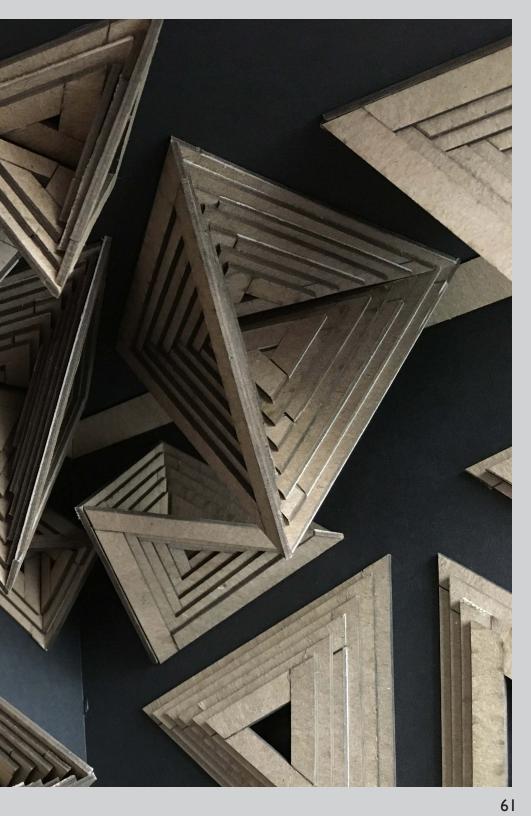
After considering the extent and significance of finished wood as a whole, it became important to look at the individual aspects of wood trim as a singular element.

Much of this research has been about the reoccupation of existing homes, which are obviously prevalent in Detroit. Due to the significance of the redevelopment of existing single-family homes, coupled with the impact and the importance of finished woodwork, the following interventions all involve the manipulation of wood trim.

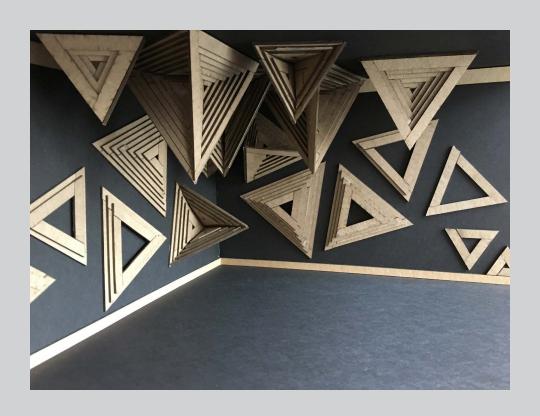
Two primary routes were taken. The first is an exploration of the use of dimensional trim, in unconventional ways, and the second an investigation of finishing techniques.

The first concept sits in opposition to the concept represented by the previous model. The conventional use of trim is not only for added ornament, but also to cover the imperfect nature of the built construction itself. As such trim surrounds transitions, from floor to ceiling, window to wall, room to room. Due to the encompassing nature of trim, it becomes the definer of volume.

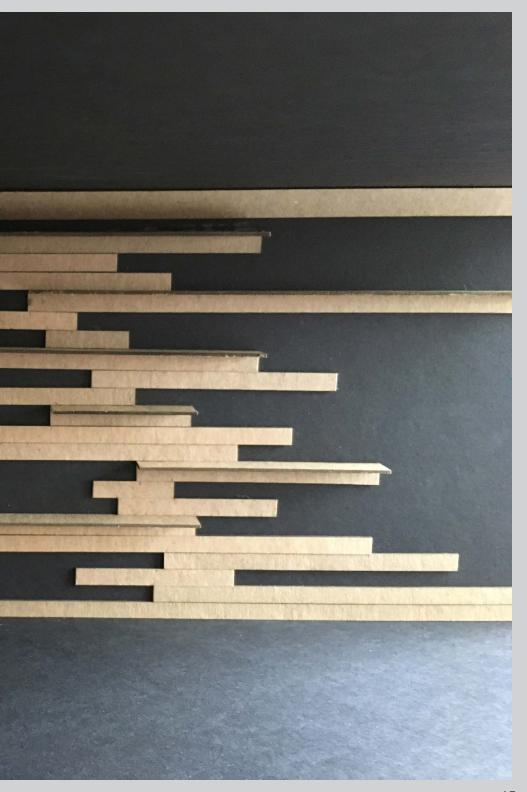




This model represents an opposition to this nature, and instead of being used to define volume, the same elements are used to create forms whose only purpose is to oppress volume and therefore redefine the space. For instance, in the corner of a small room these triangular forms would be simultaneously inviting and overbearing.

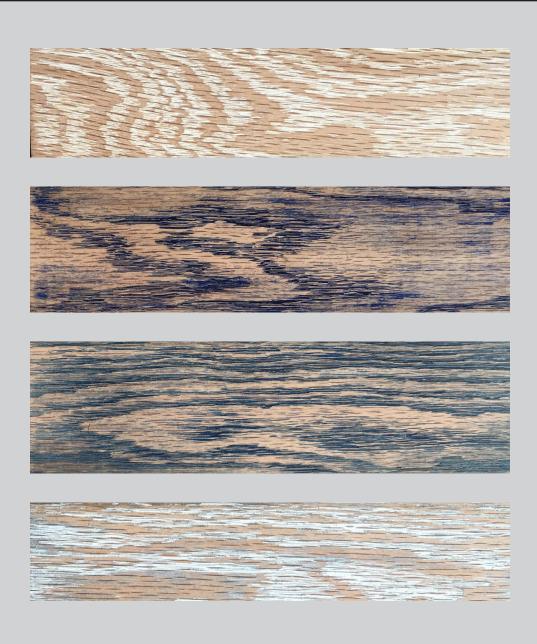




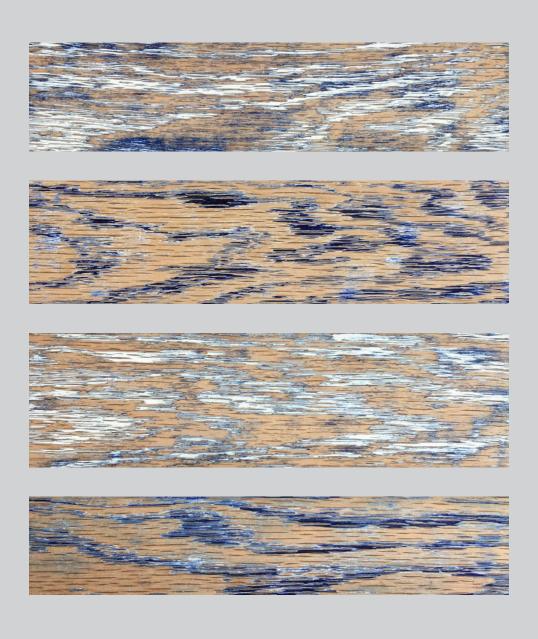


The second sketch model is also an attempt at using trim in an unconventional way. In this case, using the same dimensional trim and creating a corner condition with the added function of decorative shelving.





The first proposed finishing technique is derived from an ancient Japanese technique and inspired by artist and designer Jo Nagasaka. This process is achieved by first stripping away the soft grain of the wood in order to create a natural relief. Then individual layers of paint or epoxy are added to the surface. When the desired thickness is achieved, the pieces are then sanded back down, revealing the now enhanced grain.

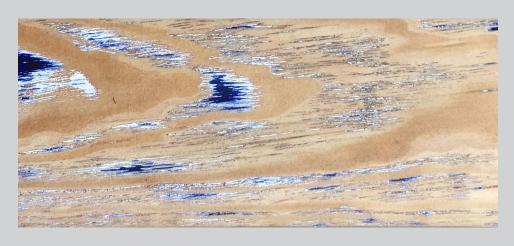


This technique could be used in nearly any finished wood application, from cabinetry to trim, or even in floors or furniture.



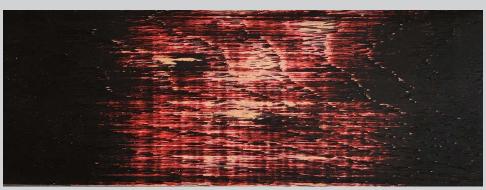


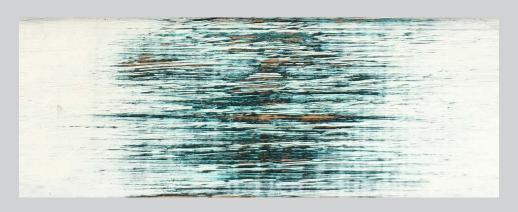


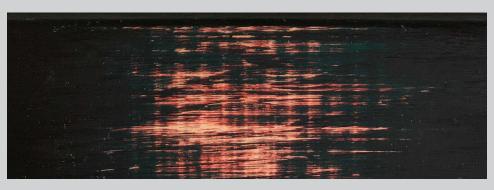










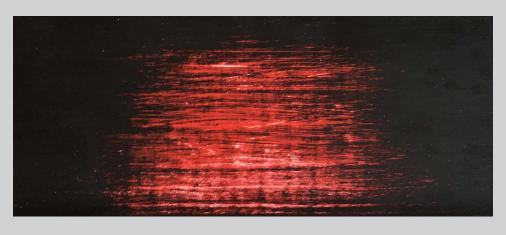


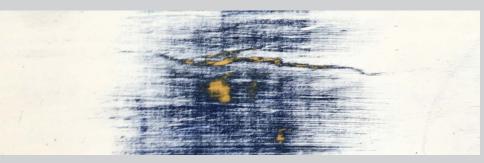
Finally, these samples are meant to illustrate the idea of a slow reveal. The thought behind this intervention is that recently refinished house might have woodwork painted in a white or black finish. As people interact with these surfaces, the finish will wear away, providing the dramatic reveal of a splash of color.

This technique would be particularly effective on stair treads, balusters, windowsills, door-frames, cabinet doors, and furniture.











The Occupation of Existing Homes

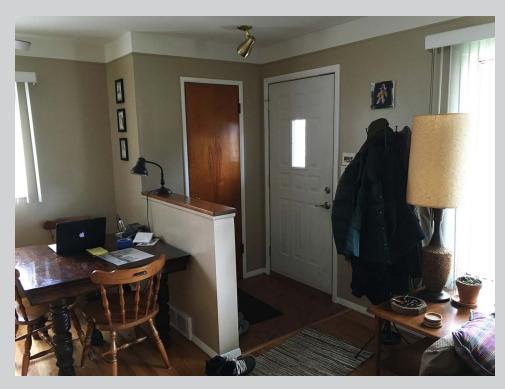
Finally, this set of photos represents the future of this process. Built in 1958, this home has been in my family since 1964. With some help, I have been slowly renovating since December. So far, we have pulled some 750 square feet of carpet, refinished nearly 1000 square feet of oak floor and painted every square inch of the main floor.

These images are representative of my case study house, the implementation of my research and what I hope will be the groundwork of my career.





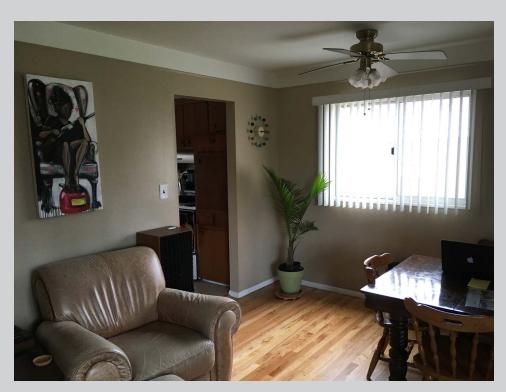




















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