THE ARCHITECT AS DEVELOPER

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DEDICATION

To my wife
Amy Funari

ABSTRACT

The current architectural landscape of strip malls and big box stores is the antitheses of what nearly every practicing architect avails to while in the security of the academy. Upon entering the real world of budgetary constraints and hard deadlines, it seems that most architects are content to simply earn a paycheck rather than produce meaningful work. This destructive method of designing is a result of a supposed lack of choices, and can only be combated when architects have more to lose than their principles. By architects playing the role of both designer and developer, it is possible to see a more sustainable, meaningful and beautiful architectural landscape emerge. This architecture will ideally be tailored to the specific community in which it resides, it is not meant to be a prototype that can be inserted in any hurting neighborhood, or a top-down solution to a worldwide problem, but rather an example of one possible solution used to inject life back into an under used or undervalued locality.

PREFACE

This thesis will explore the viability and effects of a mixed-use, luxury condominium development in Boston, Massachusetts. By first examining what the problem currently is and how it became that way, and then providing a possible solution to that problem, this thesis will demonstrate that the architect-developer model is a viable one that can lead to increased design control, profitability and, naturally, responsibility. The site chosen represents incredible opportunities and some challenging constraints, but the goal remains to make a financially and socially viable, mixed-use, residential mid-rise that can incorporate with it's surrounding context and connect with the rich history of Boston.

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CHAPTER I
INTRODUCTION

In today's built environment, most building occurs without the consultation of the architect. While this has become the normal state of operations for certain economic reasons, in that, fewer middle men (architects, in particular) equates to less expended capital, it has done incredible damage to the quality of the built environment. While modern industry has proven to be unrivaled in efficiency of production, it has done little to address this lack of quality throughout time. This negligence, on behalf of contractors, eager developers and passive architects has resulted in a rather dismal built environment, which has caused nearly irreparable damage to downtowns and dense urban development across the country. While there are several, notable exceptions, the majority of development occurs without the incorporation of an architect. One possible solution to this seemingly apocalyptic problem can be found in the exchanging of the traditional role of the architect into a more contemporary one. Since the existence of the profession of architecture, the architect has always been dependent on a patron, someone who would require a service that an architect could provide. This has served quite well in some sense, particularly in the efficiency of design, because an architect would only design once a patron has been acquired and has requested a service. It has proven especially problematic in recent decades, when increasingly more architects are finding their skills to be less of a necessity than they have been in the past. One possible solution to some of these problems could be changing the role of the architect. If the architect is willing to assume risk and become a developer as well as a designer, he would become his own patron, essentially flipping the tables on the current state of business. This new model of business would provide several key benefits for the architect, including increased design control and improved income, but would also

benefit the developer who could contribute worthwhile built projects and improve their own community. While this may seem unprecedented and risky, which it is to a certain extent, it is not without some model to follow.

CHAPTER II
THE PROBLEM

Historical Process and Precedent

Architects like Jonathan Segal and Tim McDonald of Onion Flats have been operating on precisely this model of design/develop and have seen many rewards because of it. Their award winning projects have not only gained them well-deserved notoriety, but have also made them many millions of dollars. While it is often taboo to discuss financial matters in architectural circles, it is not possible to explore to the fullest extent the benefits and constraints of this scenario of designing without delving fully into such matters.

In the past, certain attempts have been made on a federal level to establish a system that would allow for rapid housing growth to lower income individuals and families. Namely, Operation BREAKTHROUGH by HUD which claimed its primary objective as, “the establishment of self-sustaining mechanism for rapid, volume production of marketable housing at progressively lower costs for people of all income levels…”[1] As described by Arthur Newburg, Director of Operation BREAKTHROUGH, it would revolutionize the low-income housing industry by creating a partnership between “government and industry and labor”[2] This “top-down” approach is contradictory to what I propose in this essay. By starting with an invested developer, who would have capital at stake, the end result should be not only profitable, but also embody an architecture

1 Boeing Company Community Development Organization, . Design and Development of Housing Systems for Operation BREAKTHROUGH. Washington, D.C.: 4-5 U.S. Department of Housing and Urban Development, 1973. Print.

2 Boeing Company Community Development Organization, . Design and Development of Housing Systems for Operation BREAKTHROUGH. Washington, D.C.: Preface U.S. Department of Housing and Urban Development, 1973. Print.

critical of the current landscape that responds to a specific regions needs. By proposing a development that can add not only cultural, but monetary value to a place and the architect, I hope to show that social experiences and communal improvement is possible and profitable if the architect is willing to take on the role of developer as well.

Figure 1: Suburban Landscape disregards the street

For decades, the architectural profession has been steadily declining into a state of complete marginalization. According to Architects Journal, “Another reason cited for architects slipping down the pecking order is the increasingly risk averse approach taken by clients...Contractors are put in the driving seat rather than the architects who simply provide the design.”[3] Figure 1 demonstrates the lack of consideration taken by most developers. This vast, suburban landscape is completely unsustainable and is designed

Figure 2: Urban development defining the streetscape

3 http://www.architectsjournal.co.uk/Journals/1/Files/2011/2/25/The%20Future%20for%20Architects%20Full%20Report.pdf Web. Dec 8. 2012.

and built with (almost always) only economic considerations, which is (according to the above definition) bad architecture. Rather than this, the architect-developer would consider not only economic concerns, but also issues of context, equality and aesthetics.

While this is admittedly the desired goal for the profession of architecture, most professionals have simply allowed their role to slip from the ancient master builder to service-for-fee professionals, architects have shown that a lack of initiative and short-sightedness will inevitably lead to irrelevancy. The lack of initiative is demonstrated by the fact that many buildings are built without the consultation of the architect, and by not reacting to this profession-altering fact, architects have provided evidence for their irrelevancy. Certainly, the profession of architecture will continue, but not at the same level of design control it has enjoyed in the past and definitely not to the level of control most professionals and academics would believe to be beneficial for the public and the built environment. Additionally, an exorbitant amount of money has been made by developers at the hand of architects, who seem content to allow the current trend to continue. This, however, has proven to be catastrophic to the built environment, as contractors and clients lack the knowledge of creating enjoyable spaces that architects work for years to perfect. As the architect becomes further removed from the actual developing and construction of buildings, design-driven decisions are exchanged for economic-driven decisions. This ideology is exactly what John Portman, architect/developer admonished in his book, *The Architect as Developer,* when he reprimanded the real estate industry and developers for producing an inferior product. Since developers are the major force shaping our built environment, Portman believed that they should be subjected to building responsibly, as this would combat the (then) current scenario of developing carelessly to receive a quick profit.[4] The conventional structure

4 Portman, John, and Jonathan Barnett. The Architect As Developer. New York: McGraw-Hill Book Company, 1976. 7.

of a development would be that the owner of the land (or the developer) deals with the architect, who in turn deals with the contractor. While this may seem like a logical process, the reality is that an incredible amount of communication is necessary to "grease the gears" and make the process actually yield its intended result. While this may have sufficed in former years, it has lead to the current dreary state of the built landscape and should be rendered obsolete.

The other role, most preferred by architects, has been to act as the master builder. Merriam-Webster defines master builder as: "a person notably proficient in the art of building: one who has attained proficiency in one of the building crafts and is qualified or licensed to supervise"[5] This role is typically associated more with antiquity than anything else and seems archaic to most. Certainly, this is understandable, since as early as 2600 B.C., Zoser (an early pharaoh) commissioned Imhotep to design/build a stepped pyramid in Saqqara.[6] Other examples are readily available, however, of master builders operating in the modern era, from Brunelleschi to Thomas Jefferson, and even Frank Lloyd Wright.[7] While this function is certainly more desirable for the architect, it has become dated, as few clients will deal exclusively with an architect. Perhaps this is the result of the fact that architects have allowed themselves to slip from being proficient in the art of building, to being proficient in the art of designing a building, something that, Philadelphia-based firm, Onion Flats calls, "the profession of architecture". Tim

Print.

5 http://www.merriam-webster.com/dictionary/master%20builder Web. 17 Sept. 2012.

6 Kostof, Spiro, and Greg Castillo. A History Of Architecture, Settings And Rituals. 2nd ed. New York: Oxford University Press, USA, 1995. 71. Print

7 Grant, Donald P. The Small-Scale Master Builder: Selected Readings on Professional Practice as an Architectural Designer - Builder - Investor at the Personal Scale. San Luis Obispo: The Small-Scale Master Builder, 1983. 8-9. Print.

McDonald, principal and cofounder of the firm notes correctly:

> A profession, architectural or otherwise, invokes first the institution, not an individual's active mode of being within a community of others…The discipline of architecture, however, is less certifiable, more uncomfortable because it is always in question and incessantly judged. It refers to one's working method, one's 'serious play', one's continued and rigorous questioning of the very doctrines which are professed in any institution. Strangely enough, one may be considered part of a profession and never question one's relation to it's discipline.[8]

Disjointed Interests

Certainly, external forces have affected this degradation of the profession of architecture, as well (codes, zoning, etc.) and have helped to create the unfortunate situation in which architects now find themselves. In addition to these external forces, budgetary constraints are also a large, if not overwhelming, reason that mediocre building often happens in the first place.

Design vs. Budget

In the academy, designers are operating within a vacuum, often free of any kind of budget or other real-world constraint. This freedom provides incredibly interesting, distinct designs that the built environment would be lucky to have, however, as soon as those same designers enter the pragmatic world, their designs become slave to the almighty budget. This sudden interaction with a misunderstood component of the design

8 www.onionflats.com/plumbob/ Web. Oct. 2012. Emphasis added.

process inevitably leads to a poorly executed design that caters more towards meeting the bottom line rather than aspiring to creating meaningful spaces and buildings. While architecture must reconcile itself to even the most pragmatic portions of practice, it has, perhaps, catered too much towards such things and not enough towards other, equally important elements, such as: equity, identity, density, industry or environment. Good architecture can be defined 1,000 ways by 1,000 different people, but for the sake of this thesis, it can be best understood as a design that is not exclusive to one of the aforementioned issues, but responsive to many of them (and countless others) that are confronting it within it's context. Simply put, "bad" architecture is only focused on one element of design.

Societal Concerns vs. Convenience

Considering this disregard of other dependent factors, it is rather obviously seen that societal concerns are often one of the first things knocked off of the priority list. For the same reason that good design is often not accounted for in real estate developing, societal concerns are also not acknowledged nearly as much as they should be. Rather than considering the importance and significance that a building can have on the built environment, developers build irresponsibly simply because that is the model that already exists. One would be severely challenged to make a convincing argument that strip malls and other insensitive building types are improving or responding to societal concerns. However, when the architect can also be the developer, design and societal concerns no longer have to be entirely subject to the budget and convenience.

The Present Dilemma

This problem prompts a question, if the former role of architect as master builder is unlikely to emerge again, and the current of role of architect as secondary to the contractor and client is responsible for the current, dismal state of building, then what options are left for architects? This has been a question that many have avoided due to the over arching implications it may have in the architectural profession, because for as long as architects have existed, they have served a client. The only viable option left to restore architects to a place of prominence in the building community and to ensure a better built environment is for the architect to become the client. Such an incongruous suggestion causes many architects to become uneasy, just as any idea that will upset the status quo will be received with contempt. John Portman was practically run out of the AIA for doing this very thing decades ago.[9] While things have become far easier in recent decades, a stigma still exists in the architectural profession about architects serving as developers. In reality, nothing is going to stop properties from being developed, the issue is with who is developing the properties. Jonathan Barnett notes, “Although the real estate industry is the major force shaping our surroundings, it has done little to recognize its responsibility to the environment. With some honorable and infrequent exceptions, developers have been selling the public a very inferior product.”[10]

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9 http://www.gpb.org/television/john-portman. Web. 18 Sept. 2012.

10 Portman, John, and Jonathan Barnett. The Architect As Developer. New York: McGraw-Hill Book Company, 1976. 7. Print.

CHAPTER III

A SOLUTION

The Architect as Developer

In order to combat this destructive slide into a mediocre built environment, architects must find a new outlet for their subversive talents. Barnett notes, “The art of architecture and the practical necessities of real estate are not necessarily antagonistic.”[11] Barnett begins to uncover the need for a hybrid role to fill the aforementioned void. One possible small step to take towards a solution to this problem could be through a mixed-use development I propose in Boston, Massachusetts. This development project will not only look into producing a beautiful, sustainable and socially-responsible building, but also demonstrate that these concerns are not mutually exclusive from good business and the “practical necessities of real estate” that Barnett noted. The goal is not to produce a design that can solve all of the problems mentioned earlier, but to demonstrate the viability of a system than can have widespread impact.

The proposed development will occur on 112 Broad Street in Boston, Massachusetts and will be programmed to maximize profitability simultaneously with user-experience. This can be accomplished due to the site selected, which fronts the Wharf District Park, a recent development that fills the void left by interstate 93 which was plunged underground during the “Big Dig”, and also has phenomenal views of Boston Harbor. Such a prime location will not only create a memorable experience for the users of the building, but will, naturally, lead to increased profitability. I fully expect to show that good

11 Portman, John, and Jonathan Barnett. The Architect As Developer. New York: McGraw-Hill Book Company, 1976. 7. Print.

architecture can increase profits as well as improve all of the other factors that society deems important. To take advantage of the opportunities held within this unique site, a restaurant/cafe will occupy the ground level in order to create a commercial space with maximum accessibility and, thus, maximum profits. This decision will also help bring activity into the financial district, which has a tendency to become vacant after normal business hours. By including commercial program strategically, this small piece of the financial district will gain a more active/profitable nightlife and add character to an already rich urban fabric. In order to level the balance sheets, office space will occur above the commercial level and occupy the entire second level. This helps solve several inherent problems with developing mixed-use projects: firstly, it brings in tenants immediately that can help to bear the financial burden while the condominiums are selling, and secondly, it builds familiarity with the building, as a sort of free advertisement. By adding another layer of commercial use, I ensure that the building has even more regular use during the day, which will be complimented by the third portion of program, the residences, in that one will be active while the other is vacant, producing a building with constant use.

The residences make up the largest portion of the program, inhabiting six levels above the office space, and will be rented during the first five years of the building existence and then put on the market to be sold, if the current residents refuse to buy. This allows for much-needed cash flow during the first five years and also helps due to the rising value of the newly developed real estate. This method is preferred among developers due to the economic benefits, but can also help with architectural concerns as well. By the architect acting as developer, more of the unspent capital can now go into the design of the building rather than the pocket of someone else, the developer. This architectural benefit would be coveted by nearly any practicing architect, and it is only

possible through the architect playing both roles. In addition to the fiscal benefits the residences will offer, they also will boast some of the best views in the city, as well as impeccable design and proximity to popular activities.

In order for this development to occur, though, it is absolutely necessary for the architect to break free of the established means of business. Barnett notes, “Not only has [Portman] been able to take a more active role in changing the environment, but he has solved, at least for himself, a problem that has bested architects and other artists since the end of the eighteenth century, how to replace the aristocratic patron who had traditionally made it possible for the architect to do his best work. No Parthenon without Pericles, no Versailles without Louis XIV.”[12] Architects are still finding it difficult to escape from this idea of being a service-provider for wealthy patrons, and it is limiting the development of significant projects like the one I propose. Before such an enormous paradigm shift can occur within the profession, it will be necessary for architects to understand exactly what is entailed in such a development.

Greater Responsibility

Architecture is, by no means, considered a carefree vocation. With the constant threat of lawsuits and dissatisfied clients, the architect already assumes a great deal of risk without the implied greater deal of reward. In finance, in order to get greater return on investment (ROI), one must assume more risk. Thus, an investment that could potentially produce a 20% ROI will have far greater risk of failure than an investment with a 5% ROI. This basic rule of finance seems to escape the minds

12 Portman, John, and Jonathan Barnett. The Architect As Developer. New York: McGraw-Hill Book Company, 1976. 7. Print.

of most architects who, by law, bear incredible responsibility for their services (as they should). Perhaps this is due to the implied illustriousness of the profession of architecture, in that, architects are drawn to their profession not to make money, but for the assumed prestige. This financial oversight could also be due to the natural creativity of architectural practitioners who may prefer artistic freedom to financial benefits. Whatever the case is, the ratio of risk vs reward needs to be reconciled. By the architect acting as a developer, the minimal increase in potential risk is balanced out by the drastic increase in potential reward.

Greater Required Knowledge

In order to make this work in the favor of the architect and society at large, architects must gather more knowledge on this topic. Architect/developer Jonathan Segal has taken on this challenge personally by creating a series of workshops entitled “Architect as Developer,” in which he outlines and shares his knowledge of this process online and in seminars across the country.[13] The nine sessions include everything from loans and pro forma’s to escrow and title insurance, topics about which architects are sorely under-educated. This knowledge is what will make all of the difference in whether or not an architect succeeds or fails as a developer. Learning from someone like Jonathan Segal, who has developed properties all over San Diego can be an invaluable experience, especially when one considers the drastic lack of knowledge most architects have about such issues.

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13 Architectasdeveloper.com Web. Oct. 29.

Improved Design Control

While additional responsibility and knowledge are both required for a successful career in development, the benefits are immediately recognized. Developing properties as an architect will lead to improved control over the design of the project. Whether developing a high-rise tower, or a housing development, the architect will now posses unprecedented control over the design of his project. This is, perhaps, the most exciting benefit of the architect taking on this new role. As I mentioned earlier, I believe young architects obtain some of the most rigorous academic training and, as a result, have the ability to design remarkable buildings. Once those same architects go through the trouble of assuming extra risk and increasing their knowledge base, they should certainly reap the benefits. Part of the beauty of the architect-developer is that one now has the freedom and authority to design independent of the constraints of a client with preconceived notions. While some would correctly point out that it is the communication between an architect and his client that can cause a project to truly succeed and be beneficial to both parties, it is often understated in such cases that the client must be educated to understand the same complexities of design that it takes architects years to gather. In addition to this, the architect often earns a small percentage of the building's bid price, thus decreasing the incentive for the architect to provide something extraordinary. The freedom gained from this new role will allow more architects (who are rigorously training for years on how to improve the built environment) the tools necessary to see the required changes come to pass. If an architect is concerned about the sustainability of his city, he now has the freedom to emphasize that within his design without being questioned by a board of directors. It cannot be overstated that the limit of the model of the architect-developer rests on the individual herself, in that, her concerns, interests and goals will be what are emphasized in the developed building.

Improved Income

When the fiscal incentive is accounted for, it is now possible for an architect to participate in truly critical work. The enticement of increased income often is the catalyst for better design to occur. Now, there is the possibility for “aesthetic” decisions to be made. Rather than trying to achieve the greatest ROI, architects are now free to experiment with formerly exclusive technologies, design strategies that had been inaccessible due to budgetary constraints or convenience. In the past, the developer had been mostly concerned with achieving the largest immediate “bottom line” and had thus failed to pay proper tribute to good design and societal concerns. In this new role, the architect will no longer be questioned by a client about whether a decision is “aesthetic” and if it is absolutely necessary or not. The amount of additional capital to be reinvested back into the project or to be kept as income is entirely up to the architect-developer, which is a privileged position few architects have ever occupied.

Socially-Focused Design

In addition to streamlining design decisions, architects are now also able to consider society at large and plan for a space that will actually improve the various facets of society. Whereas the developer is not necessarily concerned with these facets, the architect certainly is, and has been trained to think this way. These considerations taken by the architect-developer will vastly improve several aspects of society and provide a far better built environment.

Consider the Street

One aspect in particular that developers often fail to consider is how the property being developed will interact with the street. While it may seem like everyone wants an enormous green sea between their house and the street, it is actually harmful to certain social dynamics of that neighborhood to separate the house from the street. The same can be said for other types of developments that occur, where density and compact living are exchange for spaciousness and solitude. Rather than allowing the users of the architecture to respond to what is happening on the street, many developers are content to place the building wherever will maximize profits and limit liability. While this may make fiscal-sense, it cripples the fabric of the city/neighborhood where the development occurs. The architect-developer, however, is trained to consider the street and embrace coexistence with it.

Consider the City

In addition to this lack of consideration for the street, is the lack of consideration for the city at large. The effects of suburban development are well documented, and the strains they put on municipal systems are massive.[14] When development considers the city, it will develop property more responsibly and sustainably, resulting in an improved social experience of architecture.

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14 Vtpi.org Web. Oct 29.

Lack of consideration for any of these factors, and the newly developed project will fall short of it's full design potential. For any project to actually get built, it must confront the economy. The role of the architect-developer is not intended to be a shortcut around all of the issues that architects don't want to deal with, but rather serve as a more efficient means to a more preferred end. In light of this, economy and fiscal responsibility is not something to be dreaded or worked around, but rather an opportunity to demonstrate dependability.

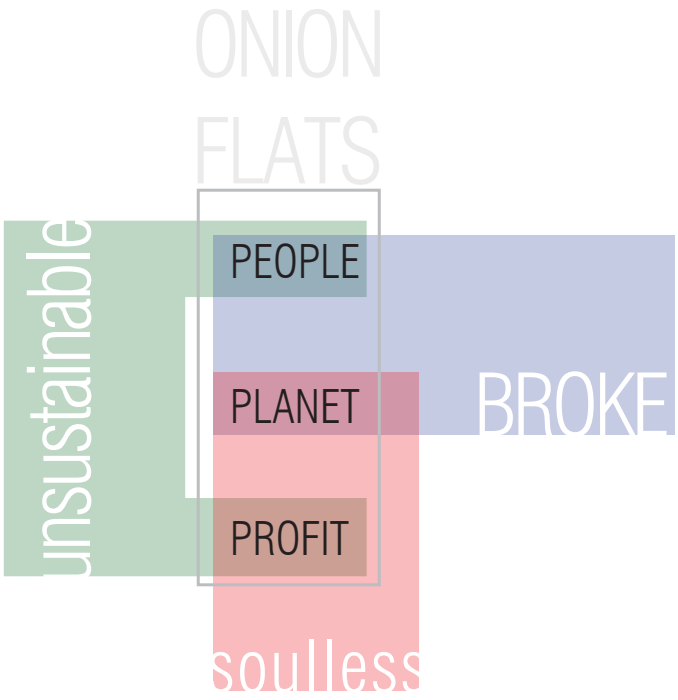

Figure 3: Diagram showing key values of Onion Flats

Consider the People

Whereas developers concerned only with financial gain won't make design decisions based on a user experience, an architect-developer makes it one of his primary concerns to create a space that is comfortable and appropriate for people to occupy. Tim McDonald of Onion Flats describes this as one of the "3 P's": Planet, Profit, People. At Onion Flats, they believe that in order for a work of architecture to be successful, it must address the planet, profit and people. "Planet" can be understood as architecture being sustainable; "Profit" as a work actually having financial benefits; and "People" can be taken to mean that all architecture must be fit for human occupation and enjoyment. Without this constant catering towards people, architecture will inevitably become soulless and bleak, lending itself more towards strip malls than desirable spaces. Obviously, there must be some benefit to this sort of bleak building process, because the built environment is filled with innumerable examples. Rather than investors being the only beneficiaries though, the buyer, seller, investor and designer are benefitting greatly from the work of Onion Flats.

CHAPTER IV

RESULT

Town Cove Lofts

In that same spirit as the work of firms like Onion Flats, I am proposing a mixed-use development along the Greenway in Boston, Massachusetts. This project is meant to serve not as a singular solution to this complex issue, but rather as one possible solution that exemplifies all of the benefits of the architect as developer model.

Site

To begin, I explored several sites in the Boston area, knowing that I would be looking to develop a building on one of them that could best make the case for using the architect as developer model of design. Starting there, I started to exclude certain sites that I believed would make it too easy to accomplish what I am proposing. It is my goal to make this model as viable as possible in the most difficult of circumstances to demonstrate that it can be done nearly anywhere. In light of this, I selected a site in the heart of Boston, that borders the Financial District and has a triangular shaped footprint. While other sites that were once considered offered less expensive land, fewer building

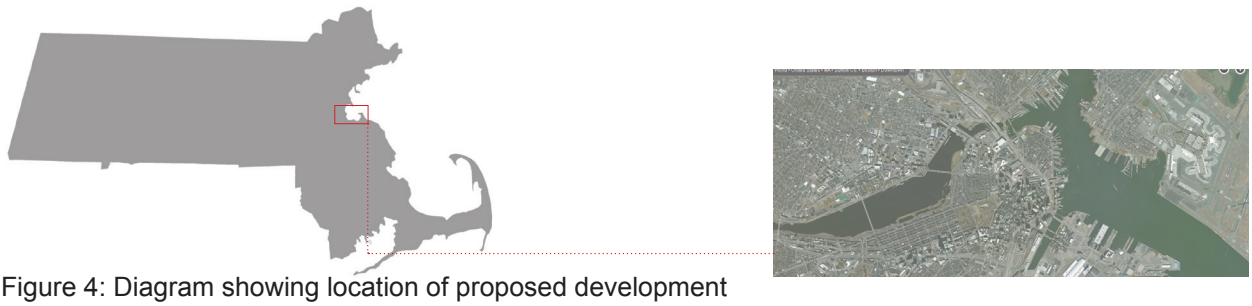

Figure 4: Diagram showing location of proposed development

restrictions and a more buildable plot of land, 112 Broad Street had the potential to best show that this business model is applicable even in seemingly unprofitable situations.

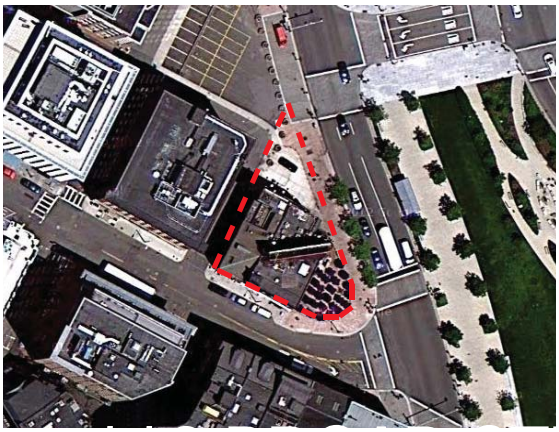

Figure 5: Proposed site

This site may, at first, seem to offer more constraints than it does potential, but I firmly believe that the most difficult constraints often turn into the greatest opportunities. Some of the constraints inherent to this site are as follows: a triangular plot of land, difficult code restrictions, specific guidelines for building along the Greenway, awkward solar orientation and having to negotiate sharing the site with a building that is on the Historic Registry.

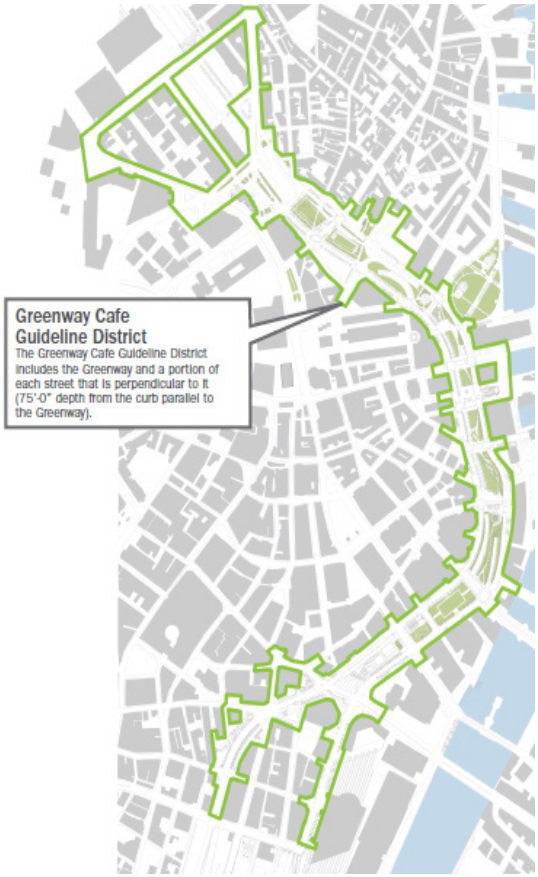

Figure 6: Area subject to the Greenway Guidelines

To ensure that my proposed building would be well received by the city, the public and potential buyers, it was imperative to see what was already existing within downtown Boston and then to supply the demand that was not being met. Appendix II shows several studies

that were done to determine what would be the best function of this building. In the end, it became apparent that a mixed-use, mid-rise building would offer the best product to the city. The ground level would need to respond to the demand for retail space and also respond the Greenway Guidelines which state that all new developments along the Greenway need to have a generous cafe or restaurant space that can program the outdoor space.

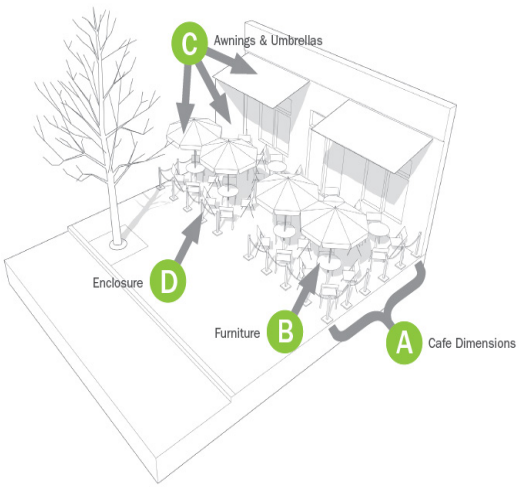

Figure 7: Cafe regulations outlined by the Greenway Guidelines

Anyone who has ever built a mid-rise or high-rise will agree that the first step in designing must be parking. Without having a clear understanding of how parking will work, it is impossible to begin to put a building together. For this project, it soon became apparent, however, that underground parking would be impossible. Due to the limited access to the site, and the small 90' x 90' triangular footprint, a parking garage was ruled an impossibility. One of the benefits, however, of operating as an architect-developer, is understanding that there are many design solutions to a

Figure 8: Park Lift's stacked parking system

drastic problem such as this. By using a stacked parking system, I am able to achieve the necessary number of parking spaces with a fraction of the space a surface lot would require. Companies such as Park Lift have been designing systems for just this purpose for decades, and are able to offer competitive prices that can be offset by the space saved from adding a parking garage or a surface lot.

Since 112 Broad Street is located in the historical Town Cove District of Boston, it had to adhere to a 100’ height limitation. Upon contacting the Boston Redevelopment Authority (BRA), I was able to find that this limitation is due in large part to the newly ratified Greenway Guidelines, which place such a harsh restriction on height in order to limit shadows on the Greenway, since that could diminish its usability throughout the day. This provided me with another opportunity to operate in both the world of the architect and the world of the developer simultaneously. I proposed to the BRA that if the goal is to limit shadows on the Greenway, perhaps a building could be allowed to exceed the 100’ limit and adhere to the more reasonable 150’ limit if shadows were still minimized

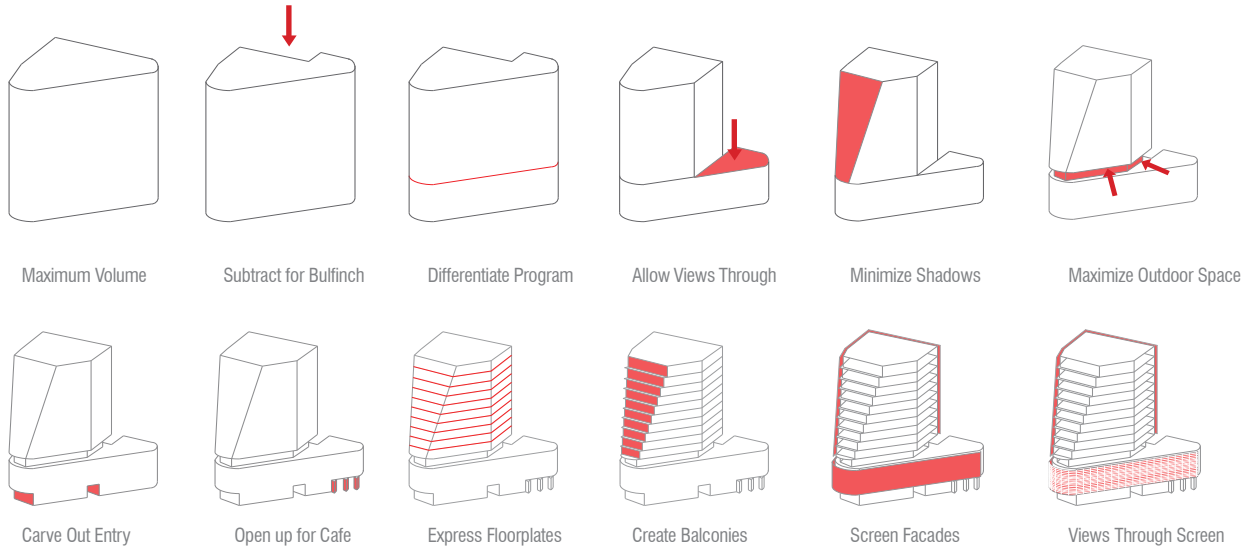

Figure 9: Formal massing moves

on the Greenway. Now, where a developer would normally build the maximum allowable building, an architect has the knowledge and experience necessary to decide where and how to shape a building. Figure 9 demonstrates, through a series of diagrams, how I have approached the formal massing of the Town Cove Lofts. The first image shows what the maximum volume would look like, and is something similar to what a developer might build on a site like this.

Figure 10 demonstrates how through some simple, strategic massing iterations, it is reasonable to say that a building of this height casts a similar area of shadow to a building that adheres to the 100’ limit.

Construction

In addition to design and development, an architect-developer is also able to have a better understanding of construction techniques and how they can affect scheduling and the overall design of the project. In the case of the Town Cove Lofts, I propose a

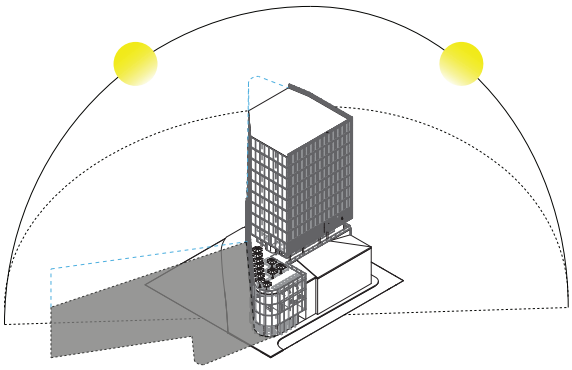

Figure 10: Sun study diagram

Figure 11: Lift slab construction technique

construction system that is easily assembled, inexpensive and provides opportunities for beautiful finishing. A lift-slab concrete structural system will allow for extremely rapid construction and also help minimize formwork, an expensive necessity for site-cast concrete. By selecting a structural system like this, I am able to minimize cost (appeasing the developer) and create various opportunities in which to make architectural statements.

This can best be seen through a series of rendered images that capture the construction process of the proposed building. Initially, steel columns are erected and encased in concrete. This step is important for fireproofing and also to minimize the diameter of the column, which may need to be oversized in other construction techniques. After this step, concrete slabs are poured on site, allowed to cure and then coated with a releasing agent that prevents one slab from bonding to another. As each slab is poured and cured, they begin to pile up. After slabs are poured, they are hydraulically hoisted into place and secured to the columns via a steel collar. After this, the core of the building is infilled, along with the other walls and the process repeats itself until the entire structure of the building is complete. At this point, the building will be outfitted and then the facade will be put in place. Lastly, the screen that prevents thermal gain will be wrapped around the appropriate facades and construction will be complete.

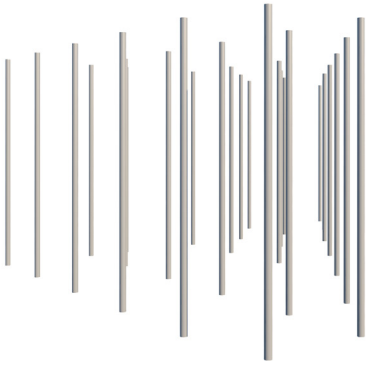

Figure 12: Concrete-encased steel columns built up in sections

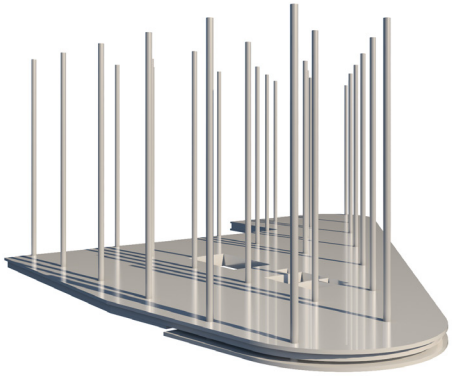

Figure 13: Slabs are cast-in-place

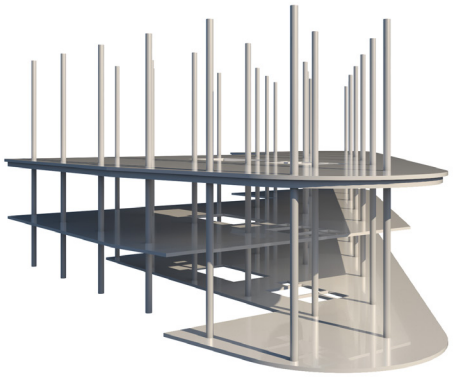

Figure 14: Slabs are lifted into place

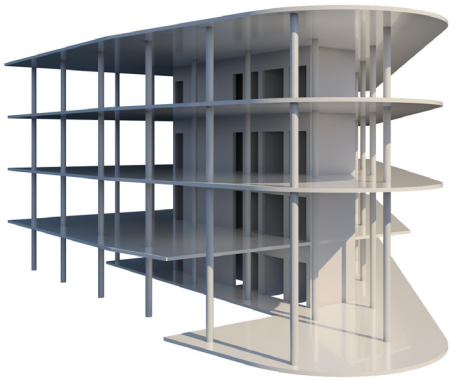

Figure 15: Core is constructed in sections

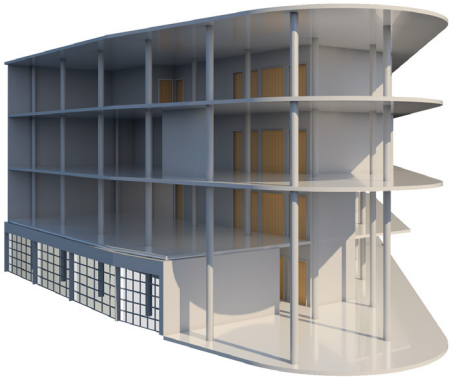

Figure 16: Non-structural walls and doors added

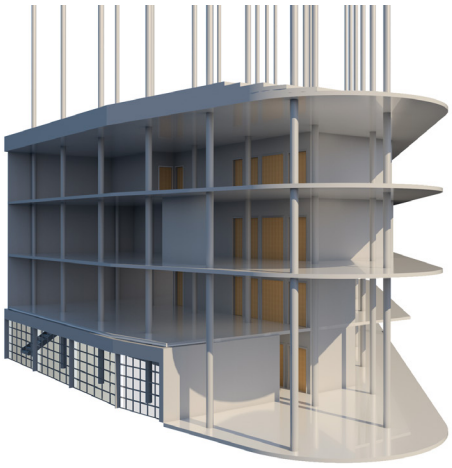

Figure 17: Structure repeats

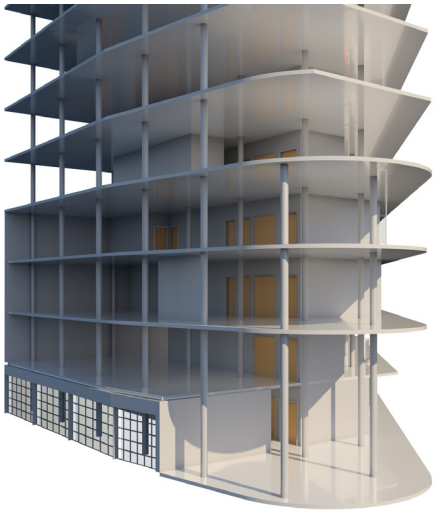

Figure 18: Upper levels are lifted into place

Figure 19: Entire building gets enclosed with glazing

Figure 20: Building is completed with ceramic screen

A Modular Solution

Using a construction technique such as the lift slab system can clearly yield benefits for the developer in the form of reduce cost, faster project delivery and improved scheduling, but it can also give the architect interesting opportunities to create beautiful spaces. While the first four levels of this proposed building are a mix of retail and commercial space, the upper ten levels are entirely residential, which means that there is a certain amount of repetition that could prove to not only enhance the architecture

of the building, but also to create a more lucrative development. Figure 999 below explains how a typical residential floor will operate. Essentially, all of the space is contained with two concrete slabs that are offset 10’ 6” from each other so that the lofts can be advertised as having 10’ ceilings, largely considered a luxury. Within these two, bounding planes of concrete, prefabricated modules are craned into place and serve as definers of space. The modules eliminate the need for “dumb walls,” and actually house program within themselves in all cases. These modules not only contain a space, but also separate off parts of the unit from each other, designating a living space from a sleeping space. So, by using only four programmatic modules and three shelving modules, I am able to remove nearly every instance of a custom built wall, dramatically reducing cost and simultaneously creating interesting architecture.

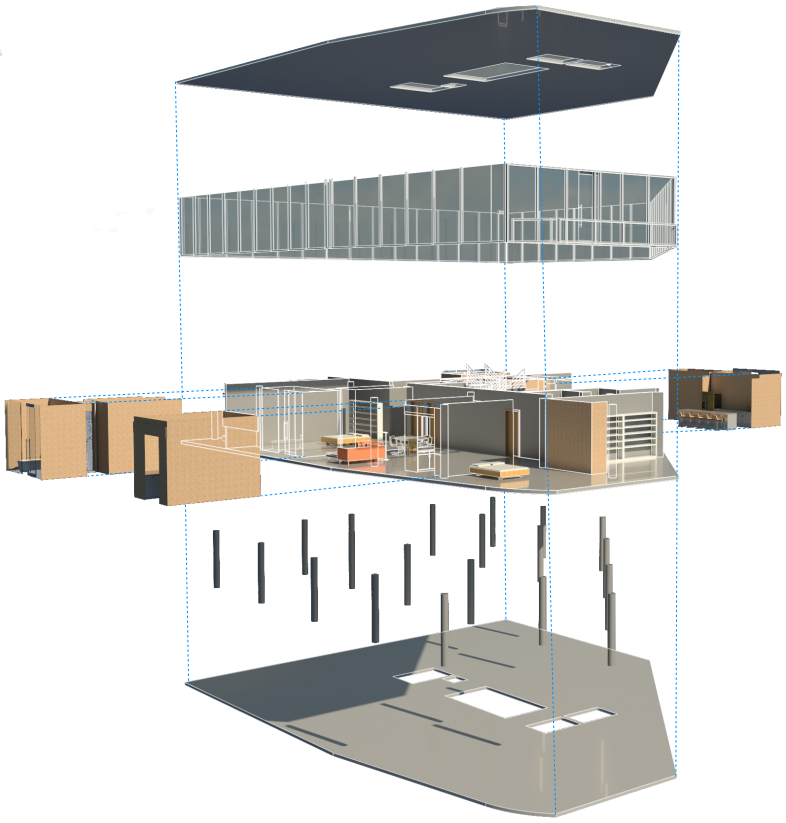

Figure 21: Exploded axonometric of residential level

This catalog, of sorts, demonstrates that with a limited number of parts and pieces, several different spatial layouts can be accomplished, resulting in a customized feel that was actually prefabricated. It also allows for an openness of the space that would be impossible otherwise. This can be seen best in figure 24

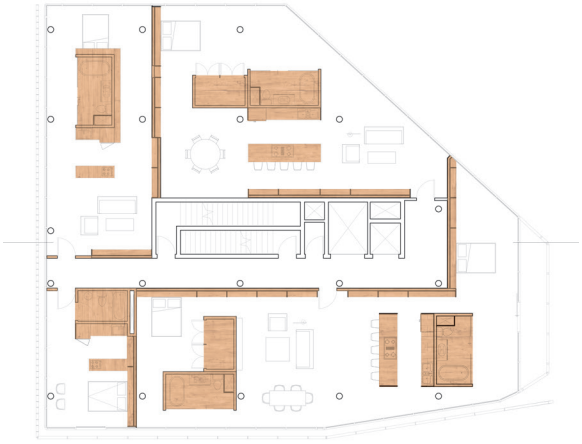

Figure 22: Level 6 - Typical residential

Figure 23: Catalog of Modules

Figure 24: Interior view of large, residential unit

that shows the simplicity of the proposed spatial organization. This organization is simply two planes of concrete with a white oak-clad module inhabiting the space in between. A wall section drawing, seen in figure 26, exemplifies this idea and helps to reiterate the architectural richness of this method as well as it's simplicity and ease of construction.

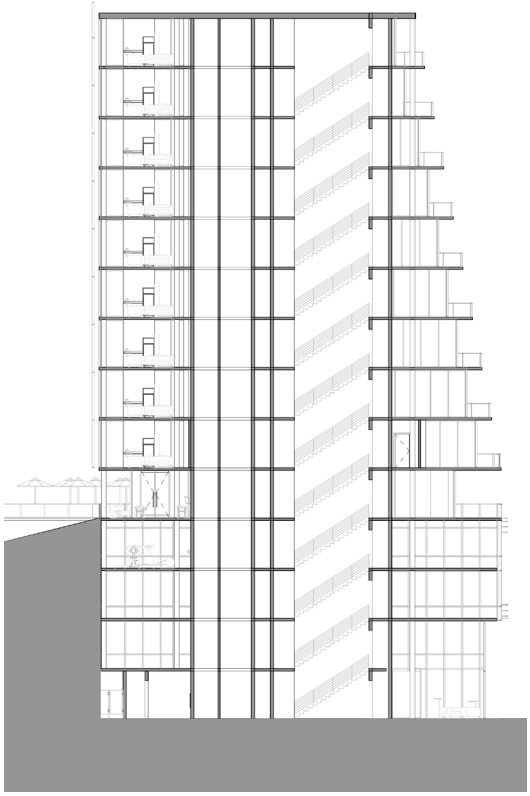

Figure 25: Section through building

In order for the traditional role of the architect to be transformed into the role that I propose, architects must transform their way of thinking. No longer are they supposed to struggle against the will of the client or the

Figure 26: Wall section through residential unit

poorly conceived plans for a city, but rather they are meant to be a chief proponent of the city, and to provide the public with phenomenal buildings that can help shape our cities in a sustainable, meaningful and beautiful way.

Conclusion

While the business of architecture has, for the most part, subjected itself to the whims of city officials and clients, the talent, work ethic and instincts of good designers has waned very little. It seems that architects talents, while vast, honed and useful have become secondary to growing a design business. This is not to blame anyone, but rather to expound on how architects may have gotten into the situation in which they currently find themselves. The only thing keeping architects from designing beautiful, responsive projects is that they lack the financial knowledge and the connections necessary to see construction occur. Once able to bridge that divide, architects will have additional freedom to design according the spirit of the city ordinances, rather than the letter of the law, they will have an open-ended income, and a chance to see their projects actually built.

In addition to these benefits, architects must also be willing to procure additional responsibility. Financial responsibility is only one of the factors that must be weighed when one looks to develop their own projects. Design excellence must continue once the architect-developer role has been assumed, or the built environment will remain largely unchanged and continue to slip farther into a world of strip malls and faux-stucco shopping centers. While this presents some large obstacles that many will refuse to bear, the rewards (both financially and architecturally) will be great and could possibly affect the way that our profession operates from now on. Figure 27 shows that

a profitable building no longer has to be value engineered and lose all design value, but that it can take a beautiful form that is both affordable and meaningful. Rather than being concerned with a clients wishes or the bottom line, perhaps architects should begin asking how they can better serve the built environment and their own wallets.

Figure 27: Exterior view

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Figure 2: B2 at Atlantic Yards. Rendered Image. *http://www.shoparc.com/#/projects/all .* Accessed 10/23/2012.
Figure 3: Graphic created by author
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Figure 5: Map of Boston. Satellite photograph adjusted by author. *http://www.google.com/maps* . Accessed 11/2/2012.
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Figure 8: "Independent Access Parkers G63". Graphic. *http://www.parklift.com/Independent-Access-Parkers-product.php?product_id=18* . Accessed 10/17/2012.
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Figure 24: Graphic created by author
Figure 25: Graphic created by author
Figure 26: Graphic created by author
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Figure 30: Exterior view of Jackhammer. Photograph. *http://farm4.static.flickr.com/3628/3377413440_3f62b859d5.jpg* . Accessed 12/2/2012.
Figure 31: Floor plans of Jackhammer. Drawing. *http://www10.aeccafe.com/blogs/arch-showcase/files/2011/04/jackhammer_11.jpg* . Accessed 12/2/2012.

Figure 32: Garden Street Lofts. Photograph. *http://www.shoparc.com/file/759.jpg* . Accessed 12/2/2012.
Figure 33: Garden Street Lofts Interior. Photograph. http://www.shoparc.com/#/projects/all . Accessed 12/2/2012
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Figure 35: Map of Boston. Satellite photograph adjusted by author. *http://www.google.com/maps* . Accessed 11/2/2012.
Figure 36: Map of Boston. Satellite photograph adjusted by author. *http://www.google.com/maps* . Accessed 11/2/2012.
Figure 37: Map of Boston. Satellite photograph adjusted by author. *http://www.google.com/maps* . Accessed 11/2/2012.
Figure 38: Map of Boston. Satellite photograph adjusted by author. *http://www.google.com/maps* . Accessed 11/2/2012.
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APPENDICES

APPENDIX I: CASE STUDIES

After a design has incorporated all of these factors, a certain level of design excellence and societal enjoyment should be the result. The following work by these firms shows exactly that.

The Q: Economically Driven Development

In order to combat the inferior product that has been sold repeatedly to an ill-educated public, certain architects are taking responsibility and creating significant works that reinforce urban fabric. Jonathan Segal has been doing exactly this for 19 years, and has recently completed a building that does exactly this. The Q, named for the genius

Figure 28: The Q, San Diego, by Jonathan Segal

of gadgetry in James Bond movies, has brought Segal some attention in recent years from periodicals such as *Architectural Record* and *Entrepreneur*. Originally designed as a mixed-use office building, but later changed to mixed-use residential lofts (thanks to the downturn of the economy), Segal has created what can be thought of as an adaptive reuse project. In order to allow the building to have a life throughout the day, Segal raised the residences above a generous ground floor that houses two restaurants and a café, allowing for maximum commercial exposure. In keeping with the purpose of a loft, several of the residents actually live and work there, creating a remarkable sense of ownership, which, according to Segal is good business. As an architect-developer, Segal uses his design proficiency to capitalize on potential economic value by understanding that (1) tenants will pay good money for good design and (2) that good design does not have to be expensive. Segal notes, “We offered something different, not boxes punched with holes, not transplanted suburban homes, but places that capitalize on the city experience” The Q, succeeds for several reasons, most notably, it is well incorporated into the Little Italy neighborhood of San Diego, but it also

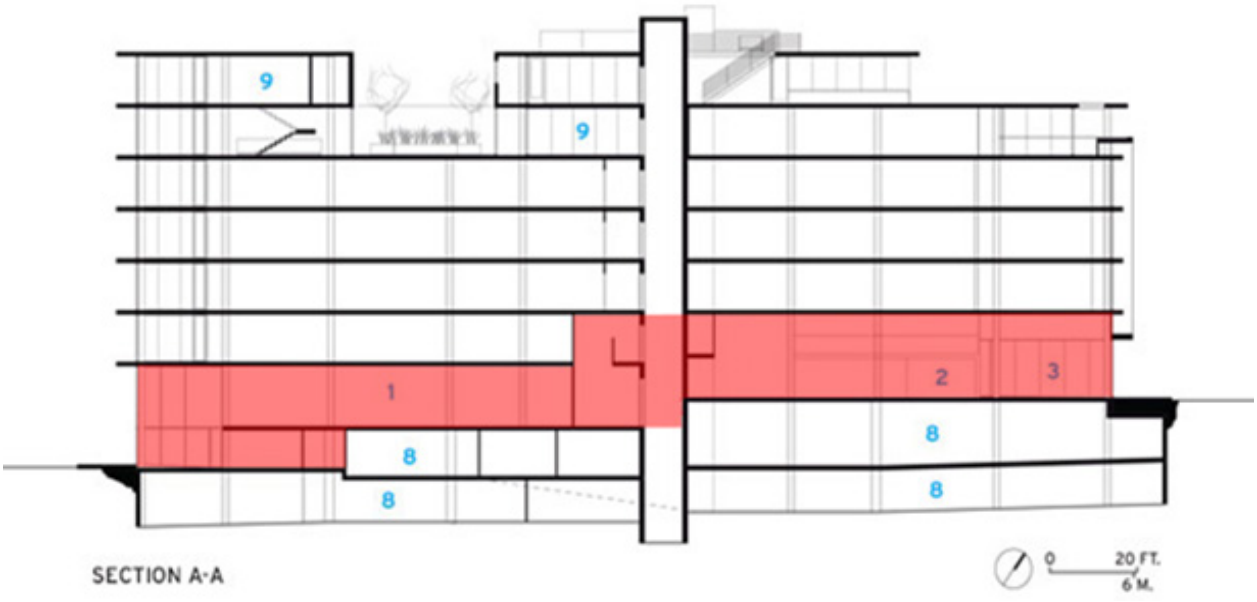


Figure 29: The Q, highlighted commercial space maximizes the economy of the ground floor

locates itself close to jobs, features beautiful design, offers unparalleled views of the San Diego skyline and the harbor and, ultimately, had every space leased instantly. Costing just over $120 per square foot, this $11 million dollar building will hopefully serve as an example of beneficial architecture, and show that good architecture can not only improve a neighborhood, but also bring the architect significant profit. Segal differentiates himself from other architects in his profound understanding of the business of architecture and development as well as his excellence in design. Most architects are capable of producing similarly interesting work, but lack the economic knowledge and understanding that Segal has mastered.

Jackhammer: Socially Focused Mixed Use Development

Located on Belgrade Street in the largely residential neighborhood of Fishtown in Philadelphia, Jackhammer represents Onion Flats' attempt at developing a formerly

Figure 30: Jackhammer, by Onion Flats

under-performing corner site into an instrument for neighborhood change. Before it was completed in 2008, 636 Belgrade Street was known in this area of northern Philadelphia as a “significant drug dealing corner property”. In 2005, it caught fire and was demolished, opening it up for development by the McDonald brothers and the rest of Onion Flats, who felt that it was important to try to inject life back into this neighborhood (in which most of their projects occur, and where they reside), and restore a sense of community. To accomplish this, they maximized the small site (only 700 sf) with a light-filled commercial ground level and basement, and a residence above on the 2nd and 3rd floors.

Onion Flats is also known for their work in on-site rain water collection/filtration and stunning green roofs. While this project is far smaller than I will be exploring for my thesis, it represents certain principles that can be carried through any mixed-use design.

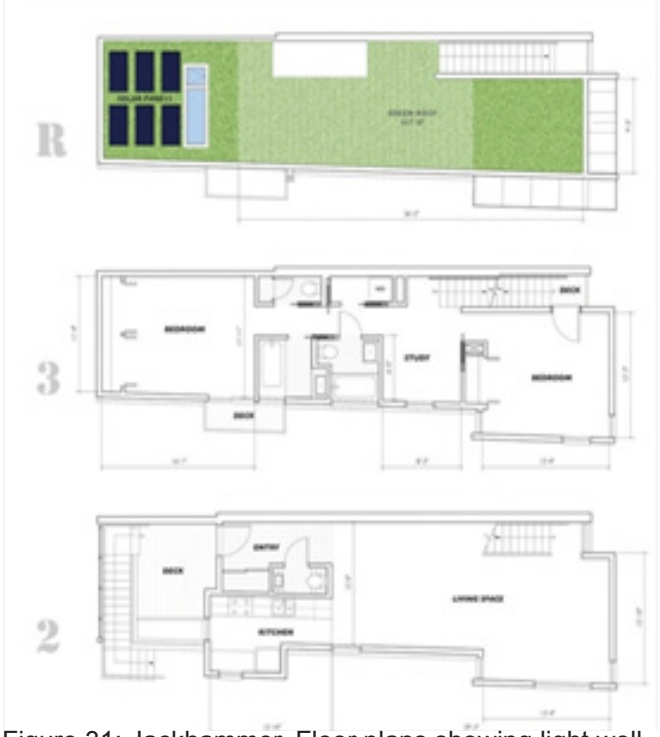


Figure 31: Jackhammer, Floor plans showing light well

Through their maximization of what they had, they were able to create a beautiful development with enough square footage to be profitable, and enough good design to allow for a light well to invigorate the ground level commercial space. Their design contribution has not only helped to reinvigorate the neighborhood of this project, but has done so in an exquisite way, bringing beautiful design to

a hurting place. By creating a mixed-use development, they additionally bring money back into the neighborhood, which, when accompanied with the increased profits the city will receive helps to understand the communal benefit of the work of the architect-developer. This project, just like any other, was required to be profitable, or it would not have even been explored as a development, so one can be certain it yielded acceptable returns.

Garden Street Lofts: A Condominium Conversion

In November 2009, SHoP architects completed yet another beautiful development near their headquarters in New York City. This time it was a high-rise residential building in Hoboken, NJ whose renovation and conversion from a warehouse to luxury condo's would earn SHoP another LEED Gold certified building. Forced to bridge the gap between two historic buildings, SHoP chose to inject a contemporary 35,000 sf addition to accomplish this and then to carve balconies and openings out of the mass to flood the interiors with light. In all, they were able to add 30 residences, which range from 1,000 to 2,500 sf and include a ground level retail space. This project is far closer in

Figure 32: Garden Street Lofts, by SHoP

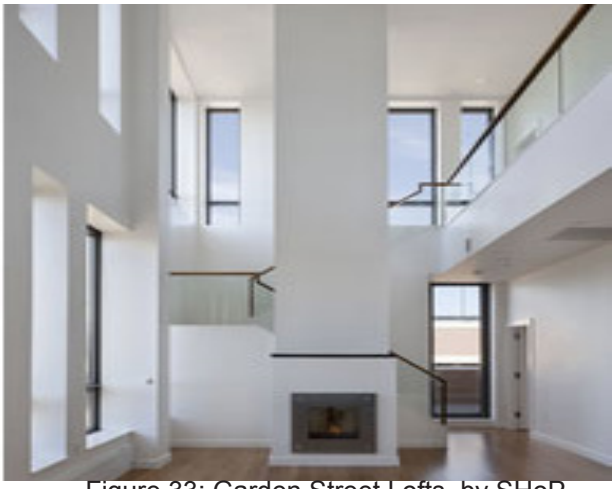


Figure 33: Garden Street Lofts, by SHoP

scale to what I will be working with on 112 Broad Street. In addition to scale, it also dealt with how to react and respond to historical buildings on it's site rather well without destroying the scale or feel of the neighborhood in which it found itself. While SHoP believes in being profitable, they never sacrifice architecture to accomplish the greatest possible profit. By allowing some room for "wasted space", they are able to create beautiful double-height spaces that capture incredible views and light.

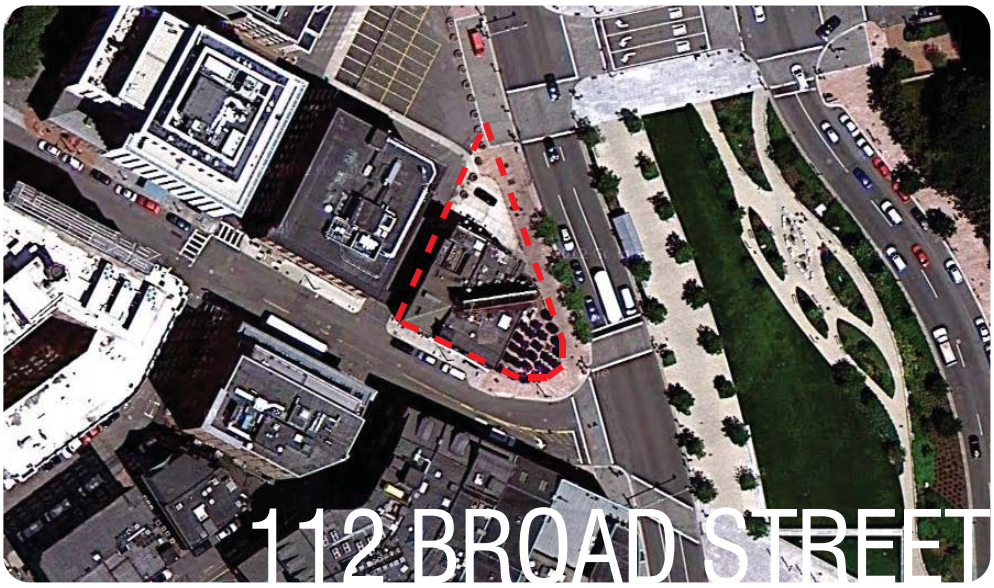
SHoP has long been a proponent of the architect-developer business model and have seen incredible architecture built because of it. This case study, in particular, shows that at least other people are thinking about these same issues and are approaching them with the mind of both designer and developer.

Conclusion

The idea that a significant work of architecture can impact a neighborhood socially and bring profit to the architect-developer creates a lucrative situation for any designer. In addition to these case studies, my proposed development described earlier will also accomplish this. 112 Broad Street is a good example of why architects should also serve as developers, in that it will accomplish architectural significance by focusing on urban design issues as well as yield high returns for its developer. The following site analysis and site synthesis are to serve as sketches that embody the idea of this proposal, capturing the essence of this mixed-use development.

APPENDIX II: 112 BROAD STREET

Site Inventory



Financial District
North End
Circulation
Views from Site
Views to Site
Site
Bulfinch Warehouse

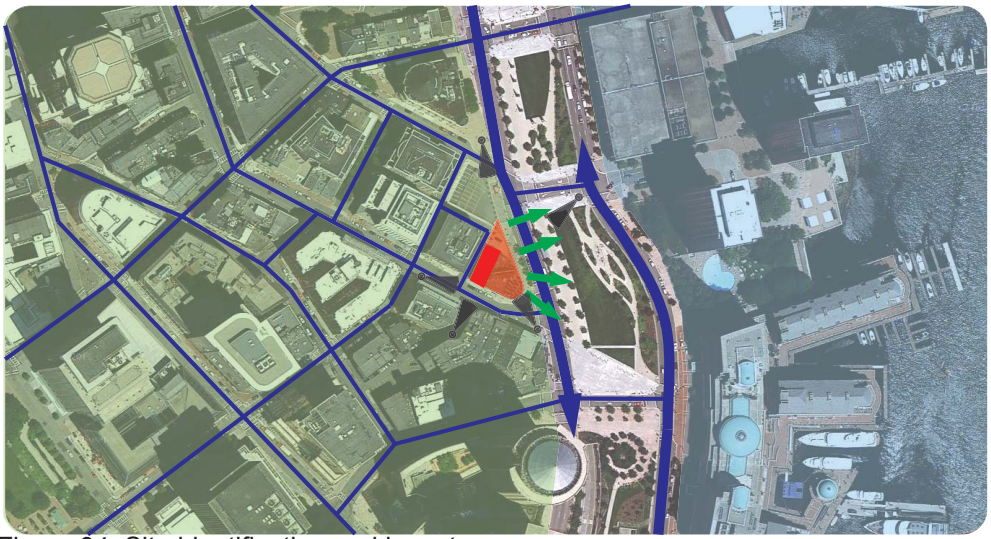


Figure 34: Site identification and inventory

Site

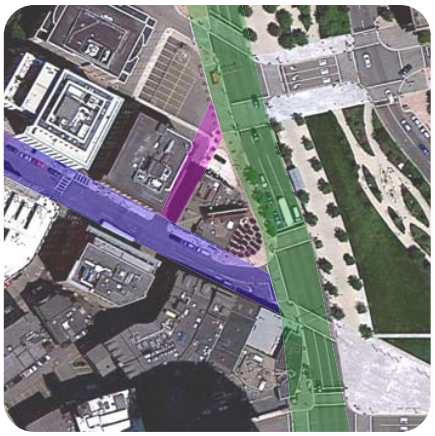
Green space and gathering areas

Major circulation routes

Grocery within a 5 or 10 minute

Neighborhood

Figure 35: Site analysis



Primary, secondary and tertiary frontages

Large massing vs. small massing

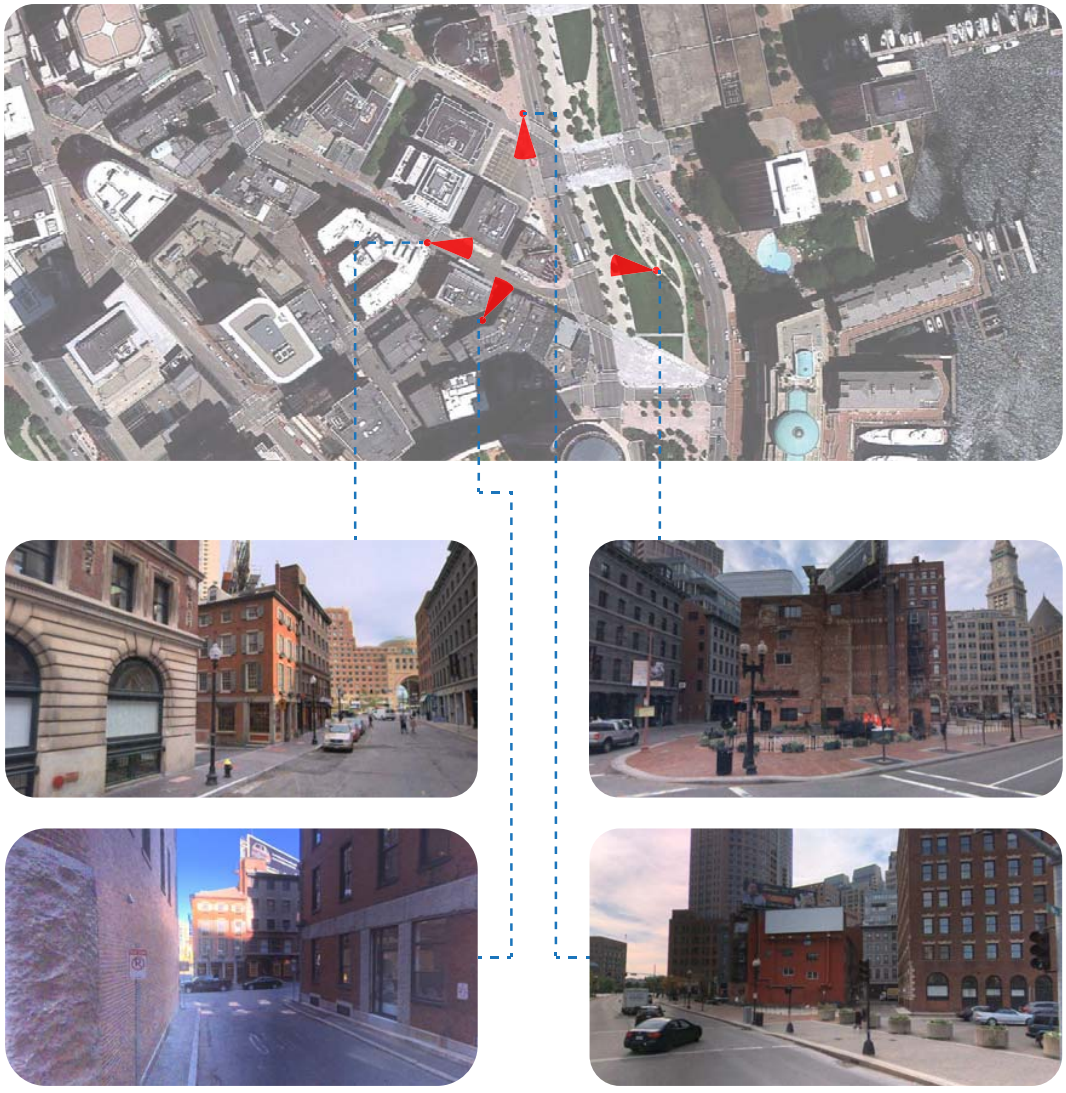


Figure 36: Site analysis

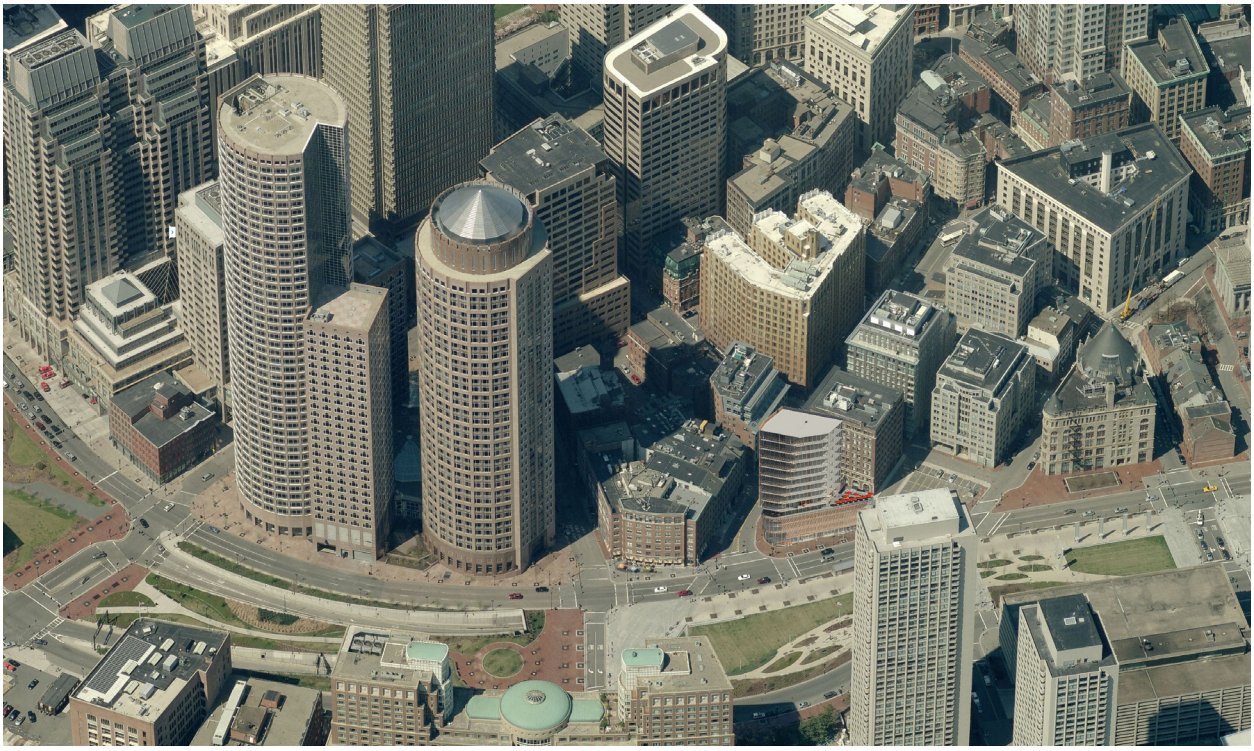


Figure 37: Modeled site with surrounding context

VITA

Samuel Funari is from Easton, Pennsylvania and moved to Knoxville, Tennessee in 2009 to pursue a Master's Degree in Architecture from the University of Tennessee. He earned a B.A. in Architecture from Lehigh University in Bethlehem, Pennsylvania and has been researching issues of humanitarian design and questioning the traditional role of the architect since his admission into the graduate program at the University of Tennessee. During his time at the University of Tennessee, Samuel has served the College of Architecture and Design as a graduate assistant for several architectural history courses and was the recipient of the 2010 Dean of the College of Architecture scholarship.

Upon graduation, Samuel hopes to relocate back to New England with his wife Amy and pursue licensure as an architect, eventually founding his own practice that will specialize in mixed-use development in urban settings, allowing him to practice as both an architect and a developer.