REPURPOSING A GRAIN SILO ELEVATOR IN SEYMOUR, INDIANA:

AN OPPORTUNITY FOR NEW LIFE

A CREATIVE PROJECT

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1.1 Problem Statement

This creative project focuses on repurposing concrete grain silo elevators in towns and cities. As large structures dispersed throughout North America’s landscape, grain silo elevators contain an often-overlooked potential providing an opportunity to produce new innovation. Those determined to develop such sites become puzzled by the question, ‘what can you do with a grain silo elevator?’ This creative project will answer that question by exploring literature, case studies and developers who have innovatively repurposed grain silo elevators. The results will then be used to examine the opportunities for a grain silo elevator renovation in Seymour, Indiana. This particular grain silo was chosen for repurposing due to its location and the fact that it is currently abandoned. The site has the potential to create opportunity for the community and aid in its growth and future development, allowing this creative project to serve as an example for other cities and developers.

1.2 Significance of Problem

Grain silo elevators are sleeping giants when exploring the untapped potential of new innovation in cities and towns. As quality of life elements become the forefront for attracting residents and visitors, creativity is crucial in the development of a destination. The opportunity to creatively repurpose a grain silo elevator as a destination not only completes the innovative draw to cities and towns, but also reuses a bygone structure. Further, the individual attributes of repurposing historical buildings add unique value to the site, the developer’s experience and city or town (http://www.metrojacksonville.com/article/2015-feb-tedxjacksonville-belonging-to-the-universe). The connotation of repurposing grain silo elevators sparked the interest of many, but the journey towards implementing this approach is not guided. This creative project will create an example with the intention that future developers may use it as a means to reflect their own repurposed project.
1.3 Motivation for Creative Project

Traveling home for the American holiday of Thanksgiving, my father and I drove on the same route headed east on U.S. 50 in Seymour, Indiana. As we drove we saw the same local pharmacy on our right, a few retail stores and restaurants on our left, passed through the historic downtown with interesting stores and fascinating facades, and then on our right was a structure I never paid too much attention to; the abandoned grain silo elevator. Sitting there like a giant headstone, my attention poised on the massive height of the concrete silos, I pondered *what an interesting structure*. It was just then when my dad said something I would never forget; “wouldn’t it be cool if that was used as something else? I always thought it would be cool if there was a restaurant on the top floor and you had to take an elevator or stairs to get up to it” (Ernest, J. 2013, November. Personal Communication). Ever since he spoke those words, my mind begun racing towards the endless possibilities of reusing and repurposing that grain silo elevator.

1.4 Methodology

The research methods of this creative project include literature review, case studies, interviews with experienced developers and owners of repurposed grain silo elevators and with stakeholders in Seymour and a proposal recommendation for the site in Seymour. The literature review will aid in the discovery of theories and practices as the literature relates to topics such as renovation, revitalization, green infrastructure, repurposing, redeveloping and restoration. It will also provide a source to measure what realistic approaches should or should not be taken when repurposing grain elevators and similar structures. The case studies will act as the main guide in understand the process by which other grain elevator repurposed sites have been successfully implemented. The case studies will also provide the opportunity for potential leads of communication to developers and owners who have experience in repurposing. The interviews will serve as a way to gather information directly from the developers and owners of existing repurposed grain elevator sites, and show how their experience can be used to
understand how to repurpose a grain elevator site. The site proposal will include interior and exterior renderings of what the grain elevator can become, a financial forecast and the benefits the repurposed site can have and a guide to successfully completing the project. Finally, the project will include a summary of the research and all data gathered to support the site proposal encouraging implementation on the site in Seymour, Indiana.

1.5 History and Background

The history of grain silo elevators in North America can raise curiosity around their designated purpose, engineering, construction, and the gradual evolution of the building type. Elevators arguably communicate a clear relationship between form and function. Le Corbusier, renowned European architect, once stated in 1923, “thus we have the American grain elevators and factories, the magnificent first-fruits of the new age” (Byrnes, 2012). The grain elevators Le Corbusier, and other European architects fascinated with these structures in the early 20th century were composed of steel and concrete. Invented in the 1840s, the first grain elevators were primarily made of wood and were used to store grains from harvested farms (2012). Architects were not the only people drawn to these buildings. Artists illustrated the eras of art through the interpretation of grain elevators and their significance to the land and nature. Not just architects were drawn to these buildings but artists as well who have illustrated the eras of design and art through the interpretation of grain elevators and their significance to the land and nature.

In the 1920s, grain elevators stood as monumental structures that, at the time, symbolized the nation and its prosperity in agriculture (Mahar-Keplinger, 1993, p. 8). Artist Demuth “connected the grain elevator to the history of architectural masterpieces while also celebrating its uniqueness as an American object” (p. 9). In the 1930s, industrialization spread across the Midwest intensifying the tension between nature and industry. The grain elevators have a certain appeal as statements of form and function (to architects). They became more common on the plains and in rural areas and in a way
redefined the “pastoral image of the American landscape” (p. 9). By the mid-1930s, the Great Depression halted the construction of grain elevators. The Farm Security Administration, a federal agency, sponsored events to bolster the importance of these structures by influencing photographers to travel around the country and take pictures of farmers; most of the pictures contained elements of the grain elevators, if not the entire structure. The grain elevators as a “document of current social issues and of human struggle,” (p. 9) represent far more original uses and tell a story about the lives of people who used the grain elevators. Nearly ninety years ago from now, grain elevators symbolized and created an experience for those who looked upon them. As the country moved beyond the Great Depression, the representation of grain elevators shifted from social concerns to more formal ones. Documentary photographer Wright Morris captured this transition in his work. He excluded people from his photographs in favor of portraying grain elevators as impersonal, traditional objects of massive scale within the landscape (p. 10). In the early 1960s, the typology became popular with the success of pop art and the repetition of common objects. Many photographers took pictures of vernacular and industrial buildings due to their scale and external variables of buildings. Since the grain elevator lacked variation to the design, materials and form, this made grain elevators a popular piece of art. During the 1960s, grain elevators served as forms of art demonstrating elements of form, scale, differences in design and the importance of the relationship to both history and context. In the 1970s and 1980s, the historical interest of the 1960s transformed the typology interest into a fascination of ruins (p. 11). By this time, the grain elevator succumbed to age and showed signs of material decay. Artists like Frank Gohlke, Walter Pichler, Colin Grey and perhaps thousands of student photographers exposed the relationship between people and their environment through grain elevators crumbling and decaying and how they no longer fit into a site’s context or appeal to adaptive re-use (p. 11). Grain elevators over a 150-year history influenced many perceptions and representations of building types. The unique structure transcended its practical purpose and demonstrated its ability to stand firm in a timeless
fashion. The grain elevator truly transpired into a symbolism of industry and landscape, architectural beauty and geometric purity.

From 1870 to the present, grain elevators can be simply divided into two categories: rural and urban. Rural grain elevators served a crucial purpose in clearly marking the location of towns from miles away along with being established directly by, and sometimes attached to, railroad stations. As a matter of fact, the westward expansion of the railroad in the late 1800s accompanied by a surge “in building track-side towns, created and planned by railroad companies to generate traffic along their lines” (Mahar-Keplinger, 1993, p. 46). Because of this, towns spaced at intervals based on the amount of business a railroad was predicted to generate and because of this, towns became susceptible of competing railroads bringing new lines and towns (p. 46). Depending on which existed first, towns expanded in orientation to either the railroad or the land survey in a grid design. The grain elevators and railroad stations became the first structures to be constructed. To a farmer, the most important quality in a grain elevator was the structural stability, including economy and fire resistance. Wood was used until about 1915 due to the fact that is was stable and affordable. Despite these benefits, wood burns easily under the right conditions. The threat of grain dust explosions, poorly lubricated machinery and sparks flying off passing trains led builders to consider other materials (p. 12). A grain dust explosion is the rapid combustion of fine particles suspended in the air, often but not always in an enclosed location. This can occur where any dispersed powdered combustible material is present in high enough concentrations in the atmosphere or other oxidizing gaseous medium such as oxygen (Eckhoff, 1997). These problems led to the experimentation of alternative materials such as brick, tile and steel during the first two decades of the 20th century. By 1915, all alternatives became rejected in favor of concrete. However, wood elevators remained popular in rural settings. In order to reduce the likelihood of fire, builders covered wood with metal sheeting or asbestos siding (Mahar-Keplinger, 1993, p. 12).
Urban grain elevators in the early 1900s became mechanically sophisticated and a single bin (silo) could store the annual yield of neatly a hundred family farms. The urban grain elevator is nearly built out of concrete and is designed to receive grain from smaller rural elevators and store it until it could be sold to processors. Most have the capacity to sort and clean grain and are commonly located near railroad centers or waterways. Even though urban elevators are more conventional than rural elevators, they are placed on the edge of cities because of the little effect they had on defining the structure and identity of a city. However, urban elevators are built by engineers and therefore unique in design whereas rural elevators are designed to a standard plan and resembling one another, formal variations resulted of regional differences and local building practices (pp. 12-13). Four distinct levels in concrete urban elevators are often found in any urban or sub-urban city or town. They are the work floor (ground level), storage bins/silos (bulk of building), distributing floor (directly above bins/silos), and the headhouse (isolated structure on top of building or sometimes separate from elevator altogether) (pp. 70-71) see Figure 1.

![Figure 1 - Four Distinct Levels of a Grain Elevator. Source: Caleb Ernest and www.publishing.cdlib.org](image-url)
The rich and diverse history of grain silo elevators has always been quite unique since the 1920s. From then, varieties of uses have been hinted at and inspired many artists, photographers and architects from around the world. Grain silo elevators stand as symbols of timelessness and inspire visitors to experience and relish the hidden history of agriculture. One Australian artist mentioned early, Walter Pichler, suggested the poetic beauty in such structures and encouraged the option of adaptively re-using the structure. It is even so that “most of us are unfamiliar with the inner workings of the grain elevator, we respond to them largely as symbol” (Mahar-Keplinger, 1993, p. 83). Unfortunately, most grain elevators have fallen into disrepair and are in need of saving, reusing or repurposing in order to conserve the nostalgic beauty just like the ruins of European cathedrals. Arguably, grain silo elevators have become monuments to the golden age of American farming and agriculture, taking on a romantic air and need to be admired today just as Le Corbusier and others admired in the past (pp. 8 and 83).
CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

Most articles and journals describe the process of specific projects whereas others explain the motivation and reasoning for strategies that work or do not work. Some authors, such as Wilton Corkern find the faults between heritage tourism and history while other authors, such as György Ängelkott Bocz, distinguish the potential for reusing agricultural buildings. As multiple authors and articles alike elaborate on their critiques of old buildings and future uses, patterns begin to emerge revealing common themes found throughout literature. The following reviews of literature contain relatable information similar to repurposing grain elevators. This section will expand upon four different groupings of themes found in the literature reviewed.

2.2 Themes

2.2.1 History, Heritage, Culture and Identity

Several authors communicate the same ideas about the significance of old buildings and elements that aspire to create a journey through time. All historic buildings are represented by their age and how long they have been standing. In the article Adaptive Reuse in Sustainable Development, Tam, Fung & Sing explain how “in the United States, a building must have at least 50 years old to be considered as historic...some have lowered thresholds such as New York City which is 30 years old” (2016, p. 636). Without historical relevance and ties to telling a story, old buildings are just that: old materials holding together throughout the years. A few facts about a building are not necessarily interesting, but “real history is challenging. It is complicated and uneven. It can be risky. It can be fun, entertaining, interesting, even exciting. History can inspire us and give meaning and relevance to our everyday lives” (Corkern, 2004, p. 15). Presenting the entire history of a site, the development and relevance to why it was built and what purpose the building had can grab the attention of anyone and
create a historical adventure. Further, a building’s history gives value and understanding to its significance, which develops a richer meaning to the residents who live around a historic building or for visitors who are attracted to it. Thus, heritage is just as influential as history because they are directly tied together.

Heritage buildings cater towards an area’s identity and “serve as cultural and heritage symbols; thus, they act as a centre of individual and community life” (Misirlisoy 2016, p.92). Heritage defines where people came from and gives a sense of pride, nostalgia and glory. Most often recognized among residents and visitors who witness heritage buildings, the first experience is potentially emotional. The symbol of heritage relates to more than a cultural identity. It is also a way to take part of continuity in a community’s identity (Tang, Fung & Sing, 2016, p.635). Heritage provides a glimpse into the past which is a rare experience many communities would love and cherish (Bullen, 2011, p. 411). Future generations can look back to a city’s or building’s heritage and understand important lessons of character and identity and how influential heritage is in one’s own history and identity. A building’s history, heritage and identity influence culture to the surrounding people and city or town. A site is much more valuable when its heritage becomes an interest to anyone. Even one person valuing a site because of its past and relevance to history influences that person’s culture. Heritage buildings are so crucial because of their symbolism and the time traveling ability to glimpse into past periods of time. Though some people would prefer to tear down old buildings simply because they are not providing any use other than sitting there, Misirlisoy explains why preservation is key:

“Instead of destroying, they should be sustained since they are evidence of the people’s lifestyle and culture living in or around it. Conserving heritage buildings and giving new functions according to their location, size, and potential can help to future generations to understand where they are coming from.” (2016, p.91)
Old buildings stimulate historic and heritage relevance. They provide rebirth of identity and give new birth to culture. Old buildings have an array of opportunities to be utilized and history, heritage, culture and identity are just the start.

2.2.2 Sustainability, Environment and Conservation

Another theme centered on the interpretation of old buildings is to conserve them with the environment in mind, and doing so in a sustainable way. In the article *Adaptive Reuse of Heritage Buildings*, the author recognizes the opportunity sustainability has for sites that are otherwise exposed to the dangers of being torn down. Conserving buildings is “part of a wider revitalization strategy to promote sustainability within the built environment, many buildings of cultural and historical significance are being adapted and reused rather than being subjected to demolition” (Bullen, 2011, p. 411). Demolition is an environmentally unfriendly process (Bullen, 2010, p. 216) because of the polluting nature of machines, waste and material disposal, and then using additional materials and machines to construct new infrastructure for a new building. Adaptation of buildings for new uses, on the other hand, generates less waste, uses fewer materials and uses less energy than demotion and rebuilding (p. 216). Other than the difference in demolition versus reuse, sustainability practices use the landscape as a development asset (Garcia, 2007, p. 1386) where the local landscape serves as an existing environment challenging those who seek to reuse and sustain old historic buildings. This is not just a challenge for those interested in historic buildings, but the “role of architectural conservation has changed from preservation to being part of urban regeneration and sustainability” (Misirlisoy, 2016, p. 92), which in turn inspires developers to create or recreate something attractive with that “never-before-seen” look to a building.

Sustainability, in its own way, becomes part of a vast scale of possibilities for preservation or reuse. Beyond a property’s line, a site is so much more than the materials, history and a deeper meaning to all. The article *Adaptive Reuse: Issues and Case Studies in Building Preservation* states,
“Beyond every property line is a vast operating environment that continuously interacts with the project site. These interactions involve processes and phenomena that in turn are affected by the project site. At any given time, this environmental system is in a state of equilibrium, a dynamic balance in which the nature of these processes and phenomena has been accommodated.” (Woodcock, 1988, p. 50)

Woodcock is using this idea of sustainability serving as a signifier to a larger purpose when reusing a building. The effects of sustainability practices echo out into benefits from improvements in material and resource efficiency, cost reductions and retention (Bullen, 2011, p. 412). Environmental benefits of carbon emissions reduction with the recycling of a valued heritage building make reuse essential in sustainable development (Yung & Chan, 2012, p. 352). All heritage buildings, no matter what original use, are cultural icons and their preservation impacts on community well-being, sense of place and ultimately social sustainability (Bullen, 2011, p. 419). However, some would argue that as noble sustainable efforts are, there are no economic benefits to this process. In response, “a regional effort on sustainable tourism may have a positive effect on the market whereas a tourism enterprise working with sustainability alone will not change the number of tourists they attract” (Kernel, 2005, p. 157). To elaborate, a local market for tourism that already exists and tries to incorporate sustainable practices will not benefit as much as a destination starting off with sustainable tourism through the reuse of historic buildings. Not only do sustainable practices in historic buildings create a more efficient market for tourism, but being part of a regional effort can encourage some people to join. While conserving the heritage values of heritage buildings is phenomenal for the environment and local community, the reuse of historic buildings can also enhance economic and social sustainability (Yung & Chan, 2012, p. 360).

2.2.3 Tourism and Authenticity

The tourism industry mentions, in the previous section, and serves as another form of utilizing old buildings for another purpose. As described in article *Utilisation of Agricultural Buildings*, “Tourism is
considered to be one of the diversification tools in rural development and sustainability discourses have been expanded to tourism” (Bocz, 2012, p. 19). This said, tourism is a unique opportunity to present historic, cultural and sustainable buildings to the local community and to neighboring communities, regions and states. In recent literature found at the time of this publication, an observed pattern of heritage based conservation efforts also considered the positive impacts environmental and social sustainability. But what does one do with such a product? Show it off, display it, be proud of it and, above all, relish in the fact that preserved and reused historic buildings can communicate a timeline and shape an experience for users and visitors. In The Business of Cultural and Heritage Tourism, the author presents us with the fact that visitors prefer “cultural heritage tourism that offered entertaining and personally relevant insights into the past” (Hughes, 2010, p. 18), which is exactly what historic buildings can provide for a community. However, according to Wilton Corkern, author of Heritage Tourism: Where Public and History Don’t Always Meet, heritage tourism rarely challenges or surprises visitors because the heritage tourism attractions do not always provide true facts about exhibits. It needs to challenge the conventional wisdom that is widely known about history, and it should present a version of history that is dirty or controversial (Corkern, 2004, p. 10). Corkern is relaying that heritage tourism needs to be authentic because that is exactly what visitors seek. According to Hughes, “perceptions of authenticity in cultural heritage presentation can also differ depending on the audience. In any case, authenticity is seen as a critical aspect in producing truth and value within tourism” (2010, p. 18). So, together with a historic building that has true and real facts set in history, that authenticity reveals for all to see no matter if the history is perceived as positive or negative.

Now that heritage tourism and an authentic site are worth the visit, how can the site move forward? Cultural and heritage tourism act as a community resource drawing in visitors that contribute to the tourism business. The business of cultural heritage tourism requires catering to market the desire of individuals to experience the past in an entertaining way (Hughes, 2010, p. 17). The challenge, then, is
for heritage tourism to become a link between recreation and scholarship, where leisure activities become heritage tourism and history meets public (Corkern, 2004, p. 15; Garcia, 2007, p. 1383). This is not an initiative acted by a sole developer. Government support is needed to develop sustainable tourism, but some tourism partners with non-governmental organizations, municipalities and counties are needed in order to continue initiative efforts (Kernel, 2005, p. 154). Paul Montagno, Ball State University Alumnus (MURP 2003), incorporated tourism into one of his initiatives for economic development along the Susquehanna River Greenway in Lewisburg, Pennsylvania, for his creative project. His redevelopment of industrial sites needed an economic draw to it and he claimed tourism is one way to do just that (2003, pp. 13-17).

2.2.4 Adaptive Reuse and Creative Redevelopment

Lohren Deeg, Associate Professor of Urban Planning at Ball State University (March 2004), posed the question in his Master’s level Creative Project, “how can remnants of the past, embodied with an industrial, working persons’ history and heritage, be preserved when creative interest takes over?” (2004, p. 33). He goes on to say that creative reuse ideas centered on preserving character while creating new function(s) is a major opportunity for many communities (pp. 1 and 3). Adaptive reuse of built heritage has only been strongly advocated in the last decade, according to Yung & Chan (2012, p. 354). It spurs new life into buildings, creates efforts towards expanding the life of buildings, transforms the site and area around it into opportunity for tourism and is appealing to both public and private sectors. Old buildings can thus be treated to adaptive reuse measures in order to creatively redevelop and repurpose a building while appreciating and retelling history. It is “revered as the ‘holy grail of sustainability movement’ if the building is properly renovated,” (Boschmann & Gabriel, 2013, p. 224) and not only retains the building, but conserves the quality, effort, blood and sweat, skill and dedication of the original people who built the structure (Bullen, 2011, p. 412). Many authors agree that adaptive reuse is adaptation through remodeling. Remodeling that has become functionally obsolete from the
original use into a new use and is developed for endless potential. The different areas of potential could include heritage tourism, architectural, social, cultural and historical values and regenerating an area in a sustainable way, to name a few. (Montagno, 2003, p. 9; Tam, Fung & Sing, 2016, p. 636; Bullen, 2010, p. 215; Bullen, 2011, p. 412; Yung & Chan, 2012, p. 360).

Another perhaps untapped potential of adaptive reuse for heritage buildings is that “it serves as an exhibit in itself,” and “historic buildings materials have demonstrated their longevity through their very survival...superior to modern building materials” (Cramer, 2007, p. 159). Old buildings are a testament of an impressive ability to survive time in near original condition. To look upon a building 50, 60 or 70 years old and develop the thought of how it has been standing untouched by time is an extraordinary experience, in a manner of opinion, but also in the public interest as well. In Adaptive Reuse, the author determines that “an adaptive reuse project may be very appealing to both the private and public sectors,” and is often viewed “as a viable tool for restoring and preserving historic buildings in the public interest” (Woodcock, 1988, p. 59). A building that stands the test of time is impressive by itself, but what is more impressive is the fact of reusing the same building for a future use.

2.3 Conclusion

It is claimed that “the most successful adaptive reuse projects are those that respect and retain a building’s heritage significance as well as add a contemporary layer that provides value for the future” (Bullen, 2011, p. 413). With that in mind and reviewing the themes and patterns seen in literature, the next steps are quintessential. Old buildings contain traits of heritage, history, culture, identity and propose the elements of sustainable and environmental implementations. They not only provide the opportunity for heritage tourism, but invoke a desire for authentically rich experiences. Adaptive reuse is a new function for socially useful purposes and appears to be the most effective approach in conservation efforts (Yung & Chan, 2012, p. 353). With these themes in place and patterns usefully
developing, adaptive reuse with sustainable practices at hand, heritage, history, culture and identity can result from the involvement of reusing and repurposing old buildings.
CHAPTER 3: CASE STUDIES

3.1 Introduction

As visited in the literature review section and the exploration of multiple case studies, common themes begin to develop. Each of these case studies reveals one or more ways that municipalities in and outside the United States have pursued different ways of repurposing grain silo elevators. The case studies serve as a way to better understand the potential behind repurposing grain silo elevators in multiple locations. The results will help establish a variety of options for repurposing opportunity based on the success of the case studies. In the following paragraphs, each case study is identified by its theme and assess the typical questions of who, what, when, where, and why. The why question will be elaborated upon and generate a compilation of information collected. The information gathered will be further assessed to determine if it should be recommended for the site in Seymour, Indiana. After all of the case studies are investigated and summarized, a brief conclusive paragraph will recommend the most suitable uses for repurposing.

3.2 Themes

3.2.1 Tours

Who: Rick Smith, Rigidized Metals Corp.
What: Silo City
When: 2013
Where: Buffalo, New York
3.2.1.1 History

Silo City is a collection of three grain elevators owned by Rick Smith of Rigidized Metals Corp. He dubbed the site “Silo City” based on its collection of three elevators, an additional building and future uses for the elevators (http://buffaloah.com/a/childs/intro/intro.html). In 2008, one of the elevators (The Lake and Rail Elevator) sold to Whitebox Commodities Holdings Corp., a Minnesota hedge fund and as of 2013, it is in use as a grain storage facility shipping grain around the world (http://buffaloah.com/a/childs/intro/intro.html). The three elevators consist of The American Elevator, The Perot Elevator and The Marine “A” Elevator. The additional building, the other part of Silo City, is the Elevator B Beehive. The American Elevator, constructed in 1897 and expanded in 1922, was the first grain silo in the city of Buffalo built of reinforced concrete. It is also speculated to be the first grain silo in the nation raised by slip forms, a new method in the 1920’s of continuously pouring concrete differing from the old method of pouring concrete once a day (http://buffaloah.com/a/childs/intro/intro.html). The Perot Elevator, constructed in 1907 and expanded in 1933, is located next to the American Elevator and is connected by an overhead conveyor that transferred grain to the Perot bins.
The elevator contained two buildings. One was always used as a Malthouse (a device that malts barley for beer), and the other was a workhouse. The Marine ‘A’ Elevator, constructed in 1925, used to be the hub for receiving and transferring grain from rail shipments before closing down in the 1960’s when the transshipment business in Buffalo collapsed. The Elevator B Beehive was built around the same time as the American Elevator and served as an office building. It recently served as an architecture and planning challenge for University of Buffalo students. A massive bee colony lodged in the building, and Rick Smith challenged the students to transfer the entire bee colony from the office building to another site at Silo City. The Elevator B structure became the winner and was constructed by Smith’s Rigidized Metals Corp. A special use for one of the elevators, an Electric Elevator used to reside in Silo City and was built in 1897 as Buffalo’s first elevator to be powered by electricity rather than steam. After many years, the Electric Elevator was shut down and demolished due to rat infestation and, more so, because of the manufacturing of animal feed without a permit.

3.2.1.2 Function

As of the time of this document’s publication, the Lake and Rail elevators are still in use for the storage and shipment of grain. The three elevators and an auxiliary building that constitute the Silo City project are now utilized as a tourist attraction. Tourists from Buffalo and around the United States (and sometimes even the world) come to visit Silo City for one of five purposes: historic grain elevator tours, venues for weddings, art and culture displays, film locations and private events. The walking tours take visitors through and up the elevators with historical facts and ongoing regenerative projects for the future. Art and culture consist of poetry readings, live music, festivals, and a multimedia immersive theater welcoming family friendly audiences. Lastly, anyone is welcome to make Silo City a wedding
venue, private event or photography shoot to experience the character and unique spaces found on the site.

3.2.1.3 Significance

The uses available at Silo City offer appropriate recommendations for the grain silo elevator site in Seymour, Indiana in several potential ways. Historic elevator tours are highly recommended for the Seymour site, because of the historical significance of the elevator site. It is possible to include community events, such as poetry readings, live music, festivals, theater, wedding venues and private events. However, these events all require a civil engagement from the community to coordinate and organize towards success. It is a possibility for a future use of the site to encourage these uses, but the main recommendation from this case study would to utilize the historic elevator tours.

3.2.2 Market and Garden

Who: Chip and Joanna Gaines

What: Magnolia Silo

When: 2015

Where: Waco, Texas
3.2.2.1 History

In the 1890’s, the current site of Magnolia Silos was home to Burr-Lake Wood Manufacturing Company (http://www.historicwaco.org/blog/2016/1/24/fixing-up-waco-one-landmark-at-a-time-the-silos). From 1899 to 1926, the state of Texas was known as the “King of Cotton,” and cottonseed became the second cash crop behind lumber (http://www.historicwaco.org/blog/2016/1/24/fixing-up-waco-one-landmark-at-a-time-the-silos). At this time, lots of construction commenced where the existing buildings on the current Magnolia Silos site were demolished and several other buildings were erected in place. Some of the buildings include an entire cottonseed complex, two 120 ft. metal seed storage tanks (silos), an office, warehouse and all other necessary structures needed for the processing of grain (http://www.historicwaco.org/blog/2016/1/24/fixing-up-waco-one-landmark-at-a-time-the-silos). In 1910, J.T. Davis took this land and established the Brazos Valley Cotton Oil Company on it because of the high value and proximity to a railroad (http://www.historicwaco.org/blog/2016/1/24/fixing-up-waco-one-landmark-at-a-time-the-silos). The
railroad was used to bring in more shipments of cotton from local gins. The Brazos Company employed over 75 men and purchased thousands of tons of cottonseed from local farmers (http://www.historicwaco.org/blog/2016/1/24/fixing-up-waco-one-landmark-at-a-time-the-silos). The Company flourished until the Great Depression, which began the decline of the cotton industry. A fire and a flood during the 1940’s lead to damages on the properties (http://www.historicwaco.org/blog/2016/1/24/fixing-up-waco-one-landmark-at-a-time-the-silos) and if that was not enough, a F5 tornado hit Waco in 1953, causing even more irreparable damage to the downtown. Though many buildings on the Brazos Company site were destroyed, along with some 1,000 homes in the city, the grain silos remained untouched (https://magnoliamarket.com/a-peek-into-our-past/). In the 1960s, business ownership changed and the buildings were left in disrepair. During the 1990’s, the silos, warehouse and a few other existing buildings on the site were vacant until the Gaines purchased the property as part of their own business vision (http://www.historicwaco.org/blog/2016/1/24/fixing-up-waco-one-landmark-at-a-time-the-silos).

Today, Chip and Joanna Gaines continue to host their popular show Fixer Upper and each bring professional skills to renovating structures. Chip is in construction and real estate, while Joanna is in design. They both own the property after Waco sold it under the condition to not demolish any of the structures and, instead, renovate and host their business on the site (https://magnoliamarket.com/magnolia-silos/).

3.2.2.2 Function

Magnolia Silos serves as not just a retail store, but also hosts many other functions (such as a bakery, garden, market, lawn space for games and Chip’s real estate business) (http://www.countryliving.com/life/travel/news/a37149/10-things-chip-joanna-gaines-magnolia-market/). All of the items sold in the stores are made and grown on the Magnolia Silos site. The Gaines lease out space to local food trucks and offer a variety of food options, incorporating food trucks on site.
Many families visit the Silos as photography venues and to gather on the lawn. More so, Magnolia Silos is more of a community gathering space where visitors within and out the city come to visit, observe, shop, eat and play.

3.2.2.3 Significance

The Magnolia Silos site attracts a wide variety of visitors, but mainly draws in shoppers to the gardening and market. The Gaines have not renovated the grain silos and do not let anyone inside for risk of danger, and because they have future plans for the silos. The chosen site for this creative project in Seymour, Indiana as a garden and market attraction would be an interesting way to draw a different category of visitors who are more interested in shopping than the iconic culture of the grain silo elevators. The additional buildings, including the warehouse, at Magnolia Silos offer more flexibility of uses rather than the site in Seymour only having the grain silo elevators. However, adjacent land across the street and to the east of the site in Seymour could serve as potential for a garden store, market and possibly a public gathering space, making this use a moderate level recommendation.

3.2.3 Recreation

Who: Tom and Dana Pierson

What: Stoneworks Rock Climbing

When: 1993

Where: Carrollton, Texas
3.2.3.1 History

The Old Downtown Square of Carrollton, Texas is the location of three buildings of a large grain and feed operation including a giant concrete storage tower of the Blanton Grain Company. Lester Franklin (L.F.) Blanton was a farmer from Shawnee, Kansas who relocated during the Great Depression. LF Blanton eventually bought a feed and grain business, where the concrete towers now stand, and his oldest son Walter Blanton became a partner in the business. The business was in debt and struggled for a while during the Depression but, it recovered slowly and the grain works became one of the hubs of an American national enterprise, replacing the labor-intensive work of cotton farming. In 1935, Blanton restored the feed mill with the highest quality machinery, allowing him to add several wooden towers to the end of the building in order to store more grain. In 1939, he added a separate scale house and office generating a profitable operation. The operation was a block away from the old downtown, and it integrated nicely with the downtown railroad. During and after World War II,
increased demand for production of grain encouraged Blanton to construct two separate grain storage buildings. In 1950, the postwar economic boom and wear and tear from fires and floods caused the towers to be demolished and a new 110 ft. tall concrete storage tower was built (http://www.cityofcarrollton.com/). The tower finished construction in a fast manner using slip-form construction and, once completed, is visible from miles in any direction. The Blanton Grain Company changed its name to Blanco Feeds, sold specialty feed, and erected four attached steel-plated storage towers south of the concrete tower (http://www.cityofcarrollton.com/). Spanning a total of ten buildings in the downtown complex (seven on the east side of the railroad and three on the west), the company expanded its operation to six other towns and cities, building elevators in several of them. Their grain sold all over the region and world, supplied the Dallas Zoo with feed, became a polling place for agricultural issues throughout the 1950’s and 1960’s, became a one-stop shop for area farmers and became a hub for farmers to gather and socialize (http://www.cityofcarrollton.com/). L. F. Blanton served in many leadership roles throughout the city of Carrollton, such as president of the school board, city council and even mayor. In 1971, L. F. Blanton died; 18 months later, his son died (http://www.cityofcarrollton.com/). With his other children dispersed throughout the state, the Blanton Grain Company closed shortly after. In 1974, the Blanton Grain Company land and buildings were bought and leased out by a local electrical company for years without any success (http://www.cityofcarrollton.com/). A young couple, Russell and Karen Rand, bought and redesigned the concrete storage bins (silos) to turn the ten giant concrete grain silos into the world’s tallest indoor climbing gym.

3.2.3.2 Function

The gym is nearly six times the height of the average climbing gym, and it attracts over 10,000 climbers from the North Texas region. The towers atop the silos are utilized as emergency services communication antennae, so the entire building from floor to roof is used. The climbing gym had several
owners, the most recent (as of 2010) being Tom and Dana Pierson, and continues to serve about 250-400 climbers a month. In addition, the façade of the grain silos has been painted over, and now advertises the historical identity of the downtown. The grain silo will be in close proximity of a new light rail station on the opposite end of the town square and will continuously provide an iconic, if not monumental, attraction to the history and life of agriculture that made the town.

3.2.3.3 Significance

The silos in downtown Carrollton act as not only a form of recreation through indoor rock climbing but also as a communication hub and advertising façade. In Oklahoma City, Oklahoma, the “Rock City” indoor rock climbing is created from inspiration of Carrollton’s Stoneworks, located in Cedar Falls, Iowa, containing an example for outdoor silo ice climbing. The silo in Seymour can be repurposed to offer climbing opportunities inside and outside for all visitors and during any season. The recreational uses combined with advertising for the city on the façade of the silos creates a possible function for the site in Seymour, Indiana. The silos are tall enough to host advertising for Seymour’s historic city and can cater towards potential indoor or outdoor rock climbing, offering a moderate to high level of recommended use.

3.2.4 Residential

Who: Cyrus Youssefi and Skip Rosenbloom, City of Sacramento

What: Lofts at Globe Mills

When: 2008

Where: Sacramento, California
3.2.4.1 History

During the late 1850’s and 1860’s, California became a growing industry of wheat for domestic and foreign exports (http://www.loftsatglobemills.com/history.html). Flour milling was critical to the economic strength of Sacramento and was a basic product required by miners who rushed to the west in search of gold. In 1854, six flourmills opened and operated in the city, producing around 600 barrels a day (http://www.loftsatglobemills.com/history.html). The Phoenix Milling Company operated in Sacramento from 1853 – 1913 (http://www.loftsatglobemills.com/history.html). In 1913, the Phoenix Milling Company purchased more property, due to the increase in residents, and constructed a new mill (http://www.loftsatglobemills.com/history.html). One year later, a new five-story mill was completed and continued to operate as an independent company until 1919, the year the entire Phoenix Milling Company was sold to Globe Milling Company. Globe Milling Company was a large company operating a high number of flourmills all over the west coast (http://www.loftsatglobemills.com/history.html). In 1931, the Globe Company became one of the key companies that made Sacramento a center of
agricultural shipping (http://www.loftsatglobemills.com/history.html). Sold again, the Globe Mills Company was bought by another company, Pillsbury, continuing the manufacturing of flour. During and after World War II, Pillsbury added significant amounts of storage bins to the mills. In 1941, the Pillsbury Company included feed production, a barley mill, flour mill, paste house, broiler and the company expanded their buildings with the addition of 42 concrete silos and 30 square silos (http://www.loftsatglobemills.com/history.html). After completion, the plant became the largest feed and flour mill in the state. Production of feed and flour continued until 1968, when Pillsbury closed the entire mill (http://www.loftsatglobemills.com/history.html). The buildings sat vacant for 40 years until local developers Cyrus Youssefi and Skip Rosenbloom gained the City’s support to renovate and repurpose the mill (http://www.loftsatglobemills.com/history.html). In coordination with the Sacramento’s Housing and Redevelopment Agency, Youssefi and Rosenbloom turned the mill into an apartment complex with 31 lofts (http://www.loftsatglobemills.com/history.html). This landmark became eligible for listing in the National Register of Historical Places.

3.2.4.2 Function

Along with the 31 lofts, the Globe Mills offers other amenities, including historic details and tours, aesthetic views of the city, a fitness center, on-site laundry facilities, parking for each unit, a recreation room for private parties and a community garden. Much like the Quaker Square Hotel in Akron, Ohio, the historic building serves as an attraction to those who find value in the timeline of the city. Many seek the Lofts at Globe Mills, along with the Quaker Square Hotel, because of the repurposed nature of the grain mills and the memorable experience of living in a grain silo. Other smaller examples bloom from this inspiration, such as the Abbey Farm Bed and Breakfast in Carlton, Oregon and the Tornado Resistant Silo home in Greensburg, Kansas. All of these examples include the idea of repurposing grain silos into a variety of residential uses.

3.2.4.3 Significance
The site in Seymour, Indiana is currently made up of the grain silo elevator and is separated from other nearby buildings, see Figure 6. In the previous examples, the grain silo operations connect to a larger building of the grain mill business and offered more square footage to renovate into residential living. The grain silo elevator in Seymour could potentially turn into a hotel or apartments, but increase in cost for the limited number of units is not a great option. The grain silo elevator is not as large as the Lofts at Globe Mills or the Quaker Square Hotel. Both locations are in denser parts of a city compared to Seymour. For the site in Seymour, Indiana, converting the historic structure into residential use is an intriguing idea, but is not necessarily the top recommendation.

![Figure 6 - Grain Silo Elevator in Seymour, Indiana. Source: Caleb Ernest](image)

**3.2.5 Heritage**

Who: Minnesota Historical Society

What: Mill City Museum

When: 2003
Where: Minneapolis, Minnesota

Figure 7 - Mill City Museum Located in Minneapolis, Minnesota. Source: https://www.tripadvisor.com/Attraction_Review-g43323-d272219-Reviews-Mill_City_Museum-Minneapolis_Minnesota.html

3.2.5.1 History

In the late 1600’s, the only waterfall on the Mississippi River named St. Anthony Falls by Father Louis Hennepin (http://www.millcitymuseum.org/history). It was here where a settlement was also established and the Mississippi Riverfront became the oldest part of Minneapolis. From the 1600’s until 1803, the waterfront was controlled by the French and Spanish (http://www.millcitymuseum.org/history). In 1805, Lieutenant Zebulan Pike negotiated a treaty with the Dakota and Ojibwe people, who yielded the territory including St. Anthony Falls (http://www.millcitymuseum.org/history). By the 1850’s, the falls were a tourist attraction drawing visitors from the eastern United States and Europe, and it is used as a primary source of power for lumber and flour milling industries (http://www.millcitymuseum.org/history). The settlement of Minneapolis considered the name “Sawdust Town,” and over the next 50 years the riverfront settlement transformed into a city that led the world in flour production (http://www.millcitymuseum.org/history).
During the year 1855, a suspension bridge opened in Minneapolis and combined with a bridge from Nicollet Island on the other side of the river to form the first permanent bridge across the Mississippi River (http://www.millcitymuseum.org/history). In 1858 Minnesota became a state and in 1867 Minneapolis became incorporated. The 1870’s introduced a “new process” of revolutionizing the flour milling industry (http://www.millcitymuseum.org/history). 1872 introduced the merging of St. Anthony and Minneapolis into one city (http://www.millcitymuseum.org/history). 1874 introduced the construction of the original A Mill which held the majority of flour in storage (http://www.millcitymuseum.org/history). 1878 The Washburn A Mill explodes from a flour dust explosion that killed 18 lives along with destroying much of the riverfront business area from a resulting fire (http://www.millcitymuseum.org/history). The A Mill was rebuilt in 1880 with new machinery that provided safer operations, higher quality flour, and became the largest and most technologically advanced mill in the world (http://www.millcitymuseum.org/history). This mill was said to ground enough flour to make 12 million loaves of bread a day (http://www.millcitymuseum.org/history). From 1880-1930, Minneapolis led the nation in flour production and became known as the “Flour Milling Capital of the World” (or more informally as “Mill City”) (http://www.millcitymuseum.org/history). During this span of time, the city’s population grew exponentially from 13,000 to 165,000 (http://www.millcitymuseum.org/history). In 1882, the nation’s first hydroelectric plant began operating in Upton Island, and, a year later, the Stone Arch Bridge opened to rail travel (http://www.millcitymuseum.org/history). This provided a steady flow of grain stretching across the Northern Plains of the Dakotas and Canada. After World War I, the last of the saw milling operations shut down and changes in transportation and industry led development away from the river, and, as businesses departed, the area declined. The Washburn A Mill closed in 1965 due to fire damages and becoming obsolete (http://www.millcitymuseum.org/history). In 1983, the Washburn A Mill became designated as a National Historic Landmark but, eight years later it almost perished in a fire.
(http://www.millcitymuseum.org/history). The Minneapolis Community Development Agency cleaned up the ruins, and during the late 1990’s, the Minnesota Historical Society announced its plan to develop a museum within the ruins (http://www.millcitymuseum.org/history). The riverfront is revitalized and is a place where visitors enjoy sightseeing many historic buildings which have been redeveloped for new uses. In 2003, the Washburn A Mill opened as the Mill City Museum.

3.2.5.2 Function

The Mill City Museum offers visitors and city residents the unique opportunity to visit the ruins of the Washburn A Mill. Within the ruins is a museum filled with history sharing the timeline of the Mill’s success along with the flour industry, the riverfront and the city. The Museum offers guided tours, interactive activities and group events, field trip opportunities for schools, renting renovated conference rooms and even rents the Mill as a wedding venue.

3.2.5.3 Significance

Heritage tourism is an industry that has been growing in popularity in the last ten years or so. The Textile Mills, a heritage museum in Lodz, Poland, offers the same historical interaction as the Mill City Museum in Minneapolis. Madison, Indiana thrives off of heritage tourism as their top industry where visitors are drawn towards numerous historical facts integrated on every street corner and building. The element of heritage tourism utilizes a thorough level of historical facts about a building or municipality’s past, and connecting the timeline with the present day. The site in Seymour would benefit greatly from heritage tourism because its history is rich and well documented. A museum, guided tours, heritage interactive activities and more can create multiple options for visitors and residents alike to engage in the municipality’s history. This will not only make people more aware of the municipality’s past, but create understanding of the timeline that created the municipality. Heritage tourism has the potential to create unique place-centered experiences in every municipality and is a strong recommendation for Seymour.
3.2.6 Art

Who: Robert Lepage and Ex Machina

What: Aurora Borealis

When: 2008

Where: Quebec City, Quebec, Canada


3.2.6.1 History

Just as the Mill City Museum in Minneapolis was born from the history and development of the waterfall and river, the Aurora Borealis display on the grain silos in Quebec City was born from the history of Quebec’s port. In 1608, Samuel de Champlain built a trading post in Quebec which marked the founding of the city as a European colony ([http://www.portquebec.ca/en/about/port-authority/history](http://www.portquebec.ca/en/about/port-authority/history)). Over the next hundred years, the abundance of natural resources found in Quebec provoked the
construction of naval dockyards. By the early 1800’s, marine traffic and port activities increased and the
Trinity House of Quebec is founded to regulate the burgeoning port sector and navigation
(http://www.portquebec.ca/en/about/port-authority/history). Around 600 ships left and docked the
Port of Quebec each year where the wood trade is the economic material of trade. After its popularity of
trade from 1821-1829, the Port of Quebec became the third largest port in the Americas after New York
and New Orleans (http://www.portquebec.ca/en/about/port-authority/history). In the late 1800’s, the
Trinity House of Quebec was dissolved and the Quebec Harbour Commission (QHC) was created
(http://www.portquebec.ca/en/about/port-authority/history). This was a reaction due to the 30,000
British and Irish immigrants passing through immigration sheds from the docks each year
(http://www.portquebec.ca/en/about/port-authority/history). Just before the turn of the century,
tariffs for wood became abolished and the markets moved to Montreal, resulting in a decline in activity
at the Port of Quebec. A new wharf was built, the Louise Basin opens, and in 1879, the train reaches the
Port, allowing for more efficient transportation (http://www.portquebec.ca/en/about/port-
authority/history). Because of this, the Port began exporting mine, grain and forest products and
importing manufactured textile, iron and steel. In 1909, a major fire destroyed grain sheds in the Port
which spurred the creation of new grain elevators and silos. The Port’s main function in 1920 became
grain export (http://www.portquebec.ca/en/about/port-authority/history). The Port expanded in the
late 1920’s to allow for more transatlantic ships to enter, also bringing in massive passenger ships
(http://www.portquebec.ca/en/about/port-authority/history). During the Great Depression, the Port of
Quebec was in financial trouble and the QHC was dissolved leading to creation of the “National
Harbours Board”. This Board was a leader in administrative support to the Port, and in 1953, changes
including infrastructure improvements and terminals were added to the Port
(http://www.portquebec.ca/en/about/port-authority/history). Throughout the 1960’s, the Port
recorded considerable growth from the construction of five deep-water docks, winter navigation and
more wharf construction (http://www.portquebec.ca/en/about/port-authority/history). Ship traffic increased and the focus of the Port’s now commercial activities industry centered on visitors. In 1980, the Government of Canada replaces the National Harbours Board with the Canada Ports Corporation and created a stronger market for diversifying commercial activities (http://www.portquebec.ca/en/about/port-authority/history). The Port became a historic district and was named a World Heritage Site in 1985 by the United Nations Educational, Scientific and Cultural Organization (UNESCO) (http://www.portquebec.ca/en/about/port-authority/history). By the 1990’s, commercial success continued to rise and many facilities improved, which lead to a large draw in tourism which spurred the Port’s cruise industry (http://www.portquebec.ca/en/about/port-authority/history). From 1998-2012, the Port of Quebec has become a continuously growing destination for cruise ships and thousands of passengers (http://www.portquebec.ca/en/about/port-authority/history). In 2008, approaching the Port’s 400th anniversary, the municipal government funded the utilization of the façade of the 81 2,000-foot-long grain silos. Multi-media artist Robert Lepage and his company Ex Machina renovated the silos into a monumental canvas where artificial LED lighting was installed (http://lacaserne.net/index2.php/other_projects/aurora_borealis/). The inspiration of the Northern Lights, along with Lepage’s artistic vision of a 400-year retelling of Quebec’s history, funded for five years after thousands of viewers were attracted to the spectacle (http://www.cbc.ca/news/canada/montreal/massive-robert-lepage-show-reflects-quebec-city-s-story-1.706088). Every night from sundown until midnight, the Bunge silos in the Old Port transform into the illuminated sculpture attraction called Aurora Borealis.

3.2.6.2 Function

The Aurora Borealis attraction integrates 574 color-changing LED spotlights onto the Bunge silos along with photos and animations retelling Quebec’s 400-year history (http://www.architecturalssl.com/sslinteractive/media/240/1201LU22REV.pdf). With ample success,
the Aurora Borealis continues to display its light show every night and provides a year-round activity for tourists to attend. Other cities, such as Sacramento, California and Buffalo, New York, incorporate a light show on the grain silos located on their ports.

3.2.6.3 Significance

A light display attraction serves a simple solution for accentuating any (or no) future use of the chosen grain silo in Seymour, as it is a very low-impact activity external to the silo’s structure. Lighting the silos can become a colorful and dramatic backdrop for any number of evening outdoor activities in the immediate context, and capitalize on the silo’s physical presence as a community landmark. Funding by the local government and calling local artists provide the opportunity to collaboratively work together with the community to create a spectacle of their own. Seymour has a history. If local artists in the city or county were to retell the accounts of Seymour’s history by artistically showcasing a light show on the side of the grain silos, then the result would be an attraction similar to Quebec, Sacramento and Buffalo. A light show on the grain silos in Seymour is a highly-recommended use with simple applications and rewarding results.

3.2.7 Landmark

Who: Canada Lands Company (CLC)

What: Silo No. 5

When: Ongoing

Where: Montreal, Canada
3.2.7.1 History

The Lachine Canal opened in 1825 and became a hub of industry and transportation (http://reversedview.blogspot.com/2012/08/abandoned-in-montreal-ii-silo-no-5.html). In the late 19\textsuperscript{th} century, grain was the main export product from the Port of Montreal. Competition from the United States was strong, and the decision was made to boost Montreal’s grain industry with the completion of grain elevators which soon led to the world’s grain industry by 1928. The initial construction by the Grand Trunk Railway in 1903 completed the four-stages of Silo No. 5 being built (http://www.biennial.com/journal/collaborations/the-shifting-sightlines-of-montreals-silo-no-5). The oldest section of the elevator was constructed in 1906 and connected by a corridor to the oldest section in 1913 (http://reversedview.blogspot.com/2012/08/abandoned-in-montreal-ii-silo-no-5.html). Nearly 20 years later, the construction on the remainder of the elevator was slow due to the intervention of WWI and the Great Depression. During the 1920’s and 1930’s, Montreal’s silos and industrial port gained interest by local artists who concentrated on the beauty of the vernacular structures (http://www.biennial.com/journal/collaborations/the-shifting-sightlines-of-montreals-silo-no-5). The same beauty caught the attention of visitors at the 1937 Paris Exposition where the Canadian national
pavilion was designed to represent the grain silos (http://www.biennial.com/journal/collaborations/the-shifting-sightlines-of-montreals-silo-no-5). After WWII, Canada honed the name “Bread Basket of the World” and was a major source of grains. In 1959, the final expansion of the elevator was complete including 206 silos and a total length of 182 meters (597 feet) (http://www.mcgilldaily.com/2011/10/the-former-glory-of-grain/). When the St. Lawrence Seaway opened in 1959, it allowed ocean-going vessels to bypass transshipping to Montreal. Eventually, the giant silos grew obsolete. When Montreal hosted the World Exposition in 1967, concern arose about the silos distracting visitors from exhibits. Despite the concern, the silos become the most talked about building at the expo (http://www.biennial.com/journal/collaborations/the-shifting-sightlines-of-montreals-silo-no-5). Proposals soon after called for the demolition of the silos as a way to showcase the river and Old Montreal to which the silos were blocking the view. The closure of the Canal in 1970 and competition with a more modern Silo No. 4 added to the downfall of Silo No. 5 and its neighboring industrial buildings (http://reversedview.blogspot.com/2012/08/abandoned-in-montreal-ii-silo-no-5.html). Neighboring silos to Silo No.5 (Silos No. 1 and 2) were demolished in 1978 and 1983 and the fate of Silo No. 5 was left undecided (www.heritagemontreal.org/en/site/silo-no-5/). The eventual destruction of Silo No. 5 seemed inevitable until the site, along with the Lachine Canal waterfront, became protected by a Federal heritage program which listed Silo No. 5 as a recognized building and had heritage value. Silo No. 5 closed in 1994, and the economic turmoil by the 1995 referendum resulted in Montreal’s cityscape frozen in time (http://reversedview.blogspot.com/2012/08/abandoned-in-montreal-ii-silo-no-5.html). Abandoned for over 20 years now, Silo No. 5 is a host to artistic activities such as light installations, temporary art demonstrations and a landmark for visual photography. In 2007, Montreal’s New Harbouront initiative included the redevelopment of the waterfront and heritage site of Silo No. 5; it served as the only existing building representing the past monolithic structures of industrial and agricultural success (http://www.biennial.com/journal/collaborations/the-
shifting-sightlines-of-montreals-silo-no-5). Recent talk in 2011 led to the thought of constructing an observatory atop the silo while another suggestion includes the structure being left as a monument and landmark (http://www.biennial.com/journal/collaborations/the-shifting-sightlines-of-montreals-silo-no-5).

3.2.7.2 Function

Silo No. 5 presents the different possibility of leaving the building as it is, and, instead of reusing the site, preserving the building for its iconic landmark attraction. Ideas are discussed about small adaptations to the building but nothing involving an entirely new redevelopment has been mentioned. The discussion of redevelopment is due to the proximity of the active rail line just south of the silos and recognition of the silos as a heritage site. Numerous visitors and tourists stop at Silo No. 5 to witness the aesthetic experience of the colossal grain silo. Others appreciate the view from the top of the silo, and pit it against views from other popular destinations, such as Mount Royal, a natural mountain range in Montreal with the tallest elevation (http://www.theglobeandmail.com/life/harvesting-the-potential-of-montreals-silo-no-5/article28605518/). The surrounding area is redeveloped as a leisure and bike-commuter zone where visitors view the silo landmark.

3.2.7.3 Significance

Farmland, Indiana has a similar situation where a historic grain elevator is located in the center of their town and, instead of reusing it, the residents believe it will serve as an aesthetic landmark contributing to the cultural landscape. With this in mind, the site in Seymour can replicate the purpose as Montreal and Farmland. The silo does not necessarily need to be repurposed as a completely different use, but can still historically preserve and leave as a landmark that adds to the culture of the city. This use is recommended neutrally, more as a default option if other strategies do not succeed.

3.2.8 Restaurant
Who: Group of Partners led by Sherri Hopfe
What: Tin Bins
When: 2013
Where: Stillwater, Minnesota

![Tin Bins located in Stillwater, Minnesota](http://www.stillwatercurrent.com/white-winter-photos-stillwater-lake-elmo-beyond/)

**Figure 10** - Tin Bins Located in Stillwater, Minnesota. Source: [http://www.stillwatercurrent.com/white-winter-photos-stillwater-lake-elmo-beyond/](http://www.stillwatercurrent.com/white-winter-photos-stillwater-lake-elmo-beyond/)

### 3.2.8.1 History

The St. Croix River splits the boundary between Minnesota's City of Stillwater and the State of Wisconsin; the river is the origin of the city dating back to a time where Native Americans and early French explorers were most present. The earliest modes of transportation on the river were canoes and rafts. Eventually boat builders established small businesses in the Stillwater area. They made an impact on the way people traveled creating transportation options either by canoe or steamboat. In 1855, Phillip Muller moved to the Stillwater area and established a family (http://stillwatergazette.com/2014/08/02/back-in-time-muller-boat-works/). By 1872, Muller's two sons George and John put their workmanship with wood to use and opened their boat building business (http://stillwatergazette.com/2014/08/02/back-in-time-muller-boat-works/). The first shop is located just east of where the grain silo elevator now stands in the city. The rapid increase of boating
transportation to the area spurred the movement of grain, wheat and malt on the St. Croix River. Originally built in 1989 by the Woodward Elevator Company, the grain elevator is located at the corner of Main and Nelson Street to provide storage for passing agricultural cargo (http://patch.com/minnesota/stillwater/brent-peterson-the-commander-elevator-in-downtown-stillwater). After six years, the elevator was relocated to its current site housing the use for a new flourmill in 1904 (http://patch.com/minnesota/stillwater/brent-peterson-the-commander-elevator-in-downtown-stillwater). By 1908, an overhead spout connected the two buildings, which were now operated by the Minnesota Flour Mill Company (http://patch.com/minnesota/stillwater/brent-peterson-the-commander-elevator-in-downtown-stillwater). Lastly, the Commander Company purchased the elevator in 1919 (http://patch.com/minnesota/stillwater/brent-peterson-the-commander-elevator-in-downtown-stillwater). The Commander Company operated the elevator into its peak years of storage and production until 1961, when G.T.A bought out all of Commander’s elevators (http://patch.com/minnesota/stillwater/brent-peterson-the-commander-elevator-in-downtown-stillwater). Due to the name’s renown in the area, the building retained the title of “The Commander Elevator”. After G.T.A., Harvest States Co-op operated the elevator until 1986 (http://patch.com/minnesota/stillwater/brent-peterson-the-commander-elevator-in-downtown-stillwater). The last load of feed is ground in the mill, and Harvest States Co-op did not renew its lease of the building. The small retail store section of the elevator remained operable while the grain silos remained in disuse. An architect suggested reusing the site as apartments in 1988, and suggested a rock climbing company in 1993. Both achieved permission from the City Council to reuse the grain elevator (http://patch.com/minnesota/stillwater/brent-peterson-the-commander-elevator-in-downtown-stillwater). Even though emphasis was placed on preservation, the architect’s idea is not carried out and the rock climbing operation is closed down 15 years later (http://patch.com/minnesota/stillwater/brent-peterson-the-commander-elevator-in-downtown-stillwater). From 2008 to 2013, the elevator sat vacant
until a group of partners led by Sherri Hopfe invested in the elevator by, renovating the first-floor interior, retail space and outdoor deck. The group turned the site into a restaurant and eatery named Tin Bins.

3.2.8.2 Function

Tin Bins offers the unique reuse of an elevator as a site for a restaurant. The eatery provides an in-house bakery, gourmet coffee, breakfast options, sandwiches, desserts, cocktails, and an array of other foods (http://www.tinbinscafe.com/). The aesthetic view from the deck is in close proximity to the St. Croix River and surrounding historic downtown of the City of Stillwater. Location is another significant element to the landmark of Tin Bins. Located within the landmark grain silo elevator that sits over one hundred feet tall, Tin Bins draws crowds of people to their business, creating a popular spot for all ages (http://www.tinbinscafe.com/).

3.2.8.3 Significance

In Bozeman, Montana, a similar site takes advantage of the historical proximity of the grain elevators. Montana Ale Works is located within a historic train depot next to grain elevators. The train depot was constructed in 1916 and was operated by the Northern Pacific Railway Company. After refurbishing the interior in 1998, the building reopened in 2000 as Montana Ale Works (http://www.montanaaleworks.com/). The function of a restaurant space combined with the aesthetic experience of sitting inside a historic building is a recent emerging theme. The elevator site in Seymour has a retail strip located to the east of the site, and the first floor of the silos could be utilized as a restaurant and pub. Renovation of the interior, combined with health requirements for a restaurant, might take time to complete. However, the notion of a restaurant in Seymour’s historic building is a highly-recommended use.

3.3 Concluding Recommendations
The case studies reviewed gave a wide range of uses for the rebirth in grain silo elevators. Across the United States and continent many municipalities, organizations, developers and entrepreneurs pursued the idea of repurposing the uses of grain silo elevators with much success. Each of these case studies adds a layer of knowledge onto the availability of functionality of the repurposed grain silo elevator in Seymour. After reviewing these case studies, the repurposed uses will be recommended from least recommended to highest recommended.

The Lofts at Globe Mills located in Sacramento, California is the lowest recommendation for Seymour. Sacramento is a dense city with lots of contributors, financial assistance available and residents in the residential market. Repurposing the silo in Seymour as apartments, condominiums, lofts, or any other residential use is unlikely. The more a historical site undergoes renovation, the more it loses its character and aesthetic. Also, residential reuse is one of the pricier options for renovations due to the inclusion of up-to-date utilities, unit dimensions, safety regulations, parking requirements, and other amenities needed to draw tenants.

Magnolia Silo located in Waco, Texas is an example that leads to a lower recommendation for the Seymour site. The repurposed building was the grain elevator’s offices and warehouse instead of the silos, which are tasked to be reused in the next five years. The functionality of a market and garden are attractive uses contributing local efforts and products, as well as healthy food options, but often require a specific demand. Not all local markets and gardens are successful, nor do the owners have the time and labor available to put effort into the store. Possibly at some point in the future, a side garden or small market could be added to the silos in Seymour but, for its immediate reuse, another function would be recommended for the purposes of this creative project.

Neither highly or lowly recommended is Silo No. 5 in Montreal, Canada. Silo No. 5 is sitting unused for the past 20 years, and naturally became a landmark by remaining dormant and the city’s preservation efforts. Besides the preservation efforts on the buildings, though, no other use has been
utilized. The same could be said for Seymour’s silos. They may provide a more efficient use as a preserved landmark rather than another use. This option would be a good backup plan if other recommended uses are not viable.

Neither highly or lowly recommended is Stoneworks Rock Climbing in Carrollton, Texas. The silos were adapted into indoor rock climbing, and now provide an extension to the recreational opportunity. According to the case study, little cost is associated with repurposing a silo into indoor rock climbing. Likewise, for colder seasons, the silo could alternatively be used as outdoor ice climbing. Rock climbing is attractive and offers a new form of recreational use to the city’s residents, but it does not always offer a sustainable use for a long duration. Carrollton became a hotspot for rock climbing, attracting climbers from around the nation and world; the silos there are some of the tallest in the nation.

A moderate-high recommendation is Aurora Borealis in Quebec, Canada. The adaptability and related cost are relatively low, compared to other case studies, and offer the opportunity to showcase the city in an artistic way. Adding lights and a possible video to the side of the silos in Seymour would potentially present public facts and heritage to the city’s residents. Added lights and video might attract local attention, as well as city or state-wide visitors, providing a new and exciting experience. With an artistic approach, the Aurora Borealis is extended from its original five-year show life to every night. The same could be utilized for Seymour to continuously attract visitors from all over.

A highly-recommended use is Mill City, located in Minneapolis, Minnesota. The original site is home to a surplus of history and it provides nostalgia when experiencing the museum located within the ruins of the grain elevator. Many use the space of the site for meeting rooms, as well as wedding and party venues. The historic value of a site can give credit to its past by showcasing and displaying the history for visitors. Repurposing Seymour’s silos as a small museum, given the smaller scale compared to Mill City’s silos, could attract wide attraction from the city’s residents, as well as those visiting. A museum provides a new land use to the city and offers an extensive look at Seymour’s past by
showcasing its pride and knowledge onto visitors. Museums and other historical sites provide sought after attractions for all age groups and offer a variety of activities for its users.

Another highly recommended use is Tin Bins, located in Stillwater, Minnesota. The reuse of the grain elevator site is one of the first completed in recent years. The main draw to this restaurant is the historic landmark location. Visitors and residents alike seek out a new and unique experience at one of the oldest buildings in the city. The Montana Ale Works building in Bozeman, Montana is another recent example of a business using the historical aesthetics of the grain elevators as a way to draw customers to their location. Seymour’s grain silo elevator relates with the same elements of being historical, a unique location and experience, and offering a new use not often developed in repurposed elevators. It could become an economic engine, as well as an attraction to those who visit and experience the reuse of this site.

The highest recommended use in the context of this study is Silo City, located in Buffalo, New York. The main attraction, besides the massive scale of the grain elevators, is the ability to tour the grain silo structure. Historians and other active residents who engage in heritage can offer their service as a tour guide for the silos. At some point in every case study, the authors, developers, and visitors are able to explore the silos, and every single person described their experience as more enrichening than viewing natural landmarks. The reason is that the silo elevators are agriculture wonders and it took incredible craftsmanship and engineering to create the monoliths in the landscape. Artists, historians, engineers, architects, urban planners, designers and other professions become awe-inspired by the silos when explored. Visitors can read all about a site and its history online, but not everyone can walk through a historical site and witness the culture and heritage in person. Providing tours in Seymour can engage the community for those who want to work as tour guides, preserve the building, visit and create more activities and overall attract visitors to actively engage in an attraction.

For an extensive list of case studies explored, please see Appendix A.
CHAPTER 4: INTERVIEWS

4.1 Introduction

Only phone and email interviews were conducted. The interview consisted of questions that related to the process or steps of a successful repurposed project. Sample questions included ‘What inspiration drove the project idea to become reality?’ and ‘What was the cost associated with renovating the structure?’ For a complete list of interview questions and a prompt of what was spoken to each interviewee, see Appendix B. The interviews serve as a way to gather information directly from the developers and owners of existing repurposed projects and utilizing their experience to understand how to repurpose the site in Seymour.

The compilation of case studies created the opportunity to reach out and contact the developers and owners of the repurposed projects. The previous section elaborated on specific case studies in which the developers and owners are mentioned. I compiled a list of case studies, including those used in the previous section, and sent out a message via email to about 30 case study recipients. Of those contacted, only three responded. Please find the resulting correlation in answers given from all three interviewees in the next section.

4.2 Interviews with Developers and Owners

The first phone interview was conducted with John Stuart, the owner and developer of the Abbey Farm Bed and Breakfast located in Carlton, Oregon. The interview commenced on February 21, 2017 and lasted for 46 minutes. The second phone interview commenced with Aaron (last name withheld by request) owner of the climbing gym Climb Up located in Norman, Oklahoma. The interview was conducted on February 22, 2017 and lasted for 33 minutes. The final interview conducted via email was with Eric Turner, architect and designer of the Silo Point residential apartments, located in
Baltimore, Maryland. Turner replied to the interview questions via email response on February 22, 2017 and contributed detailed responses.

After interviewing the three developers or owners of their projects, a correlation formed from their answers. The inspiration that spurred the idea of repurposing a grain silo elevator originated from the developer’s self-reflection on creativity and sustainability. Each of interviewees mentioned either respect for the American farming ethic, the unique innovation of creating a business or the challenge of improving a structure to spur development in nearby neighborhoods. The Bed and Breakfast in Oregon pursued due to Stuart’s respect for his father’s values of American farming and how resilient the farmers of the early 1900’s dedicated their lives (Stuart, J. 2017, February 21. Personal Interview). At the time of the interview Mr. Stuart expressed that he wanted to pass down something other than money to his children and leave behind a sustainable act of efficiently using the agricultural structure (2017, February 21). Likewise, the original owner of the climbing gym in Oklahoma heard about a developer creating a climbing gym inside of a grain silo and wanted to pursue the same notion. Specifically, the climber population, is always looking for something new that peaks their interest and provides a new experience they are attracted to (A. 2017, February 22. Personal Interview). Turner created the Silo Point apartment project through his company (Turner Development Group); repurposing abandoned or forgotten buildings is its specialty. The goals of reducing urban sprawl along with adaptive-reuse projects led to the crucial understanding of a future development where “we need to make use the best we can of the existing infrastructure and forgotten buildings that just need someone to bring a little imagination and creativity” (Turner, E. 2017, February 22. Personal Interview). Not only has each of these projects invoked awareness of innovation to structures otherwise forgotten and neglected, but the passion behind repurposing grain elevators is the drive leading to successful and influential projects.

The process of repurposing these structures is quite different for each developer. The Bed and Breakfast consisted of a three- to four-month process of achieving approval and convincing of the local
officials to allow Stuart to pursue his project. The construction, beginning in January 2005, took another five-and-a-half months and opened in July 2005. The climbing gym is an ongoing project acquired in 1998 and started in 1999. The gym required an ample amount of interior renovations to the silo along with current and future expansion of an office and restaurant in the adjacent buildings. For Turner, the project was no different than other adaptive-reuse projects where the project’s completion consisted of acquiring a contractual team, financial support and construction/completion of the project. Even though each developer utilized different processes in repurposing their grain silo, every structure shared the need for specific expertise due to the materials and historic nature of the buildings. Many contractors and personal experiences were not familiar with grain elevators which led to resilient work ethic on the part of the construction teams and developer’s handiwork. Another problem that arose from all three projects was the issue of moldy and fermented grain from the early 1900’s still stored within the grain elevators. Assured that no grain remained inside the structures, each developer found piles of rotting, molding and decomposing grain of which had to be shoveled and removed. Another common issue between the three projects is adapting typical building systems to the grain elevator. Utilities, windows and doors, as well as specific elements from each project (climbing rocks, geothermal, staircases, etc.) forced innovative and creative thinking on how to solve such a problem. After all, “most people think these silos are round, they appear round, but because of weather, the challenge is that they expand to heat and cold,” (Stuart, J. 2017, February 21. Personal Interview). Challenges unique to each project tested the minds and wills of the developers.

The scale and size of each project creates a challenging situation when finding a common price or cost associated with the repurposing of grain silo elevators. The height and width of each project varied and was not consistent which makes comparing and recreating these projects challenging. For example, the Bed and Breakfast silos are three 25 1/2-foot wide structures standing no more than a couple stories tall. The climbing gym reached 90-150 feet tall and the Silo Point project varied in width
and length due to the adaptive-reuse of the grain elevator along with residential units. Each project required different costs specific to the intentions the developers had in mind. The Bed and Breakfast cost $300,000 to $350,000 without including the cost of specialized equipment, which roughly totals a third of the Bed and Breakfast. The Climbing Gym is an ongoing process as of 2017 still acquiring incoming costs with continuous renovations. However, the initial startup cost of the project was $200,000, and eight years of renovations totaled another $300,000. In the Silo Point project Turner noted the complete cost was $145,000,000. The various projects result in high costs because of the unique adaptation of the structure. Nevertheless, the repurposing venture of grain elevators is not a low-cost project when considering activities required, such as cleaning, labor, utilities, safety, specialized materials, infrastructure improvements and more. According to Stuart, “unless someone dedicates their own time and finances to the project,” (Stuart, J. 2017, February 21. Personal Interview) it will never be effectively completed. Stuart, Aaron and Turner all agree that without personal dedication and passion for such a unique project, the results will not bear the hard work and time contributed to the outcome.

The success from the completion of each developer’s project have all left an inspirational example of what can be completed from the desire in repurposing grain elevators. Stuart claims the Bed and Breakfast silos have “been widely” accepted in an otherwise nature conservative area and “lots of people come here, internationally too, who have inquired about doing projects and it has inspired other entrepreneurs and developers to pursue something similar” (Stuart, J. 2017, February 21. Personal Interview). Aaron states the “value in something as unique as the silos is definitely high,” (A. 2017, February 22. Personal Interview) and the creation of a repurposed area out of the silos generates an experience unlike any other visitors can witness. Those who explore and observe repurposed structures, especially grain elevators, “are amazed at what they have become...a lot of value in that and it becomes a recognizable feature in the city,” (2017, February 22). Not only do the people who visit repurposed sites benefit from the experience, but the city establishes an achievement of raising awareness to
visitors and residents alike that the city cares about its history, culture and future growth in innovative possibilities. Though Silo Point opened during the Great Recession in 2008, it “sold condominiums well due to the building being unique and well designed” (Turner, E. 2017, February 22. Personal Interview). Further, the repurposing of the silos provided the opportunity to tell a great story while utilizing contemporary uses which is what many people have been looking for in a unique and memorable experience.

4.3 Interviews with Seymour Stakeholders

On February 13, 2017 interviews commenced with the Mayor of Seymour, Craig Luedeman, and historian and store owner, Kevin Greene, in the City of Seymour. Both provided deeper insight into the past, present and future use of the grain silo elevator in Seymour, along with the neighboring sites. A series of introductory comments, a summary of the creative project’s research, findings so far, and future intent presents an up-to-date description of the creative project to both interview candidates. The responses served as a way to increase the local understanding of the city and the level of significance the grain elevator has on the community.

The interview with the mayor began well as Luedeman expressed much attention to the idea of Seymour’s grain silo elevator being repurposed. The review of literature, case studies and future ideas for the site activated the mayor’s recommendation to talk with historian Kevin Greene about a timeline history of the site and the owners. Mayor Luedeman knew the grain silo elevator was as old as he was and almost as old as the city. He also expressed the silo has always been up for debate about future use. Currently, the city had just approved the design of a new park located across the street to the north of the grain silo elevator site. The park will consist of trailhead connections, walking trails, open space, 64 parking spaces, landscaping, a great lawn that can hold anywhere from 300-350 people, and a pavilion seen in Figure 11.
The park was designed by HWC Engineering and is scheduled to start the first phase within the next few years. After this news was provided, the mayor became more energetic about the idea of repurposing the grain silo elevator in a way that compliments and works in conjunction with the park. Luedeman stated, “the grain elevator is such a large complex structure that has been here for who knows how long. The history that elevator has with it is definitely more valuable than trying to, let’s say, blow it up” (Luedeman, C. 2017, February 13. Personal Interview). He continued to describe how at one point the city looked into the explosives and demolition required to tear down the structure and reported that “the concrete walls are so thick and it would take a lot of dynamite and money to tear that elevator down” (2017, February 13). In the end, the city decided to leave it standing in its current location at State Road U.S. 50 and Jeffersonville Avenue. The mayor expressed once again how he is “all for any ideas that you can present. I’d love to have you present to the city council once you are finished with your proposal and maybe it can be thrown into the pot of ideas for the elevator” (2017, February 13).
The next interview was with local historian and small-business owner Kevin Greene; his store Artistic Impressions resides in Seymour’s downtown. Per the mayor’s recommendation, Greene elaborated on the history of the grain silo. He speaks on this exact topic often because he provides walking tours of the city to visitors. Greene provided a hand drawn postcard of a scene from the 1870’s of the grain elevator site seen in Figure 12.

![Figure 12 - Postcard of the 1870’s Blish Grain Mill. Source: Kevin Greene](image)

Greene’s storytelling incorporates the town’s origins, important people and what role the grain silo elevator played. Greene mentioned, “the grain elevator is only one part of the larger site that used to be the Blish Mill. It took up much more space than what is left now and that is something quite impressive” (Greene, K. 2017 February 13. Personal Interview). The grain elevator is something Greene would love to see come alive again. Repurposing the site well would promote both the history of the city and the history of the people who made the city.

4.4 Conclusion
All the interviews provided in depth analysis of the process and interest behind grain elevators. The interviewees mainly communicated the same experiences when repurposing a grain elevator. Some of those experiences consisted of creating passion and inspiration to sustainably repurpose a historical structure, providing your own time and devotion to the project, experiencing complications of design and idea approval, meeting unexpected construction processes, enduring costly renovations and a rewarding experience and end product. All of the interviewees encouraged the notion of a proposal to repurpose a local grain silo elevator and emphasized the importance the community can benefit from such a process. In the end, the developers expressed the most successful element of a grain elevator project as the experience visitors obtain. This is not by engaging in the activity or use provided at the site, but witnessing the in the moment unique experience offered only by such historical and monumental structures.

On February 13, 2017, interviewing Craig Luedeman, Mayor of Seymour, and Kevin Greene, local historian and store owner, resulted in expressed substantial interest in the idea of repurposing the grain silo elevator in the city. With plans to build a new park across the street from the site, the grain elevator retains value for the community as voiced by the mayor’s passionate perspective. Both the mayor and historian agreed that the community would benefit from such a project, and they encouraged the idea of presenting a proposal to the city council in order to bolster the idea to finally repurpose the grain elevator site. The interviews confirmed the passion and unique experiences repurposing grain elevators can have on the developers, owners and community. Driving the idea of a proposal containing the site’s repurposing, the grain silo elevator in Seymour contains the possibility of recreating a new element to add to the experiences developers and local officials are waiting to embrace.
5.1 Introduction

After reviewing literature, case studies and interviewing developers of similar projects, the proposal for the grain silo elevator site in Seymour began. This section is the culmination and result of information found about grain silo elevators and their history with repurposing. To better help understand the context and history of the grain silo site in Seymour, a brief background of the site was given. Once the background was given, the recommended use was revealed based on significant literature, case studies and interviews. Further, the design of the recommended use was illustrated by conceptual renderings of the future use on the site along with descriptions of each rendering to aid in fully comprehending the idea. Financial data was provided to demonstrate the costs of repurposing the site and comparing the cost of demolition or leaving the site unused. Lastly, a brief summary of the recommended use was given to tie in the concepts and details presented.

5.2 Background of Site

Seymour’s grain silo elevator dates back to 1854, just after the city was established. The existing silo structures are actually built in the 1930’s but the origin begins much earlier. The Blish Milling Company was a family of millers headed by John Blish. Originally from Europe in the early 1600’s, the Blish name dates back centuries from Europe to the establishment on the east coast of the United States in the early 1800’s. John Blish became one of the first millers in the nation. Upon expanding and traveling to the west, he met and fell in love with Sarah Shields, a daughter of the founder of Seymour. The town, founded in 1852, became the new location for Blish’s milling operations. In 1854, he constructed the first mill in the city. Located north of Tipton Street, the mill grew to be one of the largest employers in the area and one of the largest mills in that part of the country. Tragedy struck
when the mill burned down on Halloween night in 1885 and rebuilt less than a year later on the south side of Tipton Street. John Blish died in 1886 before he could witness the reopening of the mill, and his two sons Meedy and Tipton Blish, took over the business. The mill continued to grow, and, by 1912, the mill produced 1200 barrels of flour daily. During both WWI and into the 1920’s the mill reached its peak production. The continued growth of the mill led to the expansion of the mill's storage area. The brothers constructed 109 feet tall concrete silos in the 1930’s, which created total wheat storage of nearly half a million bushels (Greene, K. 2017 February 13. Personal Interview). The concrete silos developed next to the Pennsylvania Railroad and a track which runs into the Blish property, see Appendix C for Sandborn Map. This location includes close proximity for railroad operation. The next generation of the Blish family took over after Meedy and Tipton and eventually other non-family related businessmen acquired the mill and silos. Operation continued into the 1950’s and 1960’s, but began to slow down drastically until the mill inevitably closed in the late 1970’s. Sitting vacant for years to follow, the mill is torn down in 1976 to make way for construction of a parking lot to the grocery store across the street and all that remains in the present day are the concrete silos. The property is vacant, the grocery store eventually is torn down and the remaining two lots are empty to the north and to the east of the concrete silos. The silos were deemed too expensive, thick in material and would require costly procedures requiring explosives in order to demolish the massive structures. The city decided to leave the silos standing to which they have been vacant and housing storage for the years to follow. In 2016, Mayor Craig Luedeman and the City of Seymour decided to repurpose the vacant lot to the north of the silos into a new city park. The property to the east of the silos contains the location of a small retail strip of stores consisting of a nail salon, Mexican market and restaurant.

5.3 Recommended Use
The recommended use for the site in Seymour is not one use, but a culmination of four ideas. The combined uses consist of art, museum space with tours, recreational area and a restaurant and pub. Mark Byrnes states in his article *The Toughest Re-Use: Grain Elevators* that “developers and city officials are forced to be more creative than usual when determining new uses for these grain elevators,” (2010) and he is correct. In this day and age, reuse projects need more creativity than ever before to spark interest and attraction. Successful reuse projects do not always have to result in obtaining occupancy, as the majority of reuse projects are, through unoriginal ideas (Byrnes, 2010). In Quebec City the grain elevator became a giant canopy for lights and video projection. The result attracted thousands of continuous viewers and despite being planned to only project these features for a few years, the popularity led to the continuous showing of lights and film every night. As Misirlisoy states in *Adaptive reuse strategies for heritage buildings: a holistic approach*, heritage buildings cater towards an area’s identity and “serve as cultural and heritage symbols; thus, they act as a center of individual and community life” (2016, p.92). The site in Seymour could serve a similar function because of its proximity to the new proposed park across the street. The proposed park would be located near the middle of the city in the hopes of attracting many visitors. By displaying lights on the sides of the grain silo elevator, the structure becomes a piece of art, adding even more aesthetics to the experience of visiting the park. The silos could become a backdrop for visitors to the park or adjacent businesses and stores and serve as a focal point during any errands or traveling. Silo No. 5, located in Montreal, became an iconic landmark for users of the nearby park. Its status as a landmark is its primary use, but it is still loved by members of the Quebec community. In addition to its status as a landmark, the silo occasionally offers observatory views from the roof. The grain silo elevator illuminated with lights would be visible from afar standing 109 feet tall and can provide the opportunity to view the city from a different angle. As a result, a possible viewing platform atop the silos would provide the same effect and attraction as Silo No. 5, see Figure 25.
Derek Lantham states that before the “aesthetic interpretation of the new use can be considered” (Latham, 1999, p. 3) other factors need to be addressed concerning the functionality and interaction with the community. He continues how without people, buildings are mere monuments and “buildings must thus be seen in the context of both the people and the society that use them … in order for the visitor to identify the activity within, and for the user to occupy it practically, efficiently and economically” (p. 6). This is the reason why the Mill City Museum in Minneapolis and Silo City in Buffalo still successfully attracts people to the structure’s functional use. The Mill City Museum not only uses lights and banners to advertise and showcase the historic building, but incorporates a museum with artifacts from the time period when the mill was functional. Silo City offers the same exploration through guided tours of the many grain elevators. Visitors seek authenticity in tours, and museums are “seen as a critical aspect in producing truth and value within tourism” (Hughes, 2010, p. 18). Cultural heritage tourism provides personal insights into the past, allowing that interaction between public and history. It is for this reason that half of the interior of the grain silo elevator in Seymour should be utilized as a museum where artifacts and authentic displays can be presented. The reuse of historic buildings can also enhance economic and social sustainability (Yung & Chan, 2012, p. 360). Ball State University graduate thesis documents from MUPD graduate Paul Montagno and MSHP/M-Arch graduate Joshua Stowers offer more insights into economic development. Montagno incorporated economic development into his project using tourism (2003, pp. 13-17) and Stowers (M-Arch, March 2016), elaborated on attracting people to a destination “can improve the economic vitality of a downtown” (2015, p. 42). John Stuart, owner and developer of the Abbey Farm Bed and Breakfast in Carlton, Oregon, stresses that there needs to be some sort of economic driver creating enough revenue for a project to maintain stability (Stuart, J. 2017, February 21. Personal Interview).

At first, recreational opportunity is an alternative use for a project to maintain stability for the grain silo elevator but, after the successes of several entrepreneurs, recreational activity attracts a thrill-
seeking crowd to a unique location. After interviewing Aaron, owner of the rock climbing gym *Climb Up* inside of a silo in Oklahoma, a grain silo elevator “made a perfect environment for indoor and outdoor rock climbing facility ... it is unique for its height and structure for what it was made of ... vertical real life becomes a destination for climbers” (A. 2017, February 22. Personal Interview). Just as with Stoneworks Rock Climbing gym in Carrollton, Texas, what first started as a local electric company’s access to expand its utility and company, young entrepreneurs developed the interior for rock climbing. The silos soon became unique for being some of the tallest rock climbing gyms nearby. They are nearly six times taller than other rock climbing facilities. Anywhere from 250-400 people a month visit and use the Stoneworks Rock Climbing gym. The opportunity to invoke a unique venue provides Seymour’s residents and visitors with “opportunity for community vitality” (Montagno, 2003, p. 13). A new experience can provoke activity not only in a recreational way, but also in an engaging experience for people to explore and reach out of their comfort zones. In addition to a recreational opportunity, visitors will experience a multi-use facility offering rock climbing, possible bouldering options and indoor trampolines. Climbers can even discover unique voids within the grain silos in which they can climb and indulge in similar environments found at natural rock climbing attractions. Rock climbing facilities have become popular in recent years. With repurposed grain silos becoming unique opportunities to install rock climbing recreation, Seymour can utilize the attraction of not only art and history but of activity as well.

Tins Bins, a restaurant in Stillwater, Minnesota repurposed a grain silo elevator to serve as a retail destination. An interest in history, preservation and aesthetic views, the restaurant became incorporated into the grain silo elevator as a way to provide a popular place for business. Similarly, Montana Ale Works is a repurposed historic train depot that is now a pub and restaurant. Both locations generate a unique experience unlike anything else. Aaron also mentioned that the “value of something as unique as the silos is definitely high,” and those who explore and observe repurposed structures “are amazed at what they have become ... not just the new use, but just the fact they are standing in
something old that has been re-used” (A. 2017, February 22. Personal Interview). According to Susan Kalcik in the article The America’s Industrial Heritage Project, “the challenge is to de-familiarize the story and make people look anew at the familiar or expected” (1994, p.10). This challenge helps positively change people’s impressions and opinions of a familiar structure. The remains of the grain silo elevator in Seymour stands in the same place for nearly 100 years and the residents “know the silos and the Blish legacy/name, but that’s it” (Luedeman, C. 2017, February 13. Personal Interview). Kalcik’s challenge can de-familiarize the grain silos into a mixed-use site containing the potential for residents to explore and find new meaning. Aside from preserving the silos for historic interest, “the economic advantages of conversion ... are nowadays recognized” (Robert, 1991, p. 4). A restaurant and pub fulfills the need of an economic driver while still maintaining the historic value of grain silos. The second half of the grain silo elevator in Seymour can be utilized as a restaurant and pub while the first half can be used as museum space with tours.

Allowing the Seymour silos to host art exhibits can attract visitor’s attention with aesthetic and visual zeal. The museum space and tours provide the activity and authenticity visitors seek when experiencing a destination. The restaurant and pub provide the economic driver of the site and offer the de-familiarization of a site’s use, thus resulting in unique value discovered upon a visitor’s experience. The recommended uses of art, museum space and tours and a restaurant and pub achieve a unique attraction providing multiple proposed uses for the site. “Creating new function is a major opportunity for many communities,” (Deeg 2004, pp. 1 and 3) and the silos in Seymour can generate exactly that opportunity as a new function.

5.4 Site Proposal
With the addition of a future park north and across Tipton Street, the site becomes part of a larger picture. In Figure 13, the grain silo elevator site is outlined to contextually represent its location within Seymour.

Figure 13 - City of Seymour and Grain Silo Elevator Site Outlined. Source: Caleb Ernest

In Figure 14, the grain silo elevator site is enlarged to show a close-up aerial of the site and its neighboring parcels of land.
Historically, the property located east of the grain silo used to be part of the entire elevator. The properties north of Tipton Street are within close proximity to the site and can be utilized along with the city’s approval of a new park. To this end, the grain silo elevator repurposing becomes one part of a four-phase proposal. The four phases include:

- Phase 1: New Park
- Phase 2: Silo Renovation
- Phase 3: Restaurant and Pub
- Phase 4: Senior Housing

In Figure 15, the four phases are in numerical order and will be discussed separately.
Phase 1, the new park, is introduced as a newly accepted concept the City of Seymour plans on developing. Mayor Luedeman informed me how the park concept has already been approved in 2017 and is hopefully set to begin construction within the next few years. The park concept is not an original idea of this creative project, but an additional component that functions well with the remaining phases. It, in itself, is purely contributing to the overall context of the four phases. All credit to the park goes to the City of Seymour and the private developer, HWC Engineering, they hired to create the park concept.

Figure 16 shows the proposed development of Phase 1 within the overall site area.
Phase 2 begins with the main focus on the grain silo elevator. Figure 17 demonstrates the layout of the repurposed silo on the current site. The existing grain silo elevator is built into three sections when construction completed in 1939 when it was originally built. The sections consist of a ground level, a storage level and an office level. The ground level contains worker rooms. These allow workers to operate the grain auger and perform maintenance on grain silo storage spaces. The ground level is located beneath the storage level and is approximately 14 and a half feet tall. The storage level consists of the silo storage units that hold and preserve the grain. The silos are located just above the worker rooms and measure 70 and a half feet tall. The office level resides atop the silos and sits about 24 feet tall. The office level is used for administration work, financial obligations and oversight of the operations of the grain processed from train to storage. Figure 18 demonstrates the breakdown of the sections and the divided uses within the entirety of the grain silo elevator. In Figure 19, the silos are numbered one through ten and will be referenced by their labeled numbers later in this section for clarity when discussing individual silos.
Figure 17 - Phase 2, Silo Renovation and Addition of Multi-use Recommended Uses. Source: Caleb Ernest

Figure 18 - Isometric View Demonstrating Breakdown of Multiple Uses Recommended for Within the Grain Silo Elevator

Including Exterior Additions of a New Building and Parking Lot. Source: Caleb Ernest
Figure 19 - Silos Labeled with Numbers for Clarity when Discussing Individual Silos. Source: Caleb Ernest

Just as Section 5.3 Recommended Use describes, the proposed renovation to the site would create space for art exhibits, a museum, and recreational areas. The grain silo elevator would need renovations before the recommended uses could be implemented. The costs I estimated can be found in Appendix D. The costs consist of:

- A thorough cleaning of the interior
- Water proofing the infrastructure
- Removing and gutting the infrastructure within silos two, three and five
- Demolishing the old roof
- Construction of a new roof
- Addition of a staircase from the bottom floor to the roof
- Construction of a viewing dock and walkway on the roof
- Added insulation and utilities
- Added recreational and museum/tour materials
- Construction of a 1,100 Square Foot building located at the front of the grain silo elevator
- Construction of a parking lot in front of the new building, and
- Addition of a pedestrian crossing

The resulted improvements and repurposing of the grain silo elevator would result in a completed model shown in Figure 20.

![Completed Silo Renovation and Repurposing. Source: Caleb Ernest](image)

A thorough cleaning of the interior is necessary because of pigeon feces, sitting water, mildew and mold occupying the ground floor area, see Appendix E for pictures of the interior of the grain elevator. The sitting water is from rainwater. Every time a rain storm occurs, rainwater leaks into the base of the grain silo elevator. This leaking requires water proofing to prevent future flooding and leakage. Removing the infrastructure from silos two, three and five creates space for the recreational materials, which would serve interior rock climbing. The existing roof is deteriorating and debris fall from the roof to the ground every day. The roof is not salvageable. It will need to be completely removed and replaced. A required
staircase from the ground floor in silo five would create roof access utilizing the opportunity to reach the top of the grain silo elevator. The roof access allows visitors to walk along the proposed walkway and viewing room during walking tours through the grain silo. To fulfill the recommendations of multiple uses, additional interior renovations would consist of insulation, utilities and recreational and museum materials. Lastly, to accommodate visitors and customers to the grain silo elevator, a newly constructed visitor building, 1,100 square feet, along with parking would be attached on the northern side of the grain silo elevator seen in Figure 21.

![Figure 21 - Phase 2, Breakdown of Multiple Uses inside Grain Silo Elevator and Addition of New Building and Parking. Source: Caleb Ernest](image)

Recreation and a walking tour, through silos six through nine, contribute to the unique combination of active and passive activity. The ground level area in which the worker rooms are located utilize the walking tour on the east side of the building, see Figure 22 for walking tour route. The recommended recreational uses utilizes both the worker rooms and the removal of infrastructure inside silos two, three and five for rock climbing and the staircase. The visitor center (new building to the north) serves as the gathering space for visitors and customers alike when experiencing the building for either
recreation or the walking tour. The parking lot design maximizes the number of spots available in order to accommodate visitors.

![Figure 22 - Walking Tour Route through Silo Rooms and Optional Route to Roof. Source: Caleb Ernest](image)

The combination of the uses generates a unique experience for visitors and an innovative utilization of the historic grain silo elevator. Figure 23 demonstrates a possible vision of the rock climbing activity and an experience unlike any they have encountered. Having a rock climbing facility in Seymour provides a new use for the city, its residents and the region. The closest rock climbing facility, as of 2017, is located in either the city of Bloomington, Indiana or Cincinnati, Ohio and contains a facility that is enclosed, which does not include the nearby rock climbing activities of the SpringHill Climbing wall west of Seymour or in Muscatatuck Park. The unique variation of infrastructure in the ground level spaces of the grain silo elevator offer crawling, climbing, bouldering and trampoline opportunities to experience active recreation.
A walking tour (Figure 22) in silos six through nine incorporates the historic element of the grain silo elevator. The history of the site, as mentioned early in this section, replicates within the ground level spaces inside each worker room. These spaces would include historical exhibits relating to the Blish family and the silo’s history. The experience of walking through each room would generate a sense of observing the time periods the silo was active and literally walking through a timeline of the history (Figure 24).
Not only are the ground level rooms and a couple of the storage silos utilized, but the roof could be the pinnacle attraction. The staircase in silo five allows for passage to the roof where the visitor would get the opportunity to climb along a walkway on top of the grain silo elevator’s roof, eventually leading to an enclosed viewing dock (Figures 25 and 26). Being over 100 feet in the air allows visitors to see the entire City of Seymour and possibly the horizon of the region. This experience is not easily replicated in any other building within the city or region. Figure 27 illustrates the roof layout.
Figure 25 - Walkway to Viewing Dock on Top of Grain Silo Elevator. Source: Caleb Ernest

Figure 26 - View from within Viewing Dock on Top of Grain Silo Elevator. Source: Caleb Ernest
Lastly, the grain silo elevator is utilized for art. Lights and images project onto the sides and front of the building to create an artwork display. With the close proximity of the new park north of Tipton Street, the grain silo elevator would become a backdrop and attraction for traveling visitors and residents alike. Figure 28 demonstrates the possibility of displaying lights along the sides of the building to create a memorable experience that could be seen from miles away.
Phase 3 includes the incorporation of the property east of the grain silo elevator. As of 2017, the 13,000 square foot building contains a Hispanic market, Carniceria La Mejor, and a nail salon, Kim Nails. These businesses and the property could be purchased and renovated into a restaurant and pub. Naming the restaurant and pub *The Grainery* (recommended title only, other names could be used) would offer an economic driver partnered with the grain silo elevator repurposed building. The walking tours, recreational use and art fully utilize the grain silo elevator, but would not necessarily obtain enough revenue to become self-sustaining as a business. Thus, the restaurant and pub located next door would ensure economic vitality and bring a steady revenue flow for the property. Appendix C includes the anticipated cost of renovating the building and building a patio. Customers could utilize the patio as a space for eating and drinking, and the passing trains could occasionally break up the otherwise quaint atmosphere. Figure 29 demonstrates the layout of Phase 3.
Phase 4 consists of the recommended use of senior housing allocating the ability to incorporate residential use to the surrounding phases. The senior housing (Figure 30) offers 12 independent living units for seniors, eight of which are one bedroom units and four are two bedroom units. These units, at first, might seem odd in the setting of the other phases and in close proximity to the active railroad. However, the connections to the surrounding context is more valuable because the future residents of the senior housing units would have access to the CVS Pharmacy located at the intersection of Broadway Street and Tipton Street. A future restaurant is located across the street to the south (Phase 3) and the homes would be within a five- to ten-minute walk to an array of businesses, restaurants and stores. The residents could even volunteer or become employed at the walking tours activity in the repurposed grain silo elevator or attend the attraction as visitors, reliving the history of the building and its original use. Further, the new park (Phase 1) contributes to the residents walking and visiting outdoor space.

Determination of specifically choosing senior housing can be supported by the supplemental document, *Market Analysis*, upon request.
The culmination of the four phases incorporates mixed-uses consisting of a new park, recreation, tourism/sightseeing, museum, retail and residential. In addition, the locations of all four phases are within close proximity to Seymour’s downtown, creating a possible attraction spurring current and future residential attention. Figures 31 and 32 demonstrate all four phases in the context of each other.
Figure 31 - Culmination of Four Phases. Source: HWC Engineering and Caleb Ernest
5.5 Financial Data

As noted in Appendix C, the total estimated costs for all four phases accumulates to roughly $5.5 million. Aaron, owner of the ClimbUp rock climbing gym in Oklahoma, provided estimates for the grain silo elevator renovation. The other estimates were retrieved from online sources with regards to home improvement and cost data (see Sources).

To moderate debt financing (a loan) for the project costs, a pro forma (payment plan) was explored and set up. The pro forma was divided into three different programs containing a Capital Program (the use of funds and sources of funds), an Operating Program (the gross income, effective gross income, net operating income and tax cash flow) and an Investment Program (net sales proceeds, total cash flow and return on equity). The funds and gross income was calculated according to the
estimates for the cost of each phase. The data was retrieved from online investment sources for the revenue generated for the restaurant and pub and senior housing. The return on equity could finalize the rate of return for which the initial investment from the city could supply. For clarification, the city would ideally fund an initial investment on the project, take a loan out from a bank or other source and then, if they are available related to this project, grants would be added as well. However, the information for the initial investment and the loan from the bank were not accessible or retrievable and prevented the completion of the pro forma.

Another exploration of the use of estimated funds for this project would be in comparing the cost of demolition versus the cost of repurposing, renovating and constructing the four phases. This comparison would generate an analysis of the more feasible option for the city to pursue. The costs of repurposing, renovating and constructing the four phases have been estimated (Appendix C), but the cost of demolition was undeterminable. The demolition would ideally consist of tearing down the entirety of the grain silo elevator and the infrastructure in the ground to lay way for a fresh parcel to develop a new use on. However, after consulting several local construction and demolition companies from Seymour and Indianapolis, all the companies settled on the same conclusion that the estimated costs for demolition are not achievable without professionally hiring the company to spend billable hours on the grain silo elevator site. Similarly, there are too many factors that impact the cost of demolition, such as health, environmental, adjacent and nearby buildings, equipment costs, labor, safety of workers and of travelers on the highway, and truck loads of removing debris and other materials found in the silo storage.

5.6 Conclusion

Through the research of literature, case studies and interviews, the recommended use of the grain silo in Seymour was determined. The integration of multiple uses on the site is intended to be a
unique experience for any visitor, resident and employee who would work in the building. Combining recreation, history and museum tour space, art and a viewing dock contribute all the more to a unique one-of-a-kind attraction. To emphasize this opportunity, the newly approved park concept north of Tipton Street generates the ability to compliment the grain silo elevator and vice versa. The silo becomes a backdrop, a landmark and piece of art park visitors can aesthetically recognize while enjoying the park space. Likewise, the property to the east of the grain silo elevator can be utilized as an economic driver resulting in the use of a restaurant and pub. More so, the parcel just east of the new park location can be developed into senior housing, which would allow the future residents to engage and take advantage of the park, grain silo elevator, restaurant and other amenities within walking distance.

Each property, parcel and building is valuable in its own unique and different way. The possibilities are endless as to what can become of a building, especially a historic monument such as the grain silo elevator. The correct use for the building becomes the questionable dilemma, but with the aid of case studies, they provide proof of successfully implemented projects similar to Seymour’s. Instead of implementing only one idea or one successful methodology from literature reviews, the multi-use variety of activity on one site provokes the hidden potential that has been waiting to be discovered. Some cities may claim they have a hidden gem or local attraction, but the grain silo elevator provides more than just one use. Matching well with the new park concept, recommended restaurant and pub and senior housing, the four phases become a destination and node of activity in the downtown of Seymour. This destination creates the option of endless possibilities for future attraction and visitation. The grain silo elevator in Seymour has awoken its potential as a destination and is ready for future development.
6.1 Reflection and Future Recommendations

This creative project allows the ability to integrate the education obtained from Ball State University’s Urban Planning Department into a real-world scenario. The grain silo elevator presents a historical building in a city which is similar to many other cities with many historical buildings in their domain. This creative project not only addresses the future concern of the grain silo elevator, but also approaches and takes steps to understanding the most appropriate repurposed use of the grain silo. At times, this project takes unexpected detailed turns consisting of figuring out answers to problems that are not Urban Planning related. Such problems are evident when creating graphics and financial data for the project. A recommendation for future exploration of, or in relation to, this topic would be a full engineering study of the grain silo elevator. It should be conducted in order to professionally establish the costs associated with repurposing, renovation and construction. This creative project is purely academic and explores the conceptual recommendations for the grain silo elevator site and its neighboring sites. Another recommendation would be professionally partnering with a funding source in order to accurately gather financial data for a debt financing pro forma and comparison of demolition costs versus repurposing, renovation or construction. Further, partnering with a third party in order to establish financial and cultural support in the production of this project would benefit the third party’s reputation and both the city and private developer in developing a piece of historic property and integrating it within the city’s downtown. A final recommendation is to recognize the cultural and historical value of the grain silo elevator site. The rich history behind this site can produce beneficial amenities to the residents and visitors in Seymour. The history behind why a city is still standing is just as valuable as how the city came to be. The grain silo elevator is already a unique element to the origins
of the City of Seymour and cherishing the existing historical building represents a monument signifying much more than a structure. It represents an opportunity for new life.
REFERENCES

Deeg, L. R. (2004). Prepare the winding path examining the re-use potential of abandoned industrial infrastructure in community health, housing, transportation, recreation, and tourism (BSU M-Arch Thesis) KinePubs Microfiche, Eugene, Oregon.
Turner, E. (2017, February 22). Silo Point [E-mail interview].
SOURCES


APPENDIX

Appendix A – Extensive List of Case Studies Explored

Akron, Ohio – Quaker Square
Baltimore, Maryland – Silo Point
Bloomington, Illinois – Upper Limits Climbing Gym
Buffalo, New York – Silo City
Bunbury, Australia – Wheat Silo Apartments
Cape Town, Africa – V&A Waterfront Museum
Carrollton, Texas – Stoneworks Rock Climbing
Cedar Falls, Iowa – Silo Ice Climbing Wall
Copenhagen – MVRDV Gemini Residence
Detroit, Michigan – Packard Plant Site
Greensburg, Kansas – Tornado Resistant Silo
Landscleafs Park, Duisberg, Germany – Steel Mill
Lodz, Poland – Textile Mills
Madison, Indiana – Heritage Tourism
Minneapolis, Minnesota – Mill City Museum
Missouri – abandoned grain silo into cabin
Montana Ale Works, Bozeman, MT – Restaurant and Pub
Montreal, Canada – Silo No. 5
Norway – Silo Student Dorms
Oklahoma City, Oklahoma – Rocktown
Oregon – Abbey Road Farm Bed and Breakfast
Oslo, Minnesota – Grain Elevator
Philadelphia, Pennsylvania – The Granary
Phoenix, Arizona – Cozy Studio Silo
Quebec City, Quebec – Aurora Borealis
Sacramento, California – Lofts at Globe Mills
Texas – Gruene Homestead Inn
The Silo, Buffalo, New York – Coal Silo Restaurant
Tin Bins, Stillwater, Minnesota – Restaurant
Vienna – Gasometers
Waco, Texas – Magnolia Silo
Woodland, Utah – Monte Silo House
Appendix B – Complete List of Interview Questions and Prompt

Process:
- Explain who I am and what my creative project is
- Explain research I have already completed

Pre-questions: Is it okay to use your name and title in my project? If not, will use anonymous name.
Pre-questions: Is it okay to quote anything you say for use in my project?

Questions:
1. Why was the repurposing done? What was the reason it was reused?
2. What were the steps taken to accomplish this? What was the process?
3. How much did it cost to repurpose? What specific costs were made with repairs/cleaning/retrofitting/addition of materials/etc.? How long did the process take?
4. What problems resulted from this process?
5. What successes resulted from this process?

Post-questions: Thank you for time and opportunity to speak with you.
Appendix C – Sandborn Map

Figure 33 - Sandborn Map from 1913, Grain Silo Elevator Site Located at the Top Right Corner of Map. Source: Indiana University Map Collection
## Appendix D – Accumulated Estimated Costs

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* = included in "Cleaning of Silo Interior" activity

**Figure 34 - Estimated Costs Table of Four Phases. Source: Caleb Ernest**
Appendix E – Pictures of the Interior of the Grain Elevator

Source of Appendix E Photos: Caleb Ernest