MEDITATIONS ON SELLE GENERATOR
WORKS AND ADAPTIVE REUSE PRACTICE

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by
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INTRODUCTION

This thesis developed from an interest in historical preservation. When beginning research, and reading the definitions presented by the Secretary of the Interiors, the idea of rehabilitation or adaptive reuse was of greatest interest. This thesis created an opportunity to develop an understanding of adaptive reuse and apply the development of that knowledge using an existing structure, in this case, the Selle Generator Works.

Beginning the research, I first investigated the history of adaptive reuse. Thus, analyzing figures such as Vitruvius and Alberti and moving towards more contemporary architects whose philosophies and practices could be traced back to them. To better organize this volume of information, I created a timeline that illustrates the research gathered. Though it excludes minor contributions, it exposes the main events throughout history that shaped preservation and reuse. Beginning with Alberti, though heavily influenced by the rediscovery of Vitruvius, the documentation of architectural practice, including preservation and reuse, became a more common method of recording architectural history. Albert’s Book X, entitled The Restoration of Buildings, set a foundation from which those following him could work. Architects like Viollet-Le-Duc and James Marston Fitch took what Alberti had recorded and formed their own methodologies around it, heavily influencing the development of adaptive reuse. The historical information provided a foundation with which I could move forward, investigating the practice as it stands today.

Understanding modern practice required a survey of the most well known adaptive reuse firms, reviewing their websites, analyzing their projects and reading about their intentions.
However, this provided me with a less than adequate amount of information on how the firms are run and what it takes to create a successful adaptive reuse project. In order to better my knowledge on the subject, I had to move away from books and websites and actively meet with members of these firms. In order to maintain consistency between interviews, I created a list of questions that would be applicable to all the firms with whom I was speaking. These questions were designed to allow for comparison between these firms, who differed in both size and location. Speaking with principals from large firms, such as Paul Siemborski from Westlake Reed Leskowsky offered insight into how larger firms operate, as opposed to smaller firms such as Perfido Weiskopf Wagstaff + Goettel (PWWG) and Chambers Murphy Burge. Surprisingly, the processes undergone by firms of all sizes, was incredibly similar. Starting with an analysis of conditions and compiling a team were the two first steps taken by every firm. Jan Irvin, a senior associate from PWWG, reinforced this similarity, as he worked at both large and small firms, stating that the largest difference due to size would be the scope of the projects they can handle. Though PWWG and Westlake Reed Lekowsky work within the realm of adaptive reuse, both practices rely on new construction in terms of income. Chambers Murphy Burge, however, specializes in historic structures, often brought in as consultants on adaptive reuse and preservation projects. Consultation wasn’t a part of the practice I had considered until it was addressed by principal architect Elizabeth Murphy, who explained the importance of consultation; because there are many legal obligations one must follow, consultants, such as those at Chambers Murphy Burge are brought in to ensure a projects success. Going into this interview process, I expected to learn the practical application of the design process when facing an adaptive reuse project, these applications differing greatly based on size and location.
However, more similarities were found than differences, the process largely depends on
the scope of projects the firm undertook.

After developing a greater understanding of both the modern and historical applications
of adaptive reuse. I moved to find a building that would allow me to apply this knowl-
edge. Selle Generator Works turned out to be the ideal structure for this task. Mr. Todd
Ederer, the buildings developer, offered to give me a tour of the interior, giving me great
insight into what happened during the reconstruction processes for two of the three build-
ings on site. These two buildings had been rehabilitated by architect Alan Burge, in order
to accommodate a medical supply company. However one of the most intriguing as-
pects of Selle was its third, unfinished building. As we toured it, the need for repair was
evident, as the ceiling is caving in above, and stairs are highly deteriorated. Here Todd
explained, the great expense that it took to restore a building of this size and the need
for tenants investments. After this tour, I took it upon myself to document the exterior
aspects of the site through photo documentation, sketches and writing exercises. These
exercises furthered my understanding of the how the building was constructed as well as
the deterioration that had occurred over time.

These characteristics, found at Selle, assisted in forming the meditation section of the
thesis. Here, I looked at the drawings given to me by Mr. Ederer that illustrated a theo-
retical plan, created by Alan Burge Architecture, for occupying the remaining building.
Here, he explained the largest problems faced throughout the rehabilitation process. Both
egress and entrance were the most pressing issues, with the third being how to handle the
deteriorated facades.
Applying this information, I created graphic illustrations that offered multiple solutions. These solutions based loosely on the work of Carlos Scarpa show how the architect may have handled the problems at hand. Choosing Scarpa allowed me to develop solutions based on an architect that I had not only studied, but experienced his works first hand while studying abroad in Italy.

The term meditation, used in both the section title and main title of this thesis describes the process through which this thesis was developed. Meditation implies thought, an interpretation of what is learned and a furthering of these ideas through various exercises. It is not a simple research paper, but the beginning of developing an understanding on a particular subject matter with the intention of continuing on even after the final product is submitted; a springboard to further inquiry and work.
DEFINING ADAPTIVE REUSE
Figure 1. Timeline

80-15BC  **VITRUVIUS**
Vitruvius writes *De Architectura*, a source on classical architecture that contained ten books that cover almost every aspect of Roman Architecture (including design and construction).

1404-1472  **ALBERTI**
Alberti was an Italian artist and architect, among many other trades; he rediscovers Vitruvius’s *De Architectura* and writes *De Re Aedificatoria*, a book largely based on Vitruvius, book ten is titled “Restoration of Buildings” and is unique to Alberti’s publication.

1508-1580  **PALLADIO**
Palladio was a famous Italian architect, considered one of the most influential in the history of Western architecture; the Palladian style is created based on his “Four Books of Architecture”.

1568-1639  **WOTTON**
Wotton was an English author and diplomat who published the first free translation of Vitruvius’s *De Architectura*, making the information available to a much wider audience.

1632-1723  **WREN**
Wren was an English architect and diplomat of the Neo-Classical Movement who is credited with restoring and reconstructing 52 churches in the city of London after the Great Fire of 1666; also responsible for St. Paul’s Cathedral, Hampton Court and was a surveyor for the English Parliament.

1814-1879  **VIOLET-LE-DUC**
Viollet-Le-Duc was a French architect famous for his interpretive restoration of historic buildings; restored buildings such as Notre Dame de Paris, Pierrefonds and produced a series of sketches in his book “The Foundation of Architecture.”

1819-1900  **RUSKIN**
Ruskin was an English art critic known for taking a highly conservative stance on how buildings should be preserved. He opposed architects such as Viollet-Le-Duc for their outlandish take on preservation.

1888-1955  **KIMBALL**
Kimball was an American architectural historian and museum director and a pioneer for historical preservation.

1909-2000  **FITCH**
Fitch was a famous preservationist and is partially responsible for the school of preservation opening at Columbia University in the 1960s; restored buildings such as Grand Central Terminal in New York City, wrote many books in support of the field of preservation including “Historical Preservation: Curatorial of the Built World.”

1916-2009  **HALPRIN**
Halprin is a well-known historical preservationist and is responsible for the restoration of Ghirardelli Square, the first major restoration project that seemed to get national attention.

1971-  **OTERO-PAILOS**
Otero-Pailos is a world renowned preservationist who is famous for his unique take on the field; he argues we should not just clean, but that the dirt and grime that causes these buildings to deteriorate should be preserved as it has its own historical significance.

**Figure 1. Timeline**

Otero-Pailos is a world renowned preservationist who is famous for his unique take on the field; he argues we should not just clean, but that the dirt and grime that causes these buildings to deteriorate should be preserved as it has its own historical significance.
A HISTORY OF ADAPTIVE REUSE

Today, we refer to adaptive reuse as a method of architecture that strives to adapt old buildings to a modern purpose. As a method of preservation, adaptive reuse has been around for almost as long as architecture itself. Though we can assume its age, there is no definitive date for when adaptive reuse began. In an attempt to delineate this, we must look back in time and trace the significance of the contributions many have made to the fields of architecture, historical preservation and adaptive reuse alike. These moments throughout time have been recorded by many intellectuals and can be analyzed for their contributions not only to the field of architecture, but to adaptive reuse as well.

In order to better understand the field of architecture, we must look back to Vitruvius’ *De Architectura*, arguably the most important historical record of architectural methods. Through this work, Vitruvius recorded a detailed record of the design and construction of classical Roman architecture. The work consists of ten books, they are as follows: Town and Planning (or Architecture and Engineering in General), Building Materials, Temples and the Orders of Architecture, Civil Buildings, Domestic Buildings, Pavements and Plasterwork, Water Supplies and Aqueducts, Science Influencing Architecture and Use and Construction of Machines. These ten “pillars” are a primary source for understanding how classical buildings were constructed. Vitruvius’ works were lost to history until their rediscovery by Poggio Bracciolini in 1418, ushering in an age inspired by his writings.

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Born in 1404, Leon Battista Alberti was considered the epitome of a Renaissance Man. In addition to being an architect, he was a successful philosopher, artist, poet and priest. The most famous of his architectural works is a book titled *De Re Aredificatoria* that is highly influenced by Vitruvius’s *De Architectura*. *De Re Aredificatoria*, like *De Architectura*, also consisted of ten books: Lineaments, Materials, Construction, Public Works, Works of Individuals, Ornament, Ornament to Sacred Buildings, Ornament to Public Secular Buildings, Ornament to Private Buildings, Restoration of Buildings. The comparison between the original and inspired work show that they are largely similar, though some differences emerge. These differences can be attributed to Alberti’s view that Vitruvius, though a highly intellectual figure, was not an active architect, stating that his books are irreplaceable, however, they skim over some of the key points of architecture. The restoration of architecture is one of the key elements Alberti saw as missing Vitruvius’ from *De Architectura*. In his tenth book, Alberti highlights not only how to restore the architectural ornaments of a building, but explains the techniques used at the time in order to solve many of the problems faced throughout the restoration process. For example, in his passage on restoring heating and cooling to the interior he explains that one needs to insulate it by covering “a Wall with Hangings woven of Wool, it will make the room warmer, and if they are Flax, colder.” Though it is not how we would achieve these goals today, it gives us great insights into the technology of the time, and their solutions for the problems they faced throughout the preservation process.

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3 Grafton, Leon Battista Alberti, iv
5 Leoni, De Re Aredificatoria, x
6 Grafton, Leon Battista Alberti, 274
7 Leoni, De Re Aredificatoria, 237
This detail on application and construction is consistent throughout the entire document, which touches every aspect of preservation. It is a remarkable document as a whole, but in regards to adaptive reuse, Book X on The Restoration of Buildings represents one of the first documented sources that gives us written proof of an existing preservation process. The rediscovery of Vitruvius’s works, as well as the creation of Alberti’s De Re Aredifficatoria spawned a movement throughout the Renaissance that would see classical architecture renewed.

The Neo-Classical Era is a term that best describes the period between the 17th and 18th centuries where architects strived to restore architecture to its classical roots. With different classical styles being referenced throughout this era, it is able to transcend hundreds of years of change, regarded as one of the largest architectural movement to date. Beginning with the renaissance, classical architecture was taken up by a large coalition of architects such as Giorgio Vasari and Andrea Palladio, in response to the Gothic architecture that had preceded it. Gothic architecture was perceived by architects as barbaric with its highly ornamental style. The first man documented using the term Gothic was Gorgio Vasari; he too looked to classical architecture as a solution to bringing architecture back to its natural state.

Vasari was born in 1511, and was an architect, historian, painter and writer. His most famous work is the *Lives of the Most Excellent Painters, Sculptors and Architects*. Here he describes the Neo-Classical era as a period where new architects arose “after the

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10 Vasari and Brown, *Vasari on Technique*, 135
11 Vasari and Brown, *Vasari on Technique*, 342
Within this document Vasari reveals details about the lives of famous Italian artists and intellectuals spanning from Filippo Brunelleschi to Leonardo Da Vinci. It is a one of a kind record, not only detailing the techniques of these artists but their lives as well, making it the first art-historical document known to date. Vasari was also a highly accomplished architect himself, credited for both Palazzo degli Uffizi and the Vasari Corridor as well as parts Santa Maria Novella and Santa Croce, all of which are located in Florence, Italy. All of his projects followed the classical orders laid down by both Alberti and Vitruvius before him. Like many other architects of the Neo-Classical era, however, Vasari was able to discern his own style within a classical palette. Another architect, perhaps more famous for his loose interpretation of the classical orders, was Andrea Palladio.

Palladio is one of the most well known renaissance architects, inadvertently creating a Palladian style that would resonate into the following three centuries. Andrea Palladio, born in 1508, was an Italian architect responsible for well over 60 different projects, spanning from Villas and Palaces to bridges and churches. He was also an accomplished writer, publishing *The Four Books of Architecture (I Quattro Libri)* in 1570. These books, accompanied with original illustrations by the architect, outline what, today, we would call the Palladian style. Here he addresses Classical architecture and its traditions, accompanied by his own thoughts and ideas. These works would go on to inspire thousands of architects that followed him, a prime example being Thomas Jefferson, President of the United States and amateur architect who has referred to *I Quattro Libri* as his “Bible.”

14 Michael Fazio, Marian Moffett, Lawrence Wodehouse, *Buildings Across Time*, 306-07
These architects, both amateur and professional alike, made a great impact on the work of adaptive reuse, one of the most most predominant being Sir Christopher Wren.

Wren was an English architect famous for restoring and rebuilding 52 churches in London, England after the great fire of 1666. Up until the industrial age, many would refer to the London skyline as “Wren’s skyline”, as it seemed as though he had designed every building that was visible from a distance. He is also responsible for designing and approving the construction of the many of the most notable structures in London today. St. Paul’s Cathedral is a perfect example of his classical style, as are the restoration and additions put on to Hampton Court in 1689. As a member of Parliament, he was responsible for approving work on important government property, including the restoration of Westminster Abbey and the new facade and gate being added on to Hampton Court. Many of these designs he did himself, with the help of a team, though on some jobs, he was merely a surveyor of the site. Wren was the predominant architect of his time in the western world, and a notable figure within the field of adaptive reuse. Many of Wren’s works can be categorized as adaptive reuse projects. Though many of the churches he reconstructed after the fire needed to be completely rebuilt. In those that were damaged, not destroyed, he often simply restored sections of the churches in his own style. His work with Hampton Court in 1689, which is another example of his work in adaptive reuse, creating a new facade on the existing structure. Though Wren is certainly not the first person to take on projects of this type, he did work on a considerable amount of them, making him a prominent figure in the history of adaptive reuse.

19 Summerson, Architecture in Britain, 192
20 Summerson, Architecture in Britain, 228
21 Summerson, Architecture in Britain, 337
22 Summerson, Architecture in Britain, 228
Beginning in 1740, Gothic Revival Architecture, or Neo-Gothic formed, in response to the Neo-Classical movement taking place all over the world\textsuperscript{23}. One of the most important contributors to both the Neo-Gothic and preservation movements is Eugene Viollet-le-Duc. Viollet-le-Duc was a French theorist and architect who is well known for his interpretive restoration of historic buildings\textsuperscript{24}. Though many of Viollet-Le-Duc’s works were never fully realized, he was responsible for the restoration of some of France’s most notable sites. For example, in 1845 he restored Notre Dame de Paris, adding his own ornament to the facade\textsuperscript{25}. Viollet-Le-Duc added both the iconic gargoyles and ornate spires that today, many would view as original to the facade\textsuperscript{26}. He received a lot of criticism for these additions as they were not pure restoration, but were additions that were not in existence previous to his work on the building. Quoted as saying restoration is “a means to re-establish a building to a finished state, which may in fact have never actually existed in any given time” caused architects to rethink what restoration meant\textsuperscript{27}. Many who take a conservative stance on preservation techniques were appalled by these ideas, as they felt the position violated the history of the structure despite Wren’s previous “restoration”\textsuperscript{28}. Viollet-Le-Duc also produced many sketches of theoretical restoration scenarios. These sketches clearly show his stance on preservation, an idea that is much more based in adaptive reuse than restoration. His sketch titled Maconnerie shows a historic structure; however its columns have been replaced with a v shaped bracing technique. Though the supports in the drawing look similar to the columns you would expect to exist in this type of building, they are tilted iron, creating a different, modern support system. Thus, Viollet-Le-Duc adapted a historic structure to a newer time.

\textsuperscript{23} Michael Fazio, Marian Moffett, Lawrence Wodehouse, Buildings Across Time, 387-90
\textsuperscript{24} Michael Fazio, Marian Moffett, Lawrence Wodehouse, Buildings Across Time, 412
\textsuperscript{25} Michael Fazio, Marian Moffett, Lawrence Wodehouse, Buildings Across Time, 425
\textsuperscript{27} Eugene-Emmanuel and Viollet-Le-Duc, The Architectural Theory, 273
\textsuperscript{28} Van Brunt, trans. Discourses on Architecture (Boston: James R. Osgood and Company 1875) 514
This, as with many of his other sketches, can be seen in Viollet-Le-Duc’s book titled Entretiens sur l’Architecture (Discourses on Architecture), which he published in 1863. This work that not only contains Viollet-Le-Duc’s sketches, but detailed information on the construction of iron support structures that were enclosed by non-bearing masonry walls, a building type that would become extremely common in the future. This book, as well as his work within the field of preservation, makes Viollet-Le-Duc one of the most influential architects of the 19th century, and certainly one of the most important preservationists.

Another significant figure in 19th century preservation was John Ruskin. Ruskin, born in 1819, was a leading English art critic and social thinker. He, unlike Viollet-Le-Duc, felt that preservation should have a more conservative stance. The faking of materials and existing elements to him, were essentially an illusion of completeness made to fool the onlooker. These elements however, were insignificant copies of original pieces of art, that could never be replaced. Ruskin publicly opposed architects such as Viollet-Le-Duc, stating that their style of restoration was “a destruction of which no remnants can be gathered: a destruction accompanied with false descriptions of the thing destroyed.” This stance on restoration, was one side of a debate existing amongst artists and architects of the day, the opposing side leaning towards Viollet-Le-Duc’s more interpretative form of architectural restoration. Though Ruskin may have been conservative in his ideas about restoration, many architects today still agree with him on what the term restoration actually means.

29 Van Brunt, trans. Discourses on Architecture, 1
30 Van Brunt, trans. Discourses on Architecture, 514
32 Ruskin, John, Selections From the Work of John Ruskin, 253
33 Ruskin, John, Selections From the Work of John Ruskin, 253
Born on June 2nd, 1906, Carlos Scarpa was an Italian architect made famous for his approach to preservation\textsuperscript{34}. His method of material manipulation and deep understanding of history allowed Scarpa to look at historical buildings in a different light, seeing them for their potential instead of simply for what they were. A famous example of his work is the Museo di Castelvecchio in Verona, Italy. Restored between 1953 and 1973, the 14th century building has become the greatest example of Scarpa’s work\textsuperscript{35}. Inside, Scarpa redesigned and added many different furnishings, staircases, doorways and fixtures that added a modern aesthetic to the former fortress\textsuperscript{36}. However, what makes Scarpa’s style so famous is his ability to enhance the existing structure without removing the historical feeling of the structure. Scarpa left all that could be preserved intact, and through the use of materials and depth, was able to separate his modern addition from the existing structures. This is most visible at the entrance to Castelvecchio. Here, in the center courtyard, one would not realize the extent of his adaptation as all the buildings, to the visitor, look as if they are historically intact, with no signs of modern adaptation at all. However, as one moves closer to the entrance of the museum, it becomes more and more apparent that there is a modern interior to the structure. Standing in the entrance, visitors can see an example of Scarpa’s use of materials as it appears there is an entire glass facade, set back from the original, creating a new threshold into the building. Once within the interior, these moves are highly apparent, from the door frames that extend slightly from the original wall, to the stairs with their own modern platforms, barely touching the original historic structure.

\textsuperscript{34} Francesco Dal Co, Giuseppe Mazzariol, Carlos Scarpa: The Complete Works, (New York: Rizzoli 1985) 11
\textsuperscript{35} Francesco Dal Co, Giuseppe Mazzariol, Carlos Scarpa, 12
\textsuperscript{36} Francesco Dal Co, Giuseppe Mazzariol, Carlos Scarpa, 231
This type of adaptation can be found in all of Scarpa’s historic rebuilds as he maintains that the historic structure and the modern addition remain two separate entities. This style was unlike any other architect before him, and is used by many architects when facing an adaptive reuse project. The ability to have both modernism and historical architecture coexist in one structure is what made Scarpa’s style resonate with architects.

James Marston Fitch, born in 1909, was an American preservationist and co-founder of the Columbia Graduate School of Architecture, Planning and Preservation. He is regarded by many as the father of modern preservation, as he is responsible for bringing many aspects of the field to light. In a time when modernism was the most popular of architectural movements, Fitch argued that preservation made more environmental and economic sense. In the 1960s, Fitch, along with others, saved the South Street Seaport in lower Manhattan. The Seaport, which docks were then vacant, had become a target of demolition. Instead, it was proposed to be made into a historical district, and in 1967, the Seaport Museum was opened, turning the area into a large tourist attraction. In addition to saving sites like the Seaport and Grand Central Terminal, Fitch released a series of books advocating preservationism. The most acclaimed of these is Historic Preservation: Curatorial Management of the Built World which was published in 1982. In this book he outlines the process which one should take when restoring or preserving a historic structure. Fitch expresses his own opinions of the field, starting discussions on economic, legal and legislative forces that will come into play when working within the field of preservation.
Though a successful architect, he is perhaps best known for founding Columbia’s Graduate School of Architecture, Planning and Preservation in 1967, with fellow preservationist Charles Peterson. Fitch passed away in 2000, leaving a legacy behind him as he inspired many young architects to take on the field of preservation and brought the field to the public’s attention.

Illustrated throughout this section, are arguably some of the most important events to occur within the field of adaptive reuse. Though many could argue that these movements are better defined as a form of preservation, they accurately achieve what we would describe today as adaptive reuse. By definition, preservation is the conservation of something exactly as it exists, adaptive reuse however, is a method of preserving the important ideas behind such archetype, molding them to fit a more modern purpose. These movements throughout the history of architecture can therefore be defined as movements that fall within the field of adaptive reuse. For example, Brunelleschi was famous for his new take on the classical styles described by Vitruvius. Though he failed to meet the outlines that Vitruvius presented, he still created, what is defined as Neo-Classical works. These works take the ideas of the past, and change them to fit the applications needed in the present.

43 Columbia 250
44 Dunlap, James Marston Fitch
ADAPTIVE REUSE TODAY

Today, factors such as location, economy and condition of these buildings tend to determine whether or not they may be successfully reused. It takes a client and an architect’s vision and the community’s acceptance to ensure that the redevelopment process is completed well and the project will function in the community. Factors that ensure that a firm is successful when working on adaptive reuse include, one must analyze and compare firms in order to better understand what makes a firm succeed within a specific niche of architecture. The following are case studies that investigate practices and projects that are exemplars of adaptive reuse practice.

Cho, Benn, Holback (CBH) is a firm located in Baltimore, Maryland that specializes in the adaptive reuse of historic buildings45. Throughout their career they have helped rebuild the historic Inner Harbor in downtown Baltimore, which is primarily comprised of large warehouses that were built between the mid 19th and 20th centuries. CBH claims that their success with historical adaptation stems from three pillars which they title Purposeful Design, Meaningful Collaboration and A Culture of Creativity46. They describe Purposeful Design as design that shows respect for their community and history “by translating the client’s vision to serve the mission they are trying to achieve”47.

For CBH “purposeful design” means to preserve and enhance the historical Baltimore, CBH with the help of their clients, buildings that not only respect the historical nature of places, but transform these buildings so that they can once again function. Meaningful Collaboration is described as “the ability to listen and work with the clients”\(^{49}\). Finally, Culture of Creativity is meant to illustrate the diversity found in their office in terms of taste and skills. One project that is directly related to this approach to adaptation is the Clipper Mill Project. The Clipper Mill project was a mid 19th century machine plant that had been abandoned in 1994 due to a fire that destroyed the majority of the interior elements of the warehouse\(^ {50}\). CBH, while working the the Struever Bros., a large real estate developer, were able to create a building that not only fulfilled the pillars of their design mission, but revitalized a monumental structure that served both the client and the community\(^ {51}\). The Clipper Mill is a residential and commercial building that consists of five structures on roughly seven acres of land\(^ {52}\). Due to a massive fire that had taken place there a few decades ago, there was little left in terms of interior elements, some machinery and a stone facade were the only features of the building that had been left relatively untouched\(^ {53}\). In an attempt to maintain the original integrity of the building, they preserved most, if not all, of the surviving elements and integrated them into the new design of the building. Though they visually disconnect the old construction from the new, through the use of glazing and other materials, they were able to integrate the old machinery and facade into a new programmatic and aesthetic design.

\(^{50}\) ClipperMill Baltimore, “History”, 2014 http://clippermillbaltimore.com/history/
Their historical motivation in combination with their ability to collaborate with the client is what makes this firm successful. As a firm, they are passionate about preserving the historical nature of the Inner Harbor area and continue to adapt and alter it so that it may grow as a foundation for the City of Baltimore.

Based in Akron, Ohio, Domokur Architects is a professional consulting firm that contains a multi-disciplinary staff of architects, interior designers, landscape architects, planners and construction managers\textsuperscript{54}. They vary in the types of construction they offer, from new commercial units to the preservation of historically significant areas within Northeastern Ohio. Many of their projects, in cities such as Akron and Cleveland have been responsible for sparking revitalization of these cities’ downtown areas. The Shoreway building is a multi-purpose adaptation of an old 90,000 square foot warehouse\textsuperscript{55}. It consists of 42 lofts on the upper floors of the structure, and polished concrete and hardwood flooring that tie the design to the original materials found on the interior of the warehouse\textsuperscript{56}. This adaptation has been a vital development in the Cleveland Lakefront Development Plan. This plan’s goal is to revitalize the lakefront area in Cleveland\textsuperscript{57}. By adapting the Shoreway, Domokur brought a high end living and dining experience to a once under developed industrial area in order to generate more buildings with similar purpose and status around it. Through using their design and preservation experience, The Shoreway brings a new price point back to the lakefront in Cleveland and in turn, moving both the community toward goals.

\textsuperscript{55} Domokur Architects, “Shoreway, Portfolio”, 2013, http://www.domokur.com/Portfolio/1811/
\textsuperscript{56} Domokur Architects, “Shoreway, Portfolio”, 2013, http://www.domokur.com/Portfolio/1811/
\textsuperscript{57} Domokur Architects, “Shoreway, Portfolio”, 2013, http://www.domokur.com/Portfolio/1811/
Jorge Otero Pailos is a modern architect who specializes in the less conventional forms of architecture. Typically, as architects, there are a set of guidelines to follow that create an imaginary limit to how we interpret a specific field of thought. For example, architects began to focus greatly on sustainability, which has caused a large rise in the amount of adaptive reuse projects. Traditionally sustainability is defined as the endurance of systems and processes through time. Typical methods consist of reuse of building materials and structure, increased efficiency of building systems as well as regular building maintenance in order to preserve the state of a building. Pailos, however, has stepped out of this line thought in order to investigate other forms of sustainability that fall within the known definition and yet is surprising are new to the field. He devised a plan to preserve the pollution on important historic buildings, such as the Doges Palace in Venice, and turn it into a work of art that preserves the historical integrity of the building through the dirt and grime that we usually wipe away. He argues that this pollution is as telling as the building itself, creating a fingerprint of the exterior forces on the building throughout time. This method doesn’t fall into one specific school of thought, but blends many of these fields together, questioning how architects approach their varying schools of thought. Though Pailo’s work is more abstract than the firms previously listed, the motivation behind the work is similar, to preserve the historical integrity and communal history through the use of preserving and readapting architecture.

Alan R. Burge Architecture is an Akron firm; focused in the Akron area\textsuperscript{61}. Burge’s project types vary greatly from new construction to historical restoration and adaptation. One of his more recent projects was the Selle Building in Akron which is an old gear factory located just off High Street. Over the past 10 years, Burge and building owner Todd Ederer have been reconstructing the three building complex, floor by floor into a usable multi-purpose space\textsuperscript{62}. They are currently drawing up plans for the oldest building, built in 1886, this building will house office space and a restaurant/bar on the first and second floors. Located near downtown area, the Selle Building along with the much larger Canal Place warehouse complex, are two remnants of the industrial boom that was present in this area of Akron in the 19th and 20th centuries\textsuperscript{63}. By maintaining these buildings in an area that otherwise consists of newer development, Burge not only provides aesthetic variation in urban landscape, but allows for these buildings to have a particular distinction among the increasing amount of new construction.

Though their motivations and techniques may vary, these firms have seemed to succeed within the field of adaptive reuse. From larger firms such as Cho Benn Holback and Domokur, to more local firms such as Alan Burge Architecture and unconventional, Jorge Otero Pailos. All of these architects successfully rehabilitate buildings programatically, and contributed to communities in which they were kept.


This success can be traced back to the standards and goals set by each firm which illustrates what is important to them when rehabilitating an area. All of the firms expressed a desire to improve communities through preserving their history, showing that they feel passionately about the field of adaptive reuse itself and the history retained. Pailos is different, as he doesn’t function in one specific community; however, he expresses his love for the field of architecture and sustainability, which in many ways has become the community that he focuses on advancing and reinventing.

Based upon the number of case studies performed for this project, the next step was to narrow down the amount of firms being looked at and taking a deeper look at how each of them function within the realm of adaptive reuse. In order to do this the chosen course of action was to interview each of the following firms in an attempt to understand how successful firms are operating within the field of adaptive reuse.

Westlake, Reed, Leskowski (WRL) was the largest firm interviewed. They are headquartered in Cleveland, Ohio, and have worked on projects throughout the world. Their project types vary significantly from Healthcare facilities to concert halls, in addition to working on a significant amount of both adaptive reuse and preservation projects. Their most widely recognized adaptive reuse project is the Idea Center at Playhouse Square in Cleveland.

65 Interview with Paul Siemborski, Appendix D
This project introduced a multimedia facility into the historic One PlayhouseSquare on Euclid Avenue through a reconfiguring of the spaces that were original to the building\textsuperscript{66}. In order to modernize the interior of the complex, many of the walls were whitewashed; however original structures as well as materials were left in place, as a reminder of original interior\textsuperscript{67}. With this project, as well as many others they have worked on, WRL utilizes a design management system that can be applied in order to make sure these projects get off to a proper start. Paul Siemborski, a principle at the firm describes the design process, saying that you need to first establish a strong foundation based on research. “First, we look to see if a project is on the national register,” because if it is, there are additional rules that go along with adapting the building\textsuperscript{68}. They then search for “existing drawings and documentation” that would help them understand the original purpose of the structure, as well as allow them to make a decision of what types of program could be implemented within the existing structure. After gathering this information and looking at the Ohio Building Code, they move to consult the “State Historic Preservation Offices to make sure they understand the clients interests and approve of the program”\textsuperscript{69}. This then provides a footing for the project and gives them parameters by which they operate in order to complete the project. However, Mr. Siembroski stated that there are often specific challenges that come along with performing an adaptive reuse project. Mainly, there tends to be a disconnect between what they client may see as possible, and what is actually possible within a space and making them understand why a certain program or element may not be applicable to a certain structure\textsuperscript{70}.

\textsuperscript{66} Interview with Paul Siemborski, Appendix D  
\textsuperscript{67} Interview with Paul Siemborski, Appendix D  
\textsuperscript{68} Interview with Paul Siemborski, Appendix D  
\textsuperscript{69} Interview with Paul Siemborski, Appendix D  
\textsuperscript{70} Interview with Paul Siemborski, Appendix D
To solve this, Paul states that they go back to how they structure their design process, basing “a lot on the given criteria and then analyze the building based on that information,” again stressing the importance of the research they perform and the beginning that allows them to make informed decisions\textsuperscript{71}. After establishing this foundation, they move on to the rest of the design process, which Mr. Siemborski says can be summed up into three words, “Investigate, Program and Plan”\textsuperscript{72}. Investigating is what was discussed early and must be completed in order to move on to the next two levels of design, as it heavily informs the decisions being made\textsuperscript{73}. Program, is identifying the building requirements based on the clients wishes in combination with what is possible based on the site and making alterations to the structure based on code and system qualifications\textsuperscript{74}. Finally, there is Plan, in which all of the previous determinations are documented and are then analyzed for cost and construction\textsuperscript{75}. Due to tax abatements/credits, which are a large contributing factor to the popularity of adaptive reuse, accountants and legal consultants are constantly looking at everything produced throughout the design process in order to make sure there are no legal complications\textsuperscript{76}. Construction teams and engineers are only employed by WLR on these projects if they have members who specialize in the type of construction taking place, making sure that the final project is achieved as smoothly and cost effectively as possible\textsuperscript{77}. WRL lead these projects through assembling these teams and are responsible for resolving any and all complications along they way, to which Paul says, there can be many\textsuperscript{78}.

\textsuperscript{71} Interview with Paul Siemborski, Appendix D
\textsuperscript{72} Interview with Paul Siemborski, Appendix D
\textsuperscript{73} Interview with Paul Siemborski, Appendix D
\textsuperscript{74} Interview with Paul Siemborski, Appendix D
\textsuperscript{75} Interview with Paul Siemborski, Appendix D
\textsuperscript{76} Interview with Paul Siemborski, Appendix D
\textsuperscript{77} Interview with Paul Siemborski, Appendix D
\textsuperscript{78} Interview with Paul Siemborski, Appendix D
He tries to stress to clients, that just because they are more cost effective builds, it is not an indication that they are easier\textsuperscript{79}. Often, there are more complications within these projects, and it can be difficult to explain this to a client. WRL seems to resolve these problems well, and they continue to work heavily within the field today.

Chambers Murphy Burge is a small firm located in Akron, Ohio that specializes in both adaptive reuse and historical preservation\textsuperscript{80}. Originally founded in Medina by Loraine and Henry Chambers in 1963, the firm was purchased by its current principles, Elizabeth C. Murphy and Lauren P. Burge who moved the firm to Akron in the 90s due to a “desire to be in a more urban environment”, as most of their work consisted of buildings in a more urban setting\textsuperscript{81}. This firm differs greatly from the other firms that were interviewed, not only in size but in practice. Though they do work on adaptive reuse and preservation projects, they are more often are brought in as consultants in order to guide a firm through the process that goes along with taking on this kind of project. Elizabeth Murphy, one of the two principles of the firm agreed to be interviewed in order to shine a light on the consulting side of the design process. Though they are a small firm, Mrs. Murphy thought that the disadvantages facing her firm, one that specializes solely in adaptive reuse and preservation are no different than those facing any other small firm, noting that “firms that work strictly within historical preservation tend to be smaller because, though it is not as new of a field anymore, it is young compared to the overall field of architecture”\textsuperscript{82}.

\textsuperscript{79} Interview with Paul Siemborski, Appendix D
\textsuperscript{80} Interview with Elizabeth Murphy, Appendix D
\textsuperscript{81} Interview with Elizabeth Murphy, Appendix D
\textsuperscript{82} Interview with Elizabeth Murphy, Appendix D
Her firm, though an architecture firm at its core, offers services that reach outside the realm of architecture, having team members who are more qualified in terms of restoring objects, not buildings, allowing the firm to consult on a wide variety of projects, all of which can occur on a typical adaptive reuse job\textsuperscript{83}. When consulting, the jobs can last “anywhere from one hour, to one year” depending on the type of consultation\textsuperscript{84}. Often their jobs consist of consulting on a specific site for a client other than an architect. These clients often have a building in mind and want to know the condition of the building as well as whether or not it is a candidate for adaptive reuse or restoration. For these clients they are able to not only determine a condition of the building, but can go as deeply as identifying the type of paint was originally on the walls through connections that they have made throughout the field\textsuperscript{85}. They are also often consultants that are hired by architects in order to advise them on what actions need to be taken when facing an adaptive reuse project. Because there are many external issues that can come up when looking at a project, Chambers, Murphy, Burge are hired to assess the actions taken so that no contractual obligations with both the government and the client are broken\textsuperscript{86}. Though Chambers Murphy Burge is a small, Akron based firm, they are able to work on a variety of tasks in various places around the country due to the expertise that can be found in the firm and the services that they provide to the client.

The final firm interviewed was Perfido, Weiskopf, Wagstaff and Goettel or PWWG, who is headquartered in downtown Pittsburgh, PA\textsuperscript{87}.

\hspace{1cm} \textsuperscript{83} Interview with Elizabeth Murphy, Appendix D
\hspace{1cm} \textsuperscript{84} Interview with Elizabeth Murphy, Appendix D
\hspace{1cm} \textsuperscript{85} Interview with Elizabeth Murphy, Appendix D
\hspace{1cm} \textsuperscript{86} Interview with Elizabeth Murphy, Appendix D
\hspace{1cm} \textsuperscript{87} Interview with Jan Irvin, Appendix D
Much like, Westlake, Reed Lekowski, they work on a variety of projects spanning from new construction to historical preservation. Unlike WRL, PWWG has complete projects all around the country, mostly focusing on the Midwestern states, bridging over places like New York along the eastern coast of the United States\textsuperscript{88}. Adaptive reuse has made up a large portion of their overall work at “about 25%” as of recently but overall, almost 40% of their projects can be traced back to adaptive reuse\textsuperscript{89}. Senior Associate, Jan Irvin reinforces much of what was said by the previous firms as he has had experience working with both small and large adaptive reuse firms. He says that firms such as Chambers Murphy Burge, tend to be made up of principles and associates who are more specialized in the adaptive reuse field, performing tasks such as “historical structures reports, performing investigations and testing,” and are often consultants to a larger firm when “they are well recognized in their expertise.”\textsuperscript{90} The disadvantage to these smaller firms are their ability to handle large scale projects due to their small size and they can be limited by a smaller geographical area. A larger firm has “the capacity to support staff who are specialized enough to focus on their expertise”, writing papers and presenting at conferences\textsuperscript{91}. The “business constraints/pressure to make enough money, for a medium size or small firm limits this kind of expertise”, make it difficult for these firms to compete with larger firms who can work on multiple projects at a time as well as afford to set aside some staff that are more interested in researching and forwarding certain design types\textsuperscript{92}.

\textsuperscript{88} Interview with Jan Irvin, Appendix D
\textsuperscript{89} Interview with Jan Irvin, Appendix D
\textsuperscript{90} Interview with Jan Irvin, Appendix D
\textsuperscript{91} Interview with Jan Irvin, Appendix D
\textsuperscript{92} Interview with Jan Irvin, Appendix D
He also states that due to their size they may steer away from working on these small-
er project, that are often associated with adaptive reuse as it can be a monetary loss\textsuperscript{93}. However, the recession has refocused larger firms towards the field of adaptive reuse in order to maintain an income during difficult economic times. Firms such as PWWG have always worked within adaptive reuse as it is a product of the city in which they operate in. Pittsburgh is interested in adapting its downtown area and the movement has really spiked in recent years. They are currently working on adapting a warehouse, originally constructed in 1900, and working with this type of building tends to come with specific design issues\textsuperscript{94}. The biggest issue, according to Jan is the program. “Fitting in a new program,” such as “a ballroom, art gallery, meeting rooms, penthouse apartments into the existing spaces takes a lot of effort”\textsuperscript{95}. Determining whether or not to make additions on the roof or elsewhere goes farther than maintaining the aesthetic integrity of the building. It involves an in depth code and cost analysis, as there tends to be a lot of different floor levels to contend with to meet accessibility codes\textsuperscript{96}. Another problem facing the adaptive reuse of warehouses is meeting the fire code. The building they are working on currently is made of “cast iron columns and timber beams,” and due to previous renovations has a large variety of construction systems, such as “wood framing in lieu of beams”, meaning that there is a lot to be adjusted in order for the building to meet the code requirements\textsuperscript{97}. These are also common problems in other adaptive reuse projects but are particularly an issue in old warehouses.

\textsuperscript{93} Interview with Jan Irvin, Appendix D
\textsuperscript{94} Interview with Jan Irvin, Appendix D
\textsuperscript{95} Interview with Jan Irvin, Appendix D
\textsuperscript{96} Interview with Jan Irvin, Appendix D
\textsuperscript{97} Interview with Jan Irvin, Appendix D
Mr. Irvin allowed an insight into not only how PWWG operates as a firm but was able to give a generalized explanation of the differences found both small and large firms through personal experience, that was reiterated by other firms that were interviewed, allowing conclusions to be drawn based on observations.

Overall, the firms interviewed seemed to have more in common than expected. Though they operate in different parts of the country and vary greatly in size, the skills needed to be successful in the field could be found in all of them. The biggest factor was management. A firm would fail without being able to manage a successful design team as well as integrating their own people with outside people and elements that are needed to complete a successful project. Poor management would ultimately lead to failure, as it was stated by all of the firms. Another large factor seemed to be the ability to adapt to new situations. A lot of the firms interviewed were not large contributors to the field of adaptive reuse before around 2008. Due to a recession in the economy, new construction became too expensive for most of their clients and the firms needed a new source of income. Many of them turned to adaptive reuse where they could provide a client with an existing building, eliminating many of the costs these clients faced when approaching a completely new building. These firms joined the field in order to maintain an income and in turn have become part of a movement in architecture to renovate urban areas that were once run-down in order to provide a generally less costly service as well as offering existing real-estate that is often in the center of urban activity.
Though the firms varied in size, all of them seemed to have a considerable spectrum of clients from various areas of the state or country. Small firms such as Chambers Murphy Burge were able to claim as wide a range of projects as a larger firm such as PWWG, due to their specialization and type of consultations that they offer, showing even a firm of three can in many ways match a firm of twenty on the amount of project services they can perform.
SELLE GENERATOR WORKS
Figure 2. Sanborn Map of Selle-1886.
In 1852, Ferdinand Selle emigrated from Germany to Detroit, Michigan in the hopes of becoming a successful business man. After living almost a decade in Detroit, Ferdinand moved to the city of Akron, OH where companies such as Goodrich and Goodyear provided the area with a large industrial boom. The rubber city, as it was called, produced many different products, most of them having to do with transportation. Mr. Selle, heavily influenced by the shipping industry of Detroit, received patents for vehicular hardware, namely, the Wagon Platform Gearing, a device for steering wagons. With this patent, he caught the eye of many local manufacturers such as Mr. Crouse, the president of Buckeye Works and Mr. Seiberling who is credited with founding the Goodyear Company. These potential investors had been credited with helping companies such as Goodrich establish themselves as successful businesses in the Akron area. They inspired Selle to continue to produce many different wagon gear patents before establishing his own company in 1886.

Ferdinand Selle filed the Selle Gear Company’s incorporation papers on September 30, 1885. They were approved by the Secretary of State on October 1st of that same year. After becoming a corporation, Selle placed his new plant on West State Street as shown on the Sanborn Map of 1886. This new plan was placed closer to the Erie Canal between the Henninger Factor and Kubler and Beck Varnish Works.
This plant was a two story brick building, the first floor contained the wood shop as well as sawing and planing, the second floor contained the machine shops that assisted in the manufacturing process. In 1887, Mr. Selle constructed a new warehouse, next to the Akron Beacon Journal, containing four stories and a two story extension to the west, a remnant of which is still visible today. This new site was a composed of a steep terrain, sloping from North to South, as well as a loose soil base, making it difficult to build on.

Originally, the two story extension housed a blacksmith mill followed by an iron workshop. Woodshops as well as storage units for malleable iron, timber and machinery could be found on the northern side of the building. To the south of the building, the architect placed the boilers that were coal run and fueled the wood gear and leather belt systems used on all the floors of the warehouse. These generators were hand fed leather belts that allowed for the wooden gears to turn and operate as a large, single piece of machinery. These systems, located throughout the programmatic elements of the building, were the standard technology of their time, being run by small generators and manpower in order to assist workers in the manufacturing process. The warehouse itself was a heavy timber construction, meaning it was designed around post and beam system made entirely of wood. These supports were connected using a timber joist system, where carpenters would peg the joists into place, allowing about an inch of excess space so that the wood could move as it seasoned.

105 National Register of Historic Places, Section 8, Pg. 4
106 Interview with Todd Ederer
107 National Register of Historic Places, Section 8, Pg. 4
108 National Register of Historic Places, Section 8, Pg. 4
109 Interview with Todd Ederer
The pegs were then cut and the beam was driven fully into the socket. This method of building was a common at the time as steel only been experimented with. A year after the new plant began construction; Ferdinand sold half ownership of his patents to Edwin A. Akers and Lucius C. Miles and left the company in 1889 to establish a new company named Akron Cart Works, located near the new Selle Plant on High Street\textsuperscript{110}. He was later put out of business in 1918 due to the rising automobile industry while his former company adapted to changing times\textsuperscript{111}.

When analyzing another map, dated 1904, the title shows that the company had undergone a transformation from a gear company into the Akron-Selle Co. who continued to manufacturer wagon gears\textsuperscript{112}. This name changed is due to a merger between the Selle Gear Company and the Akron Gear branch of the Akron Wood Working Company in 1903\textsuperscript{113}. Due to this business venture, the new headquarters appeared to be too small and it was greatly expanded following the turn of the century. The company first added a one story addition to the blacksmith shop, formally on the first floor\textsuperscript{114}. In 1904, they continued to expand the complex by adding two more additions to the southern façade, designed by well known Akron architect Frank O. Weary\textsuperscript{115}. These additions accommodated the growing market for wooden gears, expanding the wood shop and storage yard.

\textsuperscript{110} National Register of Historic Places, Section 8, Pg. 5
\textsuperscript{111} National Register of Historic Places, Section 8, Pg. 5
\textsuperscript{112} Sanborn Map 1904, Akron Ohio
\textsuperscript{113} National Register of Historic Places, Section 8, Pg. 5
\textsuperscript{114} National Register of Historic Places, Section 8, Pg. 5
\textsuperscript{115} National Register of Historic Places, Section 8, Pg. 5
Figure 3. Sanborn Map of Selle 1904
Based on the map, there is little interior alteration as the original wall partitions still seem to be in place. The original structure hadn’t been altered, only expanded using the same heavy timber construction\textsuperscript{116}. All of the machinery, including the freight elevators hasn’t altered in its position and the shops and storage, through expanded remain in similar spaces to where they were before\textsuperscript{117}. Following the additions that can be seen on the Sanborn Map of 1904, there are documents showing further expansion of the company in 1907. The company added a four story annex to both the north and south ends of the existing building, matching the brick veneer of the original complex\textsuperscript{118}. In 1918, they again added to accommodate a new business merger between the existing company and Tanner Hower Manufacturing Co., a producer who utilized metal stamping, thus expanding the kinds of product the Selle Company could distribute. To make room for these new materials, a small one story, two building addition was constructed in order to make room for the new metal stamping practice\textsuperscript{119}. The timber construction in these new extensions shows advancement in building materials. Here we see the same heavy timber construction but with steel connections in place of the former wood pegs that would have connected columns and joist\textsuperscript{120}. The floor joists themselves are held up by metal connecting plates and then overlaid with a wooden floor. The walls, like the old warehouse, were constructed out of brick, framing the glazing that lined up with the glazing on the warehouse beside it. This was a four story construction; however two of the stories were below the original floor grade, hidden from view.

\textsuperscript{116} Interview with Todd Ederer
\textsuperscript{117} Sanborn Map 1904, Akron, OH
\textsuperscript{118} Sanborn Map 1904, Akron, OH
\textsuperscript{119} National Register of Historic Places, Section 8, Pg. 6
\textsuperscript{120} National Register of Historic Places, Section 8, Pg. 6
Figure 4. Sanborn Map of Selle 1940

Figure 5. Sanborn Map of Selle 1950
A bridge was constructed to connect the old and new buildings, using a similar construction method illustrated above.

These changes and many more are visible in the 1940 Sanborn maps. Multiple additions had been made in order to accommodate the once again, changing industrial manufacturing of the now automotive and truck gear warehouse. The first change in name occurred in 1929 when the Selle Company discontinued the manufacturing of truck parts and expanded their metal stamping market and automobile industry\textsuperscript{121}. Later they would revert the company back into a truck and automobile gear company, returning to the original name given to the company by Ferdinand Selle in 1885. Also evident on the map, is a railroad yard that wasn’t illustrated on the previous Sanborns. This shows the expansion of the Akron Industry between 1910 and 1940 only furthered by World War II in late 1939. Selle expanded into military equipment, as many companies in the area had, and was incredibly successful throughout most of the 1940s. This explains the location of the storage facilities and loading doors on the second floor of the structure in order to accommodate the railroad delivery system that they would have used for both importing and exporting goods country wide.

\textsuperscript{121} Interview with Todd Ederer
These railroads are still present in the Sanborn drawn around 1950. Unlike the previous three iterations of the building, there is a significant reduction in the building space. In 1943, a tornado destroyed the large 1887 one story blacksmithing wing\textsuperscript{122}. This caused the company to discontinue gear rings and put all its capital into the metal stamping industry\textsuperscript{123}. As previously stated, the company boomed during war time but because of this, the end of the war meant the end for many of the products the Selle Company produced. In 1951 the company went back to manufacturing truck parts and consumer metal stamping for refrigerators and other household products\textsuperscript{124}. By 1997, the 150 person workforce was down to 25 employees and the main offices moved out of the historical headquarters\textsuperscript{125}. By 1998, the building was empty and placed on the market to be acquired by Mr. Todd Ederer and company in 2003.

The Selle Company lives on through its former headquarters and the architectural significance it has in the city of Akron. The structure of both the original building and later additions illustrates the industrial architecture that was prevalent throughout the industrial period. First, being powered by steam, Selle introduced electricity to the site in 1918, causing changes to the buildings original form\textsuperscript{126}. These advancing building types also illustrate the evolution of glazing and window openings present in the various additions to the complex. These improvements on natural lighting and ventilation are related to the desire for better working environments.

\textsuperscript{122} National Register of Historic Places, Section 8, Pg. 6
\textsuperscript{123} National Register of Historic Places, Section 8, Pg. 6
\textsuperscript{124} National Register of Historic Places, Section 8, Pg. 6
\textsuperscript{125} National Register of Historic Places, Section 8, Pg. 6
\textsuperscript{126} Interview with Todd Ederer
The standard went from widely separated single windows to fully glazed bays and the addition of sky lighting to the interior spaces\textsuperscript{127}. These changes became feasible as the overall building methods were improved from the heavy timber construction (found in the old 1887 building) to the warehouse addition on the western façade that is made entirely of steel with large glazed panels in between. These various building methods also represent many different approaches to fireproofing, the first attempts being a “slow wood burning construction”\textsuperscript{128}. This was improved in the later additions with all steel construction which is much more fire resistant than the heavy timber found in previous buildings.

Its location is also invocative of its architectural significance as it is located at the edge of the downtown area, and “creates the feeling of unified historic vibrant industrial area that provides Akron with an identity as a premier industrial town of the 19th and 20th centuries.”\textsuperscript{129}

For all these reasons, in 2003, Ederer Construction and Real Estate bought the building and began to restore the damage that had occurred through 6 years of abandonment. The building now houses a successful medical supply company and uses both the 1910 and 1950 building additions, having been almost completely restored. The original warehouse sits next door to them, still vacant since the decline of the company after the war. Mr. Ederer has many plans for the building, from offices to apartments and even had a plan drawn up for a restaurant and brewery on the first floor of the complex\textsuperscript{130}. Mr. Ederer in cooperation with architect Alan Burge, have begun to revitalize this once suc-

\textsuperscript{127}Interview with Todd Ederer
\textsuperscript{128}National Register of Historic Places, Section 8, Pg. 7
\textsuperscript{129}National Register of Historic Places, Section 8, Pg. 7
\textsuperscript{130}Interview with Todd Ederer
The pictures to the right were taken on my first visit to the Selle Building in Akron, Ohio. Here I observed both the new and old parts of the exterior, collecting images that I thought would best represent the structure. Most of these images are of the old warehouse, which I found to be a building of exemplary character. It was the most deteriorated of the buildings, as it is the only one yet to be occupied. The machinery around it in combination with the architectural style of the building give you a sense of its age. In Appendix F, I show an exercise in descriptive writing that I completed shortly after visiting the site in an attempt to put it to words what it was like visiting it for the first time.
Figure 6. Summer Study.
Going back to the Selle Building in early January offers an entirely new perspective of the site. Due to the weather the courtyard outside was abandoned and the pathway newly cleared. The largest impact of winter to the site was the inaccessibility to the oldest Selle Warehouse. Because it is unoccupied, the area around the building remains snow covered, making it difficult to even get close to the building without walking through a foot of snow. This gave the site a much more lonely, disconnected feel.
Figure 7. Winter Study
MEDITATIONS
DETERIORATED FACADES

Figure 8. Deteriorated Facade.
Here we see a facade on the south of the 1886 facade that has completely deteriorated. A piece of the exterior wall is missing, though it isn’t clear whether or not a portion of the wall was torn down or is simply missing, there is a large piece of masonry missing. On the inside wall, still intact, the windows are filled in with brick and there is a beam that sticks out towards the onlooker, the only remaining remnant of a second floor structure.

The Alan Burge renovation, taken directly from his plans for the bier garden, he took this space and converted it into an exterior patio where people could sit and eat or drink. In order to do this, he would have to tear down the remaining interior wall in order to connect to the interior. He also removes the adjoining exterior surface in order to expand the patio around to the entrance to grant outside access.

The renovation based off of Scarpa’s work, shows almost all of the original deterioration intact. Instead of intervening directly with the damaged masonry, the new facade is set back from the original, creating a visual distinction between the old and new components of the building. To make this space usable, there is a small door cut into the wall on the left, that is not visible when looking directly at the facade from the exterior.

Of all the different problems facing the building, this is the one that Otera-Pailos would most likely take an interest in. He moves to preserve the elements deteriorating the structure and here there are many different elements in play. There is pollution on the brick, greenery overgrowing the masonry foundation and the missing facade elements make the area a very interesting example of deterioration in the building. Though Pailos would eventually clean the structure, he first would preserve these elements in order to preserve their beauty.
Figure 9. Entrance.
Here we look at the entrance, picked by Alan Burge Architecture for his restaurant and bar. It is a side entrance to the main warehouse and is currently boarded up. The condition of the structure seems to be decent, however the windows and door are highly deteriorated. The room presents a very interesting method of entry into the warehouse, entering through the boiler room door.

Mr. Burge’s renovation shows that he replaced these deteriorated elements with fresh glazing. He also took the large storage door and replaced it with a smaller entrance with a large window above it. It is a simple renovation of the entrance but does what is needed in order to maintain the original integrity of the building while adapting the area to a new program.

The final diagram shows a theoretical Scarpa alteration. The original facade is intact, removing the deteriorated glazing and door. Instead of simply replacing it with a new door and windows, a new facade is created behind the original that can be viewed due to its depth and change in material. The closer one is to the entrance the more this is apparent to them.
Figure 10. Entry.
Again, we see the entrance that Alan Burge designated for his renovation of the space. To the left, we can see an up close example of the different methods for readapting the boarded over door frame.

The historical reproduction shows a replacement of the original doors that would have been placed there, replaced by Alan Burge’s new glass door entrance. The final diagram shows a theoretical Scarpa intervention where the door is pushed back from the original facade, distinguishing the modern from the historical.
Figure 11. Egress.
In terms of egress, Selle severely lacks methods of escaping the building. As visible from the diagram to the right, the space Mr. Burge picked for his egress space, was an empty two story space near the southern facade of the building.

Mr. Burge intervenes here by placing a standard staircase that connects both levels of the bier garden.

The Scarpa alteration is based on his stair addition in Museo di Castelvecchio. Here we see a stair that is reduced in its distance it covers as each step functions as two in order to increase the speed at which one is able to climb. This reduces the amount of intervention and allows for portions of the second floor above to remain intact. Though an interesting architectural element, it would not be able to function as a fire stair as it doesn’t meet ADA requirements.
CONCLUSION
This thesis expands upon a basic understanding of what it means to work within the field of adaptive reuse. It’s concern for the theoretical and practical applications allowed for a wide range of research and exercises to be preformed. These exercises, in addition to traditional research methods, allowed for me to expand my knowledge of the subject through application. Using the Selle Generator works as a model created many unique opportunities for me to address. It allowed me, based on documentation of the site, to create my own analysis and explore my own adaptive reuse solutions. Other methods of meditation that allowed for me to investigate the field were the descriptive writing exercises and photo studies of the Selle Building. Here, I was able to investigate the aesthetic qualities of the site through two methods of documentation, allowing for me to express these aspects using multiple medias in order to develop a better understanding of place. Organizational exercises, such as the timeline and interviews, allowed me to compile quick and easy to understand references that I could refer back to at any given point throughout the research process. Through reading, writings, interviews, and site visits, this thesis has permitted me to develop a greater understanding from which I can expand my research.

Before beginning the research phase of this paper I performed an exercise titled 100 questions, compiling a list of all the possible questions that came to mind that needed to be answered throughout this thesis. Here, the questions are straightforward, technical questions that are typically accompanied with a direct and simple response. As the thesis progressed however, the questions became
much less technical and much more abstract in their answers. Though many of the practical questions were answered, the research preformed unearthed many questions I hadn’t anticipate, the most pressing of which was about the limitations of the field. Though the secretary of Interiors presents a definition, it is an incredibly broad one, allowing for a lot of interpretation and varying methodologies. For example, Violette-Le-Duc and Pailos both offer and abstract interpretation of reuse questioning the limitations set down by society. However, their stylistic approaches are very different. Pailos seems to align more this John Ruskin in his philosophies, wanting to preserve every aspect of the historic structure he is working with. Viollet-Le-Duc takes the opposite stance, not only taking away from the deteriorating structure, but adding elements to it that had not previously been there. Both Pailos and Ruskin would frown on these policies, saying that it presents a false façade, more like a stage set than a rehabilitation project. It is likely that, though the root of their motivations is similar, Ruskin would have also critiqued Pailos in a similar manner as he too removes the deteriorated portions of the façade, preserving them through artwork rather than through the leaving them on the structure as they originally formed. These abstract ideas, take the general definition of rehabilitation and apply it in a way in a new way. Looking at how different architects and firms interpretations of adaptive reuse made me question, what is adaptive reuse to me? What methodologies would I follow when facing a rehabilitation project? Before this thesis, I would have probably aligned myself with architects such as Pailos and Ruskin. However, through researching adaptive reuse, I can see both the practical
and theoretical significance of utilizing this more contemporary form of rehabilitation as it provides the building with a new life cycle.

Approaching historical buildings as adaptive reuse structures instead of purely restorative projects allows for more opportunities in the modern world. Reuse allows for a building to once again have a purpose in modern society without taking away from the historical integrity of the building. Through materiality, reconstruction and preservation, these buildings are altered and restored. In most of cases these buildings are picked based on their condition and location as well as their ability to hold the desired program. Therefore, the historic building provides a start for architects and their teams to build on as an existing foundation for a new project. However, I have also seen projects where rehabilitation has gone to far. In a project, shown to me in studio, an almost completely deteriorated building was torn down with the exception of a small portion of the foundation. This structure, most of which was entirely new, and the historical aspects of the building had been completely hidden from view. Is this still an adaptive reuse project? By definition, it seems to be. However, to me, adaptive reuse is not the creation of a new building on a historic site, but the modernization of an existing structure so that it once again may serve a purpose in society.

These different interpretations and methodologies are what make adaptive reuse such an interesting field within the realm of architecture. Unlike new
construction, it has a specific definition of what exactly adaptive reuse needs to be, and yet, unlike restoration, it has a much broader scope to work within that is open to a variety of opinions. It creates an interesting condition where, though there exists a definition for what the projects need to be, it allows for the architect to compile their own limitations to how they want to face adaptive reuse projects. Next year, as a graduate student, I hope to investigate these questions further, in order to better my understanding what adaptive reuse really does mean to me by applying the knowledge gained throughout the process of writing this thesis.


Francesco Dal Co, Giuseppe Mazzariol, Carlos Scarpa: The Complete Works, (New York: Rizzoli 1985) 1


James Marston Fitch, Historic Presercation: Curitorial Management of the Built World, 1982

HISTORY

1. What was the original reason for selecting the site?
2. Why did they demolish a significant section of the warehouse between 1940-1950?
3. What was the reason for moving from the site in the 1990’s?
4. What research has been done on the effect on site soils and surrounding quality?
5. What was the original condition of the site?
6. What happened to the former railroad construction?
7. What was the benefit of the railroad, vs. modern shipping methods?
8. How was the city of Akron different as far as living conditions and social class?
9. What happened with the development of suburbs in the city?
10. Who were the main businesses in the rubber industry, how did Selle match up with them?
11. What major historical events have occurred in the city that affected it significantly?
12. What effect, if any, did the fall of the Selle Company have on Akron?
13. What effect did the export of businesses starting in the 1980s have on Akron?
14. How has the economy developed over time (through depressions)?

ADAPTIVE REUSE

1. What are the largest external effects on whether or not a building is selected as a candidate for adaptive reuse?
2. What are the most common limits to how a building can be used?
3. What are the difference between facadism, adaptive reuse and renovating a space?
4. What is the extent of new work that can be done on building and still classify it as adaptive reuse?
5. What are the rules when readapting a historical landmark/building on historical registry?
6. Are there any code exceptions when dealing with the redesign of a historic building?
7. What is the process when approaching an adaptive reuse building?
8. What methods are in place to make adaptive reuse buildings more sustainable?
9. What are the essential criteria for taking on an adaptive reuse project?
10. What teams are involved in the rating and renovating of historic buildings?
11. What are the methods of rating the flexibility of a building?
12. What are the most prominent problems facing adaptive reuse today?
13. How are buildings tested for their environmental impact?
14. Is there a special criteria in place for the sustainability of these old buildings?
15. What is the reliability and validity adaptive reuse?
16. Where is the line drawn between change of use through demolition of interiors and adaptive reuse?
17. What are the main challenges of refurbishment?
18. How does this fit into the Carbon neutral plan?
19. What can we learn from European adaptations of adaptive reuse and sustainability?
20. What are the benefits of renovating a building verse demolishing a building?
21. What rules are in place in regards to exterior renovation verses interior?
22. What are urban sprawls negative effects on the US?
23. How have other countries addressed this problem?
24. What are future projections based on how the population is moving today?
25. How does urban sprawl correspond to economy and social class?
26. Are there methods out there that are more economically friendly than adaptive reuse?
27. More environmentally friendly?
28. What holes are still present in adaptive reuse?
29. What new methods are being looked at and analyzed?
30. Impact on idea of an urban core?
31. How can one determine the profitability of a site?
32. How to determine remaining life span of the building?
33. To what degree will renovation of the building disrupt its existing occupants?
34. What is time vs. expense ratio?
35. What are all the costs that need to be calculated in order to determine the overall cost?
36. Methods for controlling product cost?
37. What are some investing improvements that can be made?
38. How does one capture a space’s originality while renovating?
39. How far does one take cosmetic improvements?
40. How far does code allow for change of existing elements?
41. Evaluating insulation and window types?
42. How to improve insulation without damaging the original structure?
43. What is the standard time period for an adaptive reuse project?
44. How to alter mechanical systems in historic buildings?
45. How does environmental context affect adaptive reuse and sustainability?
46. How does the occupational profile effect the building (involvement of tenants and manager)?
47. Commercial verses residential renovation?
48. What is the code requirements based on building types for historical reuse?
49. How does reuse expand past the building and into energy consumption and resources?
50. When is adaptive reuse non applicable?
51. When is a proper timing to implement methods of adaptive reuse (is there one)?
56. Are there any quick fixes that are applicable for buildings in great disrepair?
57. Methods for renovating a site around a building?
58. What are the requirements for site conditions?
59. LEED applications?
60. How to assess for damage potential?
61. Methods for cleaning building?
63. What kind of chemical or contaminants can be found in a building? How can these be fixed?
64. Who all is needed to maintain and upkeep a building?
65. How can a building be adapted for handicap uses without compromising the original integrity of the building?
66. What precautions are in place for “acts of god”?
67. What are some methods for quality assurance and budget control?

AKRON SPECIFICS

1. What are Akron Ohio’s methods when approaching sustainability? Master plan?
2. What is Akron’s sustainability rating currently?
3. How can buildings such as the Selle building improve these ratings?
4. What are Akron’s restrictions on constructing new buildings vs. renovating old buildings?
5. How does Akron plan to account for urban sprawl and fix it?
6. What are the main problems facing the city of Akron?
7. How can adaptive reuse be applied to fix these problems?
8. How does land use and zoning affect the adaptive reuse conditions?
9. How does the university effect the adaptive reuse conditions (want new buildings, economically main income in the city)?
10. What adaptive reuse projects have already been implemented?
11. What does Akron need as a city to progress forward?
Technical Definitions Based on Secretary of the Interior

Preservation: is defined as the act or process of applying measures necessary to sustain the existing form, integrity, and materials of an historic property. Work, including preliminary measure to protect and stabilize the property, generally focuses upon the ongoing maintenance and repair of historic materials and features rather than extensive replacement and new construction. New exterior addition are not within the scope of this treatment; however, the limited and sensitive upgrading of mechanical, electrical, and plumbing systems and other code-required work to make properties functional is appropriate within a preservation project.

Rehabilitation: is defined as the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural, or architectural values.

Restoration: is defined as the act or process of accurately depicting the form, features and character of a property as it appeared at a particular period of time by means of the removal of features from others periods in its history and reconstruction of missing features from the restoration period. The limited and sensitive upgrading of mechanical, electrical and plumbing systems and other code-required work to make properties functional is appropriate within a restoration project.

Reconstruction: is defined as the act or process of depicting, by means of new construction, the form, the features, and detailing of a non-surviving site, landscape, building, structure, or object for the purpose of replicating its appearances at a specific period of time and in its historic location.

Sustainability: In more general terms, sustainability is the endurance of systems and process. The organizing principle for sustainability is sustainable development, which includes the four interconnected domains: ecology, economics, politics and culture.

Abstract Definitions according to Architects and Intellectuals

Preservation

“Preservation is rehabilitating historic properties conserves taxpayers’ dollars, conserves our local heritage, and conserves the natural environment. Rehabilitating historic buildings and using the infrastructure that is already in place to serve them is the height of fiscal and environmental responsibility.” Donovan Rypkema, Place Economics

“It has been, at its best, preservation engages the past in conservation with the present over a mutual concern for the future.” William Murtagh, First keeper of the National Register of Historic Places
“Historic preservation clearly does much more that preserve bricks and mortar. It recognizes that our built history connects us in tangible ways with our past and provides context for the places we occupy and the world we live in. It fuses art with craftsmanship, capacity for modern utility with embodied energy, and progressive ideas for economic revitalization with rational authenticity. Historic preservation is at the same time wonderfully egalitarian; all socioeconomic classes in every corner of the nation have successfully utilized its principles to protect their heritage and revitalized their communities.” Craig Potts, Executive Director of the Kentucky Heritage Council

“I think of preservation as the organization of attention. If it is true that we live in an attention economy, then preservation certainly influences values, but it does not assign them. Values exist only within relationships of exchange, as a measure of collective attention, or desire. Preservation seems to me to be the result of organized attention, not its origin—although it does also in turn re-organize attention. We rarely choose what gets protected, but we receive things around which social attention has coalesced for one reason or another. These are not necessarily things that everyone likes, or even wants.” Jorge Otera-Pailos, The Ethics of Dust by Richard McCoy, December 15th, 2009

Restoration

“Restoration is a means to reestablish [a building] to a finished state, which may in fact never have actually existed at any given time.” Viollet-Le-Duc, The Foundations of Architecture, Page 195

“Neither by the public, nor by those who have the care of public monuments, is the true meaning of the word restoration understood. It means the most total destruction which a building can suffer: a destruction out of which no remnants can be gathered: a destruction accompanied with false description of the thing destroyed. Do not let us deceive ourselves in this important matter; it is impossible, as impossible as to raise the dead, to restore anything that has ever been great or beautiful in architecture. “John Ruskin, Seven Lamps of Architecture, The Lamp of Memory
Questions Developed to Conduct Interviews

When faced with historical preservation or adaptive reuse what are some advantages to being a large/small firm? What are some disadvantages?

Why did you decide to create your headquarters in (location)?

When facing a historical preservation project/adaptive reuse, what are the first steps you take in the design process?

What clients are typical of adaptive reuse projects? Most common building type?

What are your motivations for pursuing the field of adaptive reuse?

Can you briefly describe your design process, the main steps you take in completing the project?

Why did your firm decide to go into the field of historical preservation?

What are the two largest problems you tend to face when readapting/restoring a historical building? How do you go about fixing these issues?

What team members do you typically apply to a project? What type of qualifications do they have?

More specifically, I am looking at the adaptation of old warehouses. What is different about adapting these buildings from other building types (office buildings, residences, etc.)?

When adapting a building how do you determine what aspects to preserve and which to replace with new construction?

You also design a lot of newer buildings, what benefit is there to performing such an array of project types? Any disadvantages?

What percentage of your overall work is made up of adaptive reuse projects?

Is there any other information you feel will be helpful?
When faced with historical preservation or adaptive reuse what are some advantages to being a slightly larger firm? What are some disadvantages?

We do a lot of work with the GSA, so you must be a qualified firm whether you are large or small, must have a large amount of qualifications. Large projects require large teams with broad connections and qualifications, this allows us to go after larger commissions.

Why did you decide to create your headquarters in Cleveland?

Founded by pressing Garfield and son in 1905 and that legacy continues on and were able to open up other offices across the nation.

When facing a historical preservation project/adaptive reuse, what are the first steps you take in the design process?

We first look to see if the building appears on the National register. Then we search for original and existing drawings. We then consult the state historic preservation offices make sure they understand the clients interest and approve of the program. You also have to look at current codes (what are you allowed or not allowed to do, chapter 34 which is about adapting historical buildings), depending where you are there are certain liabilities, for example wood construction is restrictive can be a challenge, and in places where seismic issues need to be taken into account there are lots more restrictions, overall the process is made up a lot of give and take

What clients are typical of adaptive reuse projects? Most common building type?

I would say there are typical clients we have lots of 501c3o which are non-profit organizations such as churches or theaters, government institutions also present a lot of commissions because they own a lot of historical buildings.

There are a lot of problems when determining a buildings use. How do you determine whether or not a building is fit for the client’s purpose?

Let’s give an example a client gives a program and their has a building full of columns but they want to create studio and in that case we just have to tell them it isn’t going to happen, or if they need tall space and their building has short floor to floor heights, they can’t do it. We base a lot on the given criteria and then analyze the building based on that information.
Why did you/your firm decide to go into the field of historical preservation?

I think it naturally evolved, there was not a lot of new construction in the 1960s so it was adapt or die. Cleveland had a lot of beautiful old buildings in need of restoration. It is also generally less expensive to build so in times of economic crisis it tends to be the most common form of construction out there.

Can you briefly describe your design process, the main steps you take in completing the project?

Investigate, program, plan, estimate, investigate: research, existing conditions, Program: is there a written program, do we have to add on, stacking plans, Plan: Plans and estimating, cost and constitution

What are the two biggest problems you tend to face when readapting/restoring a historical building? How do you go about fixing these issues?

Firstly, it is often times undoing environmental issues, real state of disrepair, hazardous materials and determining whether or not something needs to be torn down. The next biggest problem then is getting clients to understand renovation is more complicated, it is cheaper but more complicated.

How do you tend to assemble a design team?

First because of tax cuts, I look at do I have an accountant and legal counsel and are there people to investigate forensics, original materials, mechanical plumbing structural, with experience in historic structure, threading of systems.

You also design a lot of new buildings, what benefit is there to perform such an array of project types? Any disadvantages?

New building has a vision and no compromises and you have a blank slate.
When faced with historical preservation or adaptive reuse, what are some advantages to being a large/small firm?

Our firm, PWWG is what I classify as a medium size firm—around 20 staff—11 registered architects—6 interns. I’ve worked in a large firm and a small firm (but not with preservation expertise). The span of building types/clients for adaptive reuse projects can be broad. Preservation projects can be very unique/custom. So having some size means that various members of the firm can develop a moderate to high level expertise in various areas, i.e. code, envelope, restoration procedures. No one can know everything or let alone keep up with technology changes. These staff members can be brought in on a project team during the design process to provide input, critique, perform analysis, or produce documents. Being a medium firm also means that the firm has some horsepower for large projects that require significant staffing. We work in or have had projects in PA, NY, NC, TN, KY, WV. But for the most part our geographical reach is PA/WV.

Small firms might have a principal or two who specialize in an area—like doing historical structures reports, performing investigations and testing. This kind of firm could be a consultant to a larger firm if they are well recognized in their expertise. But due to their size I’d think the scope/size of the projects they could handle would be limited. They might also be limited to a smaller geographical area.

Large firms can have the capacity to support staff who are specialized enough to focus on their expertise, perhaps publish papers, research, present at conferences. I think that the business constraints/pressure (to make enough money) for a medium size or small firm limits this kind of expertise. However once a firm gets large, then I think they get pretty focused on big projects to get fees flowing. Small projects are often money losers as the office overhead costs discourage small project work. So smaller quality work is not something that I think they would go after. However in a down market (like 2009) the big firms are looking for any work to keep going.

The market is always shifting so what might be a trend today is gone tomorrow.

What are some disadvantages? (See above)

Why did you decide to create your headquarters in Pittsburgh, PA?

The firm was founded by Leonard Perfido over 35 years ago— in the same location we’re in now. PWWG is only in Pittsburgh. I do not know how Leonard ended up here.

When facing a historical preservation project/adaptive reuse, what are the first steps you take in the design process?

Generally they start with a good assessment of existing conditions. That assessment is based upon objective data, and perhaps even some subjective data. So collect data, make assessment, and then make a plan.
Historical Preservation and Adaptive Reuse can be quite distinct things, (at least in my mind). We had a 15-year contract for the PA Historical and Museum Commission (PHMC). These could be strictly preservation project such as restoring an old oil rig, a small structure, and an historical home. We had a historical consultant from eastern PA who worked with us who would perform some of the initial investigations – like analyzing mortar, paints, flashing, etc. He would assist us during the design and write some of the restoration specifications. We could be replacing historical materials, etc.

This is unlike a project where a significant portion of the interiors gets gutted, say for a new hotel, and where only the historical lobbies are kept. In this case, only for the lobbies do we do the same thing as stated above – collect data, assess the condition, make a plan for the historical areas. Of course for any project, master plan or whatever one starts with collection of data but I mean that for historical work it can become much more intense/focused.

What clients are typical of adaptive reuse projects? Most common building type?

Right now we are doing/have done four 21C hotels – hotels that sell art. They buy historical buildings, like a bank building, or hardware building. We work with a designer from NYC on these – she sets the overall design intent, e.g. art deco. We have a project for Clarion University where we have torn out the entire interior wood structure of a historical building and are inserting a new steel structure and new layout.

What are your motivations for pursuing the field of adaptive reuse?

Our firm’s motivation is to leverage our expertise in preservation work and put it to work for more lucrative commercial or university adaptive reuse.

Can you briefly describe your design process, the main steps you take in completing the project?

I think it is much like you probably do in school: In schematic design: Listen to the client and their goals, gather information, analyze it, understand or generate or confirm the design program, brainstorm/generate conceptual diagrams, generate schematic options, synthesize, do final schematics. It is not necessarily a linear process.

Why did your firm decide to go into the field of historical preservation?

We are an urban design firm – and probably the city is where you find much of architectural value. And through time, from working on urban buildings an expertise is developed by principals and staff. I am not aware of a specific event or decision to go into historical preservation.

What are the two largest problems you tend to face when readapting/restoring a historical building? One is clearly defining the scope of preservation, rehabilitation, restoration or repair. What is salvaged and replaced?
There are a lot of terms for doing different things. How far do you go in restoring historical hollow metal windows that have extensive rust and asbestos sealants? How and where do you do repairs? Will they remain operable or should they be fixed. Are the windows restored in place or taken to a shop? This can cost hundreds of thousands of dollars for a high-rise building. How do you go about fixing these issues? Lots of dialog and some preliminary costing by preservation contractors, if available.

What team members do you typically apply to a project? What type of qualifications do they have?

Good question. I would not say anything is typical. I assume you are talking “Design” and not “Construction”. Our structural engineer often does the analysis on the façade structure – is the cornice secure, are the steel fire escapes structurally sound. There are consultants who specialize in the building envelope. As I mentioned, for one client, we work with a design consultant out of NYC who sets up the aesthetic intent, does the interiors and any new addition design. In house, lately I am the spec writer on historical projects. I consult with others in the office, past projects, written office resources, and federal web sites such as the GSA preservation specs, the NPS Technical Preservation Services. So I have a set of specs I’m constantly tweaking for projects – like plaster repair, cleaning stone flooring, etc. So I come in on large project to set up and write the specifications. Every project is unique. For our small state historical project PWWG was actually “the contractor”. We had subcontractors such as decorative painters, coopers, masons, plasterers who were historical subcontractors so they were part of the team as well as our chief historical consultant from eastern pa.

More specifically, I am looking at the adaptation of old warehouses. What is different about adapting these buildings from other building types (office buildings, residences, etc.)?

We are adapting an old hardware warehouse for a new hotel. This building, from 1900, has cast iron columns and wood timber beams. It also went through a few renovations during the last century, which has added in some different kinds of construction systems – like 2 x12 wood framing, in lieu of the beams. Meeting the fire code is one issue.

Fitting in a new program – ballroom, art gallery, meeting rooms, penthouse apartments into the existing space takes effort but this would be the same no matter what use it was previously. Whether or not to make additions whether on the roof or elsewhere involves cost analysis. Then there are different floor levels to contend with to meet accessibility codes.
When adapting a building how do you determine what aspects to preserve and which to replace with new construction?

Often these are driven by Historic Tax Credits sought by a developer or other funding requirements, the state historical preservation office (SPHO). If an area is designated as historically significant then it’s preserved. Generally the exteriors are required to be preserved. This may be based upon an historic structures report. The building itself may be a registered historic building or it may be just a contributing building to an historic neighborhood.

You also design a lot of newer buildings, what benefit is there to performing such an array of project types?

It’s difficult as many projects have component parts that are spread across uses. So for instance, as a very simple example we are doing alterations to a significant historical building downtown to update it for new tenants. And they have a fitness center on one of the floors. We’ve done fitness centers (not on our website) but we should be able to quickly figure out what the client needs – often clients may not know what’s current.

Any disadvantages?

There can be a large learning curve – so you have to be fast on research and identifying consultants who can help. Developing expertise that’s current for a particular building type is difficult. And this is related to making a profit to stay in business. Take university laboratories or dental suites. I have done several of these for local universities. But they come few and far between. However we have a lab consultant who we bring on for larger projects.

What percentage of your overall work is made up of adaptive reuse projects?

Right now – perhaps 25%?

Is there any other information you feel will be helpful?

None I can think of right now. If you want to talk about what’s written then let me know some times.
Questions for Chambers Murphy Burge, Interview with Elizabeth Murphy

When faced with historical preservation or adaptive reuse what are some advantages to being a large/small firm? What are some disadvantages?

I wouldn’t say that the disadvantages are any different from what any other small firm experiences. Preservation firms tend to be smaller firms because, though it is as young of a field now, it is still a newer field which results in smaller practices.

Why did you decide to create your headquarters in Akron, OH?

Lauren Burge and I bought the firm from Loraine and Henry Chambers in the 90s, originally it was in Medina but we decided to move to a more urban environment as most of our clients were already coming from places like Akron.

When facing a historical preservation project/adaptive reuse, what are the first steps you take in the design process?

The first steps we take are to analyze the current condition of the building and see if it is fit for the clients use.

What clients are typical of adaptive reuse projects? Most common building type?

I wouldn’t say there any typical clients for adaptive reuse projects; we have worked with the everything from small businesses to the government. Though we do offer design services we are most often brought in as consultants.

Why did your firm decide to go into the field of historical preservation?

The firm, Loraine and Henry’s firm, was originally a preservation firm and so we decided to continue in that direction when we bought the firm.

What are the main problems you tend to face when readapting/restoring a historical building? How do you go about fixing these issues?

I wouldn’t use the word problem, more like challenges because you tend to face them with almost every project. The biggest problem is helping the client to understand all that goes into an adaptive reuse project. For example, let’s say a client has a building and they want to create an open floor plan, but there are columns every ten feet supporting the structure above, it is impossible to knock out those columns. Getting a client to understand what is possible and what isn’t can be a large challenge.
What team members do you typically apply to a project? What type of qualifications do they have?

I have a list of people I usually call first, that I know are qualified for the type of work that I will be asking for them to do. I won’t hire someone who has never worked with the construction type that I am working with. Within their team, they can bring someone in who isn’t as knowledgeable as long as someone with experience is there to oversee them and make sure the job is done correctly.

When adapting a building how do you determine what aspects to preserve and which to replace with new construction?

Money, deterioration and importance are all huge factors in whether or not a building is restored. You cannot restore anything without money, and many times, if the building or object being restored is of great importance you can get help in order to raise money, however if it is just another historical structure, often times there is little support to get them restored.

Can you describe a typical consultation?

There is nothing typical about consultations. I have had consultations that last one hour, those are usually clients who want me to look at a building and determine if it is fit for the use they have in mind. Other times, I can be consulting for a firm that wants me to oversee their entire project in order to make sure they meet all the requirements set by the government in order to get their tax returned. Therefore I am on that team for a year or so, and I monitor them throughout the process to make sure they don’t miss something they needed.
KING WILLIAM LOFTS San Antonio, TX

Poteet Architects is a 12-year-old firm based in San Antonio, Texas. Jim Poteet opened the office with the hope that the firm could further the sustainable revitalization of downtown San Antonio. Poteet Architects' success in this endeavor has brought the firm national recognition and acclaim. The firm's portfolio of completed work includes residential, commercial and institutional projects, but is perhaps best known for the sensitive adaptive reuse of existing buildings and a fresh, rigorous approach to modern interior design. In 2009, the Pace Foundation Offices was selected as one of twelve CONTRACT Interiors Awards winners nationwide. The project was given a Design Award by the Texas Society of Architects and an Honor Award by the San Antonio Chapter of the American Institute of Architects. The firm's Robison Loft was featured in the November issue of Metropolitan Home and the Pace Loft was prominently included in Michael Lassell's book Glamour: Making it Modern.

Conversion of a 1920's era glass warehouse into 11 loft condominium units, located in the King William Historic District (Texas' first national historic district). Built in 1999/2000, The King William Lofts was San Antonio's first loft/urban infill project since the late 70's/early 80's, and is recognized for re-establishing the viability of new, urban housing in the near CBD area.
Campstreet/Chrispark is the rehabilitation of a 1920’s factory and its grounds near downtown San Antonio, into 20 loft residences and an urban park. The 88,000 sqf structure was divided into lofts with indoor common area including exercise, community gallery and basement parking. Over 100 steel windows were added to the building’s refurbished façade. On the exterior, new concrete and steel porches and balconies are bounded by outdoor garden and courtyard spaces. The interior was treated as a backdrop for art in all media—the developer was a nationally known contemporary art collector.
London’s Bankside Power Station stood disused from 1981 until 2000, when it opened to the public as The Tate Modern. Swiss architects Herzog & de Meuron approached the conversion with a relatively light hand, creating a contemporary public space without diminishing the building’s historical presence. The impressive cultural icon has since become the most visited museum of modern art in the world, revitalizing its formerly sequestered, industrial neighborhood.

Herzog & de Meuron chose to enhance the urban character of the building without detracting significantly from its form, allowing it to remain an experiential and visual piece in itself. The most apparent exterior alteration is the light beam set atop its roof, a horizontal contrast to the towering chimney. The light beam’s minimal geometry and translucent glass clearly differentiate it from the dark masonry and detailed brickwork of the original facade. The transition between old and new is not always obvious, however. Herzog & de Meuron referenced the industrial character of Scott’s design in each detail, avoiding jarring interventions which might distract from the works of art. The heavy stair rails, cast iron grills, and unfinished wood floors harmonize with the original aesthetic.
Focused on supporting the revitalization efforts of downtown San Antonio, Overland Partners set out with the goal of transforming a 1918 warehouse into an innovative but functional studio space; in turn the firm was equally and unexpectedly transformed by the building.

Collaborative areas integrated into the preexisting structural grid and day-lit by clerestories serve as the primary organizational component around which the ground floor studio is arranged. This spatial organization inspires creative collaboration and communication between employees while also facilitating project reviews, client meetings, design charrettes, visiting student critiques, and weekly office-wide lunches.

A series of enclosed meeting rooms are strategically located throughout the studio, providing privacy and areas for more focused collaboration. These rooms are clad in raw sheet steel and reclaimed teak, which allude to the industrial past of the building yet are detailed with a refinement that attests to the sophistication and craft of the firm.

A newly inserted courtyard unfolds beyond the existing brick façade, creating an unexpected public space that opens the building to the street and allows access to adjacent tenant spaces. The courtyard provides natural light and ventilation while expanding the entry sequence from the compressed industrial street edge, which is located along a former railroad corridor.
PARK SHOPS Raleigh, NC

A three-story, 50,000-square-foot classroom and research building at North Carolina State University, with lecture halls, laboratories, advising offices, a television production studio, video editing suites, and an Internet café. The L-shaped structure defines a new campus plaza. This project received a 2011 National AIA CAE Facility Design Merit Award.

Pearce Brinkley Cease + Lee sought to preserve one of the oldest spaces on campus—a 1914 masonry building that once housed steel shop classes—and update it in a way that sets off its history and texture. The architects gutted the structure, removing gypsum board walls and sandblasting the brick beneath. They cleared two intersecting paths through the wings on the main level, echoed by similar paths on the ground level. Where the corridors meet, PBC+ L removed a third-floor bay of restrooms to bring the lobby to double height and allow light from the clerestory windows to filter down. At the main stair, they cut away a section of floor to open up views of all three stories. Visitors descend the stair to a glassed-in café pavilion, which serves as Park Shops’ new main entrance. Contrasting old materials with new, the architects left narrow gaps between the brickwork and some of the ceiling edges, so that thin strips of light wash over the bricks and reveal their texture.
After standing vacant for nearly 30 years, the St. Louis Municipal Power House building at 1100 Clark Avenue in downtown St. Louis, opened as the new offices of Cannon Design in September 2008. In 2007, the firm purchased the 19,000 sqf building and provided all design, development, and construction management services for its restoration, renovation and adaptive reuse—an investment that represents the firm’s confidence in the future of the city of St. Louis.

Although the building’s exterior shell and original structural steel were fundamentally sound, reuse for a large, thriving design-focused architecture and engineering practice required a creative spatial solution that exploited the building’s massive volume in spite of its relatively small footprint. It also offered the opportunity to rethink the implications of the physical office environment on the practice at a time of significant change in the profession at large and for the regional office specifically—projects of ever-increasing scale, new models of project delivery, and new technologies.

The revamped Power House features a three-story gallery formed by constructing two partial levels that, combined with the existing two floors and rooftop penthouse, create a total of 32,000 sqf of office and conference space designed to facilitate Cannon Design’s highly collaborative, team-oriented work approach. The new floors are set back from the building’s spectacular windows to maintain the building’s sense of transparency and volume and to create gallery space for the community as well as for corporate functions. The interior, essentially an empty shell, was completely rehabilitated, with installation of HVAC, plumbing, and electrical infrastructure. External modifications include historically accurate replacement of windows in their original masonry openings and creation of a 3,500 sqf urban garden.
The Mint Project is the transformation of one of Sydney’s oldest and most precious historical sites on Macquarie Street into a new meaningful public place formed and characterized as much by the carefully inserted contemporary buildings as the conserved and adapted heritage structures. It is a project that seeks to set a new and important benchmark for: The vacant and almost ruinous Mint Coining Factory and associated buildings has been transformed into the campus-like headquarters of the Historic Houses Trust. Contemporary architectural forms have been carefully inserted to accommodate a major public auditorium, exhibition areas, foyer and bar, while existing buildings have been adaptively reused to create a significant new resource center for the public and new work environments for the staff.

While the contemporary architectural forms have been carefully designed to form direct and clear relations with the existing buildings in terms of scale and proportion, they are uncompromisingly new. They have sought to create a new architectural layer on the site designed in the innovative and ‘forward looking’ spirit that underpinned the original 1850’s constructions.

This ‘layered’ approach of placing new and old in a bold transforming relationship is apparent in the general organization of the project and in design of the new courtyard. The strict symmetry of Trickett’s original plan with central pavilion and identical wings has been transformed into an asymmetrical axis about a pair of related, pavilions of ‘opposite/dialectical’ character, new and old, light and heavy, stone and glass. The outcome is a rich and complex assembly of form and spaces through which the layers and events of the site can be read and interpreted.
URBAN OUTFITTERS CAMPUS
Philadelphia, PA

Urban Outfitters Corporate Campus, designed by Meyer Scherer & Rockcastle transformed four dilapidated historic buildings in Philadelphia’s Navy Yard, into an award winning adaptive reuse headquarters. The Anthropologie, Free People, and Urban Outfitters retail brands’ design studios and offices are housed within each building. A campus commons and services’ offices are efficiently shared among the different divisions of the company. This project received a 2010 AIA Honor Award for Architecture. When Urban Outfitters, inc., first considered the site, the existing structures were dilapidated. Despite the decay, the soul of the Navy Yard spoke to the company’s founder, Dick Hayne. He purchased four historic buildings, with an option on one, that were constructed from 1880 through 1939. Urban Outfitters, a clothing and housewares retailer, was the first major non-ship building corporation to move to the Navy Yard. The design including building documentation and renovation was completed within 23 months. Using the Federal Historic Preservation Tax incentive Program, the client invested over $100 million in the 285,000 square-foot project. The buildings once operated to produce naval vessels, alternating between construction, repair, and even scrapping decommissioned ships. The design centers on utilizing the factory characteristics of the buildings industrial materiality, open volumes, and access to daylight to re-purpose the buildings’ major function from production to creativity. The synthesis of four measures art, culture, economy, and environment results in the transformation from a public, production based yard to a private, creativity based one.
CHO BECK HOLBACK + ASSOCIATES

CBH is a firm located in Baltimore, Maryland that works primarily with adaptive reuse projects. Purposeful Design, Meaningful Collaboration and A Culture of Creativity are what they say makes their firm function successfully. Purposeful Design is the use of design to show respect for the community and history by translating the clients vision to serve the mission they are trying to achieve. Meaningful Collaboration is meant to show there ability to listen and work with clients, and a Culture of Creativity meant to show the diversity of the office in terms of taste and skill sets.

Notable Projects: Clipper Mill, American Brewery, Chesapeake Shakespeare Theater, Fred Lazarus IV Center, etc.

The Clipper Mill was originally built in 1853 as a machine plant, melting shop, pattern shop, iron foundry and stables. The company was then bought in 1903 and served as a steam locomotive plant until 1920, when the site was abandoned.
After suffering a terrible fire in 1994, the building was purchased by Struever Bros, who employed the firm to renovate all 5 buildings on the 7 acre site.

Because of the fire, CBH had little to work with besides the exterior shell of the building. In an attempt to preserve as much of the history as they could, they left what had remained and designed around it. Therefore, there is a crane present in the central courtyard which is one of the pieces of machinery left mostly untouched after the fire. Within the space there are 36 residential blocks and around 10,000 square feet of commercial space. This commercial spaces spans from retail to restaurants and has become a popular location in Baltimore. The high end apartments take advantage of the large, industrial windows to provide a large amount of light and scenery into a space.
Originally built in 1915, this warehouse was re-purposed for the Maryland Institute College of Arts. Inside the old warehouse there are studios, classrooms, galleries, and re-envisioned art departments so that students and faculty may interact better with the public. On the bottom floor, near the entrance space, there is a cafe and galleries. CBH used the large windows found on the upper floors of the building to create a more open entry way and to make it more inviting to those on the street. When it was constructed, the building was in a run down neighborhood in Baltimore, that since the buildings construction, has once again seemed to come to life and many residents credit the building as the turning point for this part of the city.

Light was a large consideration in the building and was thoroughly designed. Even the logo on the doors was placed so that it would be legible at all times of the day and appear in different locations throughout the lobby and gallery spaces.
DOMOKUR ARCHITECTS

Domokur Architects is a professional consulting firm based in Akron, Ohio specializing in planning and design for institutions of higher education, government agencies, healthcare providers, corporate organizations, camps and community service groups. Our firm consists of a multi-disciplinary staff of Architects, Interior Designers, Landscape Architects, Planners, Project/Construction Administrators and Cost Estimators.

“We are passionate about the revitalization of our community. Using the framework of existing structures and infusing them with new and creative uses is sustainable architecture at its core.

By using this approach, we are lessening the impact that we have on the environment. Energy is saved by restoring buildings rather than demolishing, waste is reduced, and the original character of an urban area can be brought back to life. Domokur Architects is committed to having the least possible amount of impact on the environment.”

The Shoreway is an adaptive re-use conversion of an existing four-story, 90,000 SF warehouse into a mixed-use residential and commercial building. There are 42 loft apartments on the upper three floors, arranged in layouts that we have carefully planned to offer lake views from every unit. The unit typologies for the interiors include exposed high ceilings, large unobstructed windows, and a mix of polished concrete and hardwood floors. Throughout the design process, we have endeavored to use sustainable design principles. Tenants also enjoy an amenity deck, a fitness center, and 42 covered parking spaces and a nearby visitors' parking lot.

Located on Cleveland’s near-west side and just steps away from the Edgewater Park pedestrian underpass, this project leverages existing local amenities to echo the development strategies outlined in the Cleveland Lakefront Development Plan. The project has also secured Federal and State Historic Tax Credits, is listed on the National Registry for Historic Projects, and conforms to Cleveland's Green Communities requirements. Construction began in fall 2013 and was seen through completion in September 2014. The property was 100% leased upon completion.
The Baker Electric Motor Building was developed by Cumberland Development as a Historic Tax Credit project. The building has recently received the LEED Silver Certification. Since the building had been vacant for a number of years, the firm was responsible for a full investigation of the existing envelope to identify the appropriate repairs that respond to the requirements for Federal and State Historic Tax Credits. The building is currently being utilized as incubator space along the Bio-Tech Corridor in Mid-Town Cleveland.
Descriptive Writing Exercise II

Set below the average line of view, the warehouse sits, hidden amongst modern scenery, a glimmer of the past in a society rushing towards the future. Passed over, only given attention when one needs inspiration from the past, a former icon now invisible to average eye. However life is in abundance here, in this hidden window, silently designing for the future.

The sun shone one the windows, reflecting on the opaque surface behind them. The same sun contributes to the growth of the building, and the age of it, creating a merge between the nature that it was once so separate from, now invading the structure that had created a division. Inside, shadows of the past are occupancies by ideas of the future bridging the minds of tomorrow with those of yesterday. The future, building on this union is able to thrive, creating, developing in the hopes of assisting those who have yet to come, improving their own knowledge and ability. The building looms over them, assisting them in these noble ideas, ideas that have been present here before, ideas that it can share. The goal of the past is to assist the future, to make it a place that thrives on the ideas they have invented, the lessons they have learned. These shadows are the support, the foundation of what we have become and what we have yet to achieve and it facilitates the future through experience and wisdom.

The boom of industry draws attention from the street as onlookers peer in, looking for the source of such a sound. The once invisible landmark, now a source of attention, sparked by something not initially understood. Inside people move as a machine, engineers of new ideas that may provide a cushion for the future. The drone of machinery overwhelms the senses of newcomers, while those who are accustom move about as if it wasn’t there.