

Delftree Mill Re-Use Plan



An Environmental Planning Project

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PART I

PROJECT BACKGROUND

There are no prior proposals for the site, as far as we know. Since the Delftree Corporation took over, the building has fulfilled several uses. However, there was and is no long-term plan for use of the mill or site. New England, however, has seen the conversion of many old mill buildings toward more creative uses. These uses include loft-style residential living, artist studios, museums, commercial, and retail. The Berkshires have been notable in this regard, and Berkshire Mill in Adams and Mass MoCA in North Adams provide sources of inspiration. Additionally, Lowell, Massachusetts and Pawtucket, Rhode Island have included mill redevelopment as part of significant downtown revitalization efforts, and have been successful in this regard.

PROBLEM IDENTIFICATION AND SCOPING

Client Goals

The client, Bill Greenwald, has asked for assistance in his quest to make his business and building, Delftree Mill and Corporation in North Adams, profitable. His largest concern with the mill building is its roof, which has been deteriorating for some time without much in the way of repairs. Most importantly, with the current structure, waterproof integrity is compromised. However, Mr. Greenwald does not have the necessary capital to make a “band-aid” fix (~\$250,000) or a more permanent solution (~\$1-2 million), and therefore, his number one goal is to find funding sources to repair the roof. Mr. Greenwald is also interested in alternative uses for the short and long term that may be more economically stable than the current mix of uses. He is looking for a practical but creative solution.

Project Objectives

The objective for this project is to find a balance between attempting to achieve our client’s goals (i.e. finding money to fix the roof and proposing a more innovative/effective use for the space), and also the class goals (to experience the planning process as beginning with a problem statement, researching, objective analysis of research and formulation of recommendation based on all of the above). Unfortunately, the group was not able to cater to simply one or the other of these objectives. Thus, an amalgamation of the two is desired. The information gathered and conclusions drawn are not solely directed towards immediate client use. Some of the method and research information included in this report will help to articulate the process of planning as laid out by the class goals.

SCOPE OF RESEARCH, RESEARCH PLAN, METHODS

In order to achieve our client's goals we began researching four different areas; financial record, community, funding, and case studies. An overview of Delftree Corporation's financial records was necessary so as to get a better idea of what was currently producing the greatest revenue and at what cost. We felt a careful analysis of the infrastructure of the business would allow us to ultimately provide more applicable advice. Most of our data for the other three areas was gathered through open-ended interviews. This style of research allowed for limitless information to be gathered during a single interview. Within each area of focus, we began with a similar introduction statement and opening questions. Based on responses to these questions we allowed the interviewee to help shape the conversation. In the case study arena we gathered information in this manner on mill renovation, artist loft conversion, art space, warehouse etc. We were able to get opinions of local officials, artists and mill space owners about the town of North Adams and the current uses of old mills. Community research also encompassed talking to realtors to get figures on the cost of current housing and also understanding better economic demographics of North Adams based on the real estate market. In the area of funding several open-ended interviews took place incorporating many "what-if" questions to allow for a better understanding of how specific grants and loans worked. We then combined all of the information gathered and applied it to a modified planning balance sheet for further analysis and to determine the best alternative use (see section III).

SITE HISTORY

The old mill building that currently houses the Delftree Corporation was built in 1902 as a weave shed to Arnold Print works. What is now Delftree and also the Eclipse Mill across the street were both originally the Eclipse Mill. In 1911, the complex was acquired by the Hoosac Cotton Co. The mill business was extremely successful, employing close to 1,000 hands, allowing for the mill to be three times larger than the national average at the time. In May of 1957, as a result of the declining mill industry, Hoosac Cotton Co. sold four story mill beside the river (what is now solely the Eclipse Mill) to Sprague Electric Co. The two buildings have not shared an owner since the Hoosac Cotton Co.¹

The weave shed was abandoned in 1970 and remained ownerless for sometime. It was not until 12 years later, 1982, that Bill Greenwald and Steve Lundy reopened the mill as Delftree Shiitake Mushroom farm. When it was first getting started, Delftree was a small operation that demanded personal investment and ingenuity. Steve Lundy, Bill's partner and founder of the mushroom business, footed much of the upfront cost. He used to pack the mushrooms into the back of his truck and drive 2 ½ hours south to New York City, where he would knock on the back doors of restaurants and try to interest chefs in his mushrooms. Following a series of unwise business moves and Lundy's unfortunate death, however, the business folded only two years later.

¹ Massachusetts Historical Commission, Survey 1978.

In 1985, Delftree started up again under the management of Bill Greenwald and his friend Peter Duble, current president and vice president respectively of the Delftree Corporation. Shiitake mushrooms are a difficult crop to grow, and the process requires a nuanced understanding of the raw materials and growing environment. Since 1985, Delftree has seen bad years, such as in 1987 when production unexpectedly failed due to a bad culture, and good years of high yield, a strong market and significant profit. In October of 1989 Peter Duble passed away leaving Bill as the sole manager of the corporation. In 1996, Delftree Corporation bought the old mill building, giving Delftree Corporation the opportunity to use its real estate potential to diversify beyond mushrooms. At the end of 199 Greenwald bought out the remaining investors making him the sole owner. Right now, in addition to the rooms used for the mushroom business, the building also has storage units and batting cages.

SITE DESCRIPTION

The Delftree building is situated roughly a half mile east on Union Street (Route 2) from the designated downtown area of North Adams, Massachusetts. See Site map and enhanced building plan in Appendix. It sits on 8.62 acres, with the building taking up more than half of the acreage and most of the usable land. There is parking on site to the east and west of the building, with loading docks to both floors due to the grade change as Union Street travels west. To the North of the Delftree building is Route 2, the Hoosic River and the Eclipse Mill, recently renovated into artists lofts by developer Eric Rudd. The western property boundary is Rand Street and residential units, and the southern boundary is private residential lots. The southern adjacent properties are situated atop a 50 + foot limestone embankment, as shown in the following two pictures.



*East parking lot looking west towards Rand Street and adjacent residential property.
(Photo Katie Nicoll)*

Accessibility to the Delftree building is very easy with loading docks on both the east and west ends due to the grade change along Union Street. The northern wall abuts Union Street (Route 2) and is therefore more complicated to access and renovate. The

southern side of the building cannot be accessed by any vehicles or construction equipment due to the limestone cliff.²



South side of the Delftree building, abutting the limestone cliff. (All photos by Laura Cavin unless otherwise noted)*

BUILDING DESCRIPTION

The Delftree building is comprised of roughly 300,000 square feet of space, currently under variable states of renovations and uses. Some of the current uses are a shiitake mushroom business, batting cages, self-storage units, industrial warehousing, and storage for the Williamstown Theater Festival. The entire structure is two floors, but currently the old boiler and compressor rooms are single stories. The majority of the square footage comprises of two 110,000 sf “weaving sheds” which have a ceiling height of 15 feet to the beams, and another 6 feet on the second floor to the ceiling. The width is 250 feet at the west end, and 135 feet at the east end, and 500 feet long. (see figure below for building components).

There are columns supporting the roof and second floor. On the first floor they span a grid with rows of 10’ with 30’ isles. The second floor has fewer columns with the grid span at 25’. Initially the building was heated throughout and therefore the columns

² Burr, Site visit, personal interview. May 3, 2005.

did not have to support a roof plus snow loads because the snow would melt off through the uninsulated roof, but currently the “weaving shed” portion of Delftree is not heated and has additional columns to support Massachusetts snow loads. The roof is a saw tooth construction and currently accumulates large snow loads during the winter months. The roof initially contained skylights on the eastward facing slope, but is currently boarded over with variable roof patches. The configuration of the roof does not provide beneficial south facing exposure and therefore limits the possibilities of passive or active solar gain.



Saw tooth roof, shown with various patches.

The “block rooms” are of a different structure than the main “weaving shed” area. There are three 5,000 square foot rooms that are double story. Currently the majority of the mushroom business runs out of these areas, along with equipment storage. Also, the infrastructure is in place to close off these rooms and heat them separately.



“Block rooms” on the east side of the building.

The compressor/boiler rooms are single story structures that house the batting cage, North Adams Sheet metal, and a trucking contractor. These areas are more structurally sound than the “weaving shed” and “block rooms”, but continually need maintenance and repairs. They are single story structures that have had some structural repair to the beams and roofs.



East parking lot with compress/boiler rooms in mid-ground, and abutting residential property in the background.

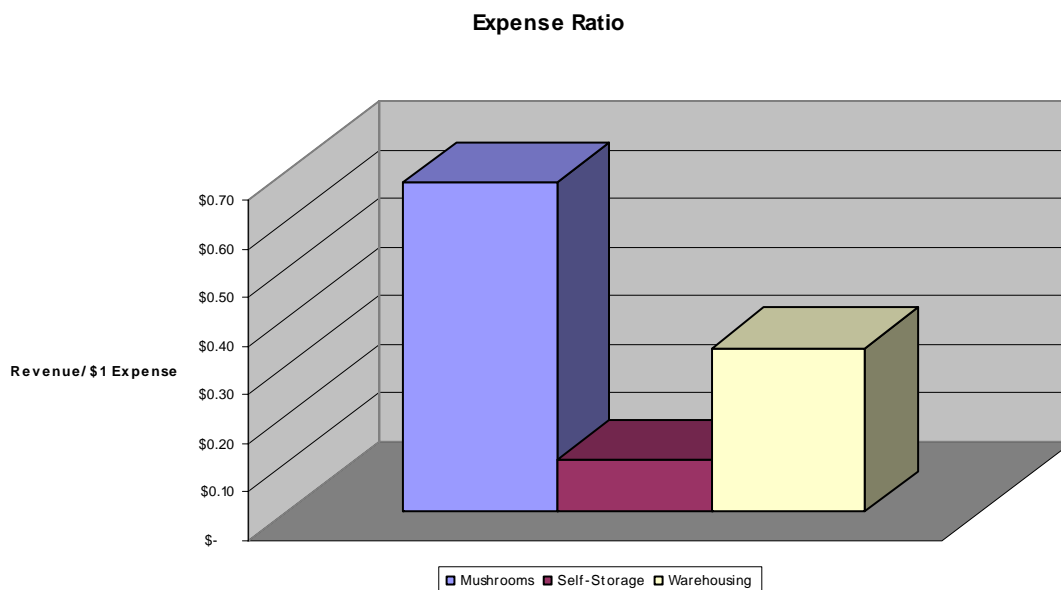
The current breakdown of uses within the “weaving sheds” is as follows: mushrooms about 55,000 sf (and 20,000 sf in the block rooms), self-storage about 35,000 sf, small business uses about 12,000 sf, currently rented warehousing about 60,000 sf. The total “rent-able” space in the whole complex is approximately 250,000 sf. The two

following building plans show the breakdown of present uses of the Delftree complex. The underutilized space is mostly on the second floor. There is 4,000 sf of available space in the self-storage units, and 31,500 sf of mixed storage and warehousing available. There are also parking spaces obtainable for paying tenants. See current building use in Appendix.³

INCOME

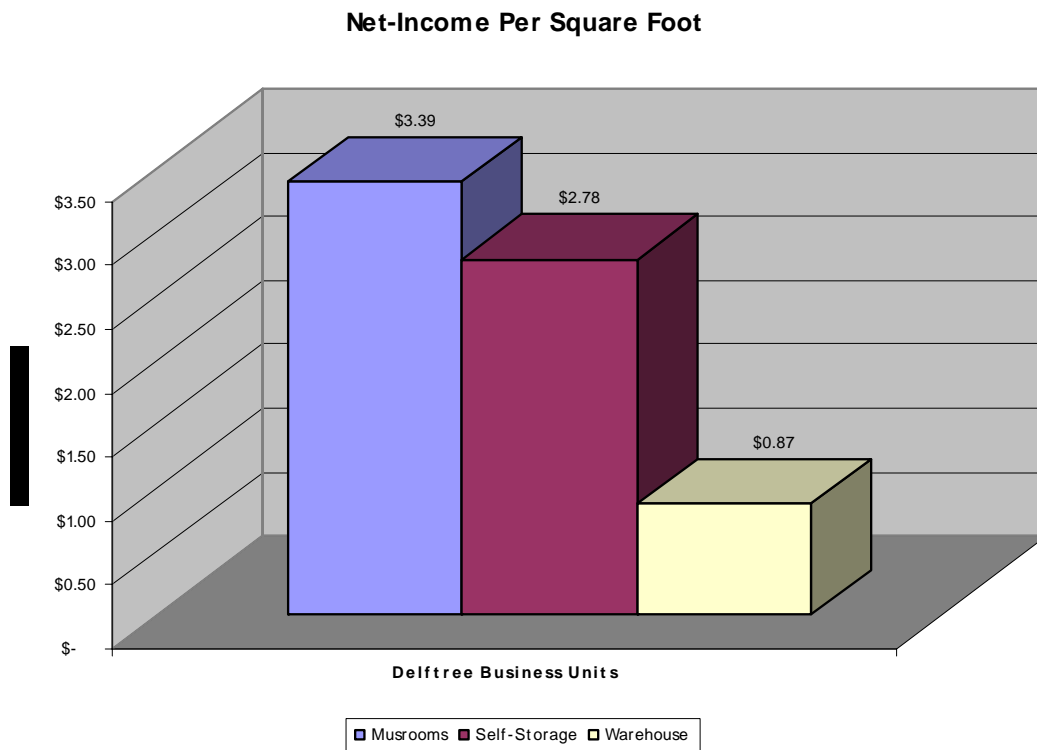
Delftree Corporation's income statement from 2004 revealed the expenses and revenues generated from each endeavor within Delftree. Each expense and revenue for each usage was segregated by the authors. The expense to revenue ratio generated, determined the cost intensity for each business unit. They are as follows with the Shiitake mushroom business at \$0.68 expenses/\$1 revenue, the self-storage is \$0.11 /\$1 of revenue, warehousing is \$0.34/\$1 of revenue. This shows that the self-storage operation requires the least expense per dollar of revenue generated of the three major Delftree businesses.

The project team also calculated the net income for each business unit of usable space. Figures of these calculations are \$3.39/sf for mushrooms, \$2.78/ sf for self-storage, and \$0.87/ sf for warehousing. This shows the current profitability for each business type by square footage. The mushrooms have the highest income per square foot (psf) of the Delftree business units despite its high expense ratio, which is due to high sales (see *percent of total income*, below). Given its low expense ratio, the self storage business is Delftree's second-highest grossing unit. These calculations are important in deciding upon a recommendation, as profitability is our client's major goal.

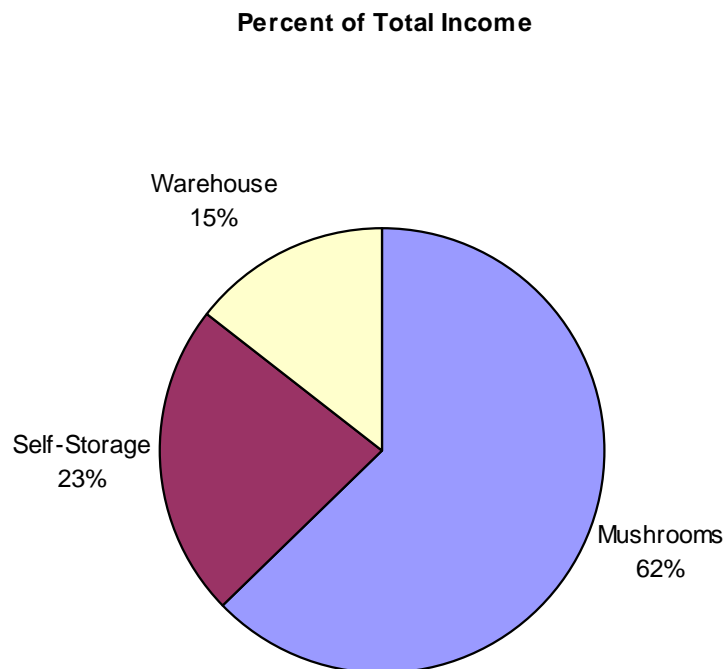


Source: Delftree Corporation 2004 Income Statement

³ Greenwald, building use breakdown.

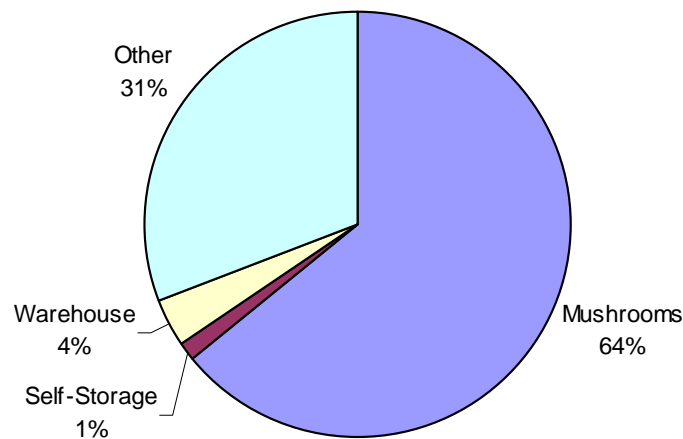


Source: Delftree Corporation 2004 income statement



Source: Delftree Corporation 2004 Income Statement

Percent of Total Expenses



Source: Delftree Corporation 2004 Income Statement

COMMUNITY DESCRIPTION

Location

North Adams is located in Northwestern Massachusetts. It is bordered by the towns of Clarksburg to the north, Adams to the south, Florida to the east, and Williamstown to the west. North Adams is 22 miles north of Pittsfield, 133 miles northwest of Boston, 46 miles from Albany, New York and about 133 miles from New York City. The total area of the municipality is 20.57 square miles and the density around 822 people per square mile.⁴

Demographics

The total population of North Adams is 14,681 (6,794 male and 7,887 female). 2,199 people, the largest number of residents, are between the ages of 35 and 44. The median age is 38. Of the total population of North Adams, 13,946 are White, 245 are Black or African American, 212 are two or more races, 117 are Asian, and another 117 are other races. There are 6,311 households, 3,634 of which are family household with children below the ages of 18. The average household size is 2.21 and the average family size is 2.87.⁴

⁴ <http://www.mass.gov/dhcd/iprofile/213.pdf>

Community Research

Important aspects to incorporate in the community profile concerning the Delftree Corporation are the population, employment, area businesses, and relevant registered historic places in North Adams. These aspects are necessary for understanding Delftree's place within the economic structure of North Adams, and for determining possible uses for the future that fit within the community structure and ultimate future goals.

The population numbers in North Adams have been on a decline since 1900 when there were 24,200 people living in North Adams. In the 2000 census 14,681 people were recorded to be living in North Adams. This population trend reflects the economic downturn North Adams has experienced since its era as a booming industrial mill town in the 1900s. The employment numbers seem to be following a similar trend with a steady decline since 1970, but have recently leveled off at about 5,900 between 1996 and 1999. This data is gathered by place of employment and includes all employers covered by state and federal unemployment compensation. Excluded are the self-employed, rail workers, student workers, elected officials, and religious organizations.⁵

The major employers in North Adams, according to the Berkshire County Regional Planning report in 2002, are Northern Berkshire Health Systems (with 500-999 employed); Excelsior Process and Engraving, Massachusetts College of Liberal Arts (250-499 employed); Big Y Supermarket, Modern Aluminum Anodizing Corporation, North Adams Commons (formerly Willowood), Stop and Shop, Wal-Mart (all 100-249 employed).⁶

According to the 1997 Economic Census, the largest industry sector in the Berkshire County is manufacturing. Of the total 9,176 employees in the manufacturing sector, 866 are in North Adams. Further breakdown of employment for the city of North Adams and Berkshire County, goes into retail, accommodations and food services, real estate, professional, scientific, and technological services, administrative, health care, arts entertainment and recreation, and other. Interestingly enough, in addition to being the major employer, the manufacturing sector also has the highest average pay per employee, greater even than professional services, educational services, and healthcare and social assistance.⁷

Other pertinent regional information from Berkshire County includes the labor, wage, and transportation costs as compared to the United States as a whole. This comparison shows the relation and viability of the economic infrastructure in the Berkshires to the labor force, and its comparative status to the US. The production costs and capital costs are also evaluated and will be important factors in the assessment of the economic feasibility of developing Delftree's capital.⁸

In conjunction with this project it is necessary to explore the option of registering Delftree as a nationally recognized historic building, with the possibility of creating access to restoration funds, and public recognition. The list of registered historic places

⁵ Berkshire County Databook-August 2001. See the excel spreadsheet for numbers. For further information on North Adams profile characteristics visit the US Census Bureau or (<http://www1.miser.umass.edu/datacenter/Census2000/SF3/pdfs/1602546225.pdf>)

⁶ MA Dept. of Employment and Training Regional Directory (1997) and Chamber of Commerce of the Berkshires. Note: Range in employment values could be due to an adjustment for part-time, temporary, or contract workers.

⁷ These numbers are available in the Berkshire County Databook or online at www.berkshireplanning.org.

⁸ Berkshire County Databook. 2001

in North Adams is extensive and it will require further investigation into which ones are relevant to Delftree.

The Berkshire County Regional Planning Commission projects their findings into forecasts for the future of the area. It is risky to forecast, but can also be an interesting way to examine the future implications of current trends. Using rough estimates the forecast for North Adams shows continued population decrease, along with decreased employment numbers.⁹

Community Development

Mass MoCA is one of the best and most highly documented examples of creative mill renovation and economic revitalization in the northern Berkshires. In 1999, the museum's first year of operation, Mass MoCA had just over 100,000 visitors, which is a little less than the Los Angeles museum of modern art. In the first two years of operation, Mass MoCA generated \$29 million in new business spending each year, and a total of 850 new jobs. In addition, storefront occupancy rates in the downtown increased, from 30% (as was recorded in 1996) to 70% in 2001, just two years after the opening of Mass MoCA.

In addition to its economic impacts, Mass MoCA has also had significant psychological and emotional effects on the community. Nancy Kelly, a filmmaker who was born in North Adams and lived there until her adolescence, was inspired to come back to the city when she heard that the old Sprague Electric mill complex in the downtown was undergoing major renovation for a new art museum. Since Kelly's family had worked in the Sprague factory, and still lived in North Adams, she decided to come back and document Mass MoCA's progress, and especially its effects on the residents of the community.

By her own account, Kelly had inherited a "downbeat philosophy" from the physical and psychological decay of North Adams pre-Mass MoCA. This outlook was perpetuated by public perception and even advertisements from tourist bureaus that portrayed North Adams as a city filled with "postindustrial decay". Since the mid 1980's, the idea had been floating around to convert the old mills into a contemporary art museum. Tom Kreans from the Williams College Museum of Art, Joseph Thompson, who was to become the founding director, and John Barrett, the mayor of North Adams, were three of the most important supporters of the project in the early days. However, for 14 years, the project was in a constant state of limbo, fluctuating between moving forward and going nowhere. Finally, the project received a \$22 million grant from the state of Massachusetts and \$9.4 million from private funds in order to be able to start on the first phase of construction.¹⁰

On May 30, 1999, the museum opened its doors to the public. People came from all over, including the local residents of North Adams. There was much talk of the economic boom that would bring in tourism, commercial activity, business start-ups, and an urban art scene. However, the sense was that the day after the opening, the downtown of North Adams was dead again.

More than anything else, Mass MoCA has brought a lot of speculation and eager planning. There are the optimists who say that the museum will be the saving grace of the

⁹ Berkshire County Databook 2001.

¹⁰ www.massmoca.org

city, and will pull North Adams out of its “postindustrial decay”. Then there are the pessimists who say that the museum has failed to come through on its promise to create jobs, boost the economy, and serve the needs of the community. The realists, on the other hand, look at the recent evidence: a clear mix of both gain and loss. Indeed, some restaurants have moved in and high-tech companies as well, drawing a cosmopolitan cyber-tech crowd with them; however, after the third winter, in which the entire country experienced a slight recession, many of those companies had to scale back, lay people off, and in some cases, move out entirely.

Even though the summer months see about 350,000 out-of-town tourists attending Tanglewood concerts alone (and Lenox is only 45 minutes south of North Adams!), North Adams faces the challenge of not being able to cater to a wealthy, cosmopolitan clientele all year long. In fact, many of the local residents are turned off by the very art that is meant to save them. Some of the people that Kelly interviewed in the course of making her film said that Mass MoCA didn’t figure into their lives at all: “I haven’t even been in it”, “The art is scary”, “I feel like a dunce”, “I hate it.” In the end, however, Kelly concludes that despite turning some people off, Mass MoCA has been beneficial for North Adams and local residents (including her family) simply because it isn’t focused on the past, and looking back and feeling sorry for itself. Rather, Mass MoCA and the waves that it continues to create is all about *“making reality rather than accepting reality.”*



Downtown North Adams

Housing

According to the 2000 census, there are 7,088 total housing units in North Adams, of which 6,311 are occupied, 777 are vacant, and 27 are for seasonal, recreational or occasional use. Of the 6,311 occupied housing units, 3,284 are owner-occupied and 3,027 are renter-occupied, which means that the population in North Adams is about half owners and half renters.¹¹ When the DHCD conducted an inventory of Chapter 40B subsidized housing throughout Massachusetts, they found 909 of the then determined 7,061 total housing units in North Adams were subsidized. This makes 12.9% of housing in North Adams affordable for low income households. Compare this value to Williamstown, which only has 136 units of subsidized housing out of a total of 2,926, or 4.6%, and we see that North Adams has a little under three times the amount of subsidized housing that Williamstown does. This is supported by anecdotal evidence by community leaders that there is no shortage of affordable housing in North Adams, whereas in Williamstown, the market for affordable housing is quite large.¹²

Development trends

In 1995 the city of North Adams completed a joint study with the now defunct Downtown Development Inc. and HyettPalma Inc. Together they conducted an analysis of retail, office and housing markets, and then developed an enhancement strategy for the downtown of North Adams. Some of their main priorities included preserving old buildings so that “Downtown North Adams capitalizes on its historic architecture,” fostering an environment that would be friendly to business, creative, entertaining and artsy, resolving the parking issue, making the downtown more compact and pedestrian-friendly, and improving the streetscapes and gateway corridors into the city. Throughout the paper, emphasis was placed on improving the physical attractiveness of the city. Specific suggestions for housing focused on conventional, non-subsidized units for singles, couples, or small families with young children. The suggestion was made that these housing units be placed on upper story levels above commercial establishments. In the retail sector the committee emphasized variety, quality, dependability of service and specifically suggested encouraging development of an outdoor café, a brew pub, entertainment spots, a “cooperative shop for entrepreneurs”, and “a healthier selection of foods for purchase and consumption.” Nevertheless, when projecting into the future, the study predicted an increase of only 2-3% in the potential for the retail market by 2001, a 6 year projection. This is a very modest prediction (especially considering that they made the assumption that certain improvement recommendations would be followed in the meantime!) and does not suggest a very high confidence level in the strength of the North Adams market.

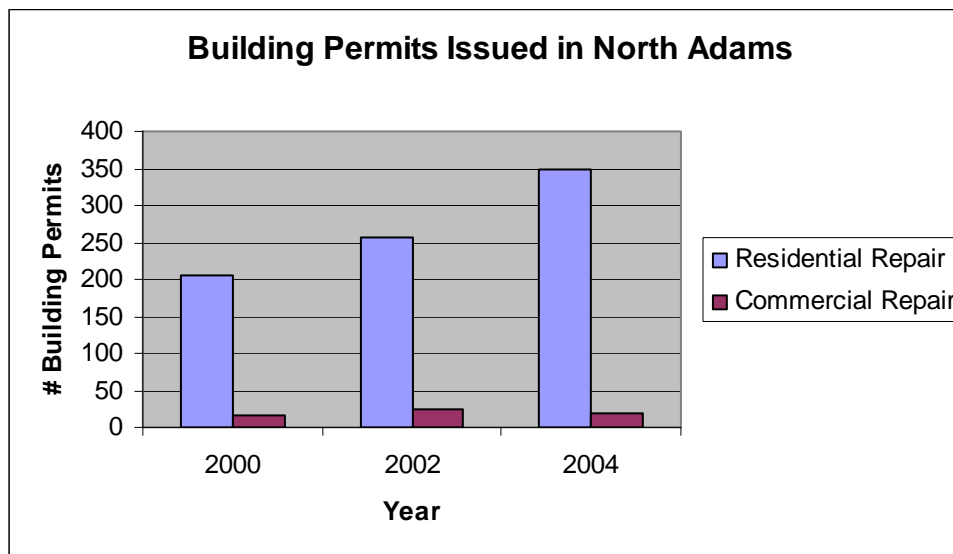
Nevertheless, John Barrett, the longtime mayor of North Adams, is optimistic about the future of North Adams. In an interview, Barrett was enthusiastic about the path North Adams was taking, claiming that the town was moving away from its urban decay and big box stores and towards setting “higher standards than a rent-a-center”. According to Barrett, Eric Rudd proved that there was a market for combined residential and workspace catering to an artistic, cosmopolitan clientele with his renovation of the

¹¹ MA Department of Housing and Community Development, North Adams Community Profile. <http://www.mass.gov/dhcd/iprofile/213.pdf>

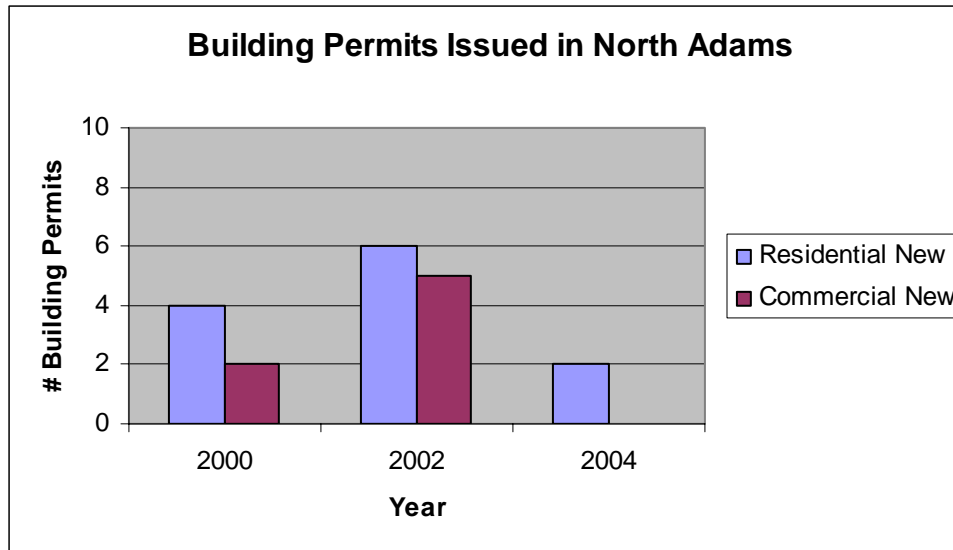
¹² Wright, Berkshire Housing Development Corporation, May 2, 2005.

Eclipse Mill. “There is a dire need for upscale apartments in the downtown,” says Barrett. Rod Bundt, at the North Adams Office of Tourism and Culture agrees with Barrett that North Adams is witnessing the birth of a “creative economy” and spoke proudly of the renovation of the Mohawk Theatre along Main Street, which is the latest of the city’s downtown revitalization projects. One employee at the North Adams Community Development Office also expressed her enthusiasm for the Mohawk Theatre. She also said she would like to see more of an emphasis on creating new manufacturing jobs, similar to what North Adams had in the past. Marlene Walsh of the North Adams Housing Authority also gave a slightly different perspective than Barrett and Bundt. Her office is funded by the state, and works to provide public housing for the lowest income bracket in units that have already been established in existing buildings. However, she does agree with both Barrett and Bundt that there is no need for more affordable housing in North Adams.

Level and type of building development in North Adams between 2000 and 2004



Source: North Adams Town Hall, Office of the Building Inspector



Source: North Adams Town Hall, Office of the Building Inspector

Cost Comparisons of new housing developments in North Adams

Location	Total Price of Unit	Price per square foot	Number of Units
Eclipse Mill	Around \$100,000	Approximately \$40	40 lofts, 2,500 square feet each ¹³
Blackinton Mill	\$160,000-\$260,000	Around \$75	25 lofts, 2,500-4,500 square feet each ¹⁴
Apartments above Appalachian Bean	Around \$269,000	-----	4 condominiums ¹⁵

Market Research

David Carver of Scarafoni Realty, based in North Adams, and Matt Harris of Village Ventures, a Berkshire-based investment vehicle and venture capital firm, were interviewed regarding the commercial real estate market in North Adams and in the Northern Berkshires. In terms of office space, they both concurred that there is little demand for professional office space in North Adams or in the Berkshires. North Adams, alone faces office vacancy rates of over 20 percent according to Carver, with the state as a whole also encountering very high office vacancy rates currently. As an additional example, Mass MoCA converted roughly 60,000 square feet of mill space to Class A office space and has only been able to find a paying tenant for about half of that space,

¹³ "North Adams to consider changes to encourage mill development" Berkshire Eagle, Nicole Sequino, 4/11/05

¹⁴ "Rudd unveils \$5M project" The Advocate, Glenn Drohan, 4/21/05

¹⁵ Barrett, personal communication, April 14th, 2005.

while the rest remains uninhabited.¹⁶ Given the market, the going office rental rate is \$10 per square foot (psf) per year, exclusive of utilities; however, Carver acknowledged that despite the rate, the vacancy rate remains high.

Likewise, Carver believes that the market for retail space is equally poor, with rates ranging from \$5-\$10 per square foot. However, even at those rates, Main Street retail locations remain unfilled at roughly 30 percent, and Carver acknowledged that space off of Main Street would have an even harder time finding tenants. Carver also addressed the market for big box retailers and stated that the big boxes are only interested in flat, green-field sites along the Route 8 corridor, where the big box development is currently occurring.

Carver believes that there is a stronger market for warehouse/light industrial space in North Adams than there is for office/retail space. The going rate for warehouse space in North Adams is \$1-2 psf and \$3-5 psf for light industrial. Matt Harris concurred and acknowledged that although manufacturing provides the greatest return in terms of rental rate, there is little to no demand for manufacturing space in the Berkshires or Massachusetts due to the cost of labor. Harris does believe, however, that there is a potential demand for what he termed “high-touch customer service and distribution” space. In this model, the space is used both for a customer service call center and for order fulfillment and distribution. There is value, he claims, in this sort of vertical integration, and given North Adams’ relatively educated population and central location, this use is appropriate and valuable in the existing community setting. He thinks such a use could command \$7-8 psf given 20,000 sf of office/call center space and 80,000 sf of warehouse/distribution space.

North Adams has 777 vacant residential units throughout the city (Census 2000, U.S. Census Bureau). However, this does not necessarily indicate that the market is saturated for residential units. Indeed, politicians (Mayor John Barrett, interview; City Council president Michael Bloom, interview; Community Development director Michael Neuivalle) all agree that enhancing the city's residential options through the conversion of mill space to high-end residential units is in the city's long-range vision. Through the work of developers such as Eric Rudd, mill space has successfully been turned into residential condominiums on two occasions, at the Beaver Mill and the Eclipse Mill.

Moreover, Rudd is currently working on a new conversion project in North Adams with the Blackinton Mill. Combined, these projects will provide well over 350,000 square feet of new residential space in North Adams through redevelopment. Though the number of vacant units might not suggest it, the success of the projects that have seen completion indicates that a market does exist. This is because the mill conversions provide residential space of a quality and aesthetic unavailable elsewhere in the city.

Furthermore, recent projects have been selling for record prices, at about \$20-30 per square foot, illustrating the strong demand for such units in the city.

Mushroom market background

The mushroom business is one of the more challenging elements of this project partly because it is constantly fluctuating and partly because the business is simultaneously incurs the greatest cost, the greatest benefit and the greatest risk of all the uses in the mill. Currently, Delftree is producing an excess of around 500 cases of

¹⁶ www.massmoca.org

mushrooms per week.¹⁷ However, since growing shiitakes is a highly unpredictable and risky game where production can fluctuate as much as 50% from week to week.¹⁸ In order to evaluate the mushroom business and make the best recommendations on how to proceed, it is important to understand the broader environment and market for shiitakes in the United States.

Mushroom production

According to the USDA Agricultural Statistics Board, total sales of shiitake mushrooms was 7.54 million pounds for the 2003-04 season, up 7 percent from the previous season. Growers sold 34.9 million pounds of mushrooms that were certified organic during the 2003-04 growing season, triple the amount certified during 2002-03. Out of the 34.9 million pounds, 7.86 million pounds, or 23 percent of the total were marketed as certified organic mushrooms, while the rest were sold without the certified organic label. These certified organic sales represent 1 percent of the 2003-04 total mushroom sales. The number of certified organic mushroom growers totaled 31, up 1 from the previous season. These growers represent 11 percent of the 278 total mushroom producers.¹⁹

Early in the 1980's, Delftree was at the cutting edge of shiitake mushroom production and technology. At one point, the warehouse farm in North Adams was supplying approximately 5% of the nation's shiitakes. However, as a result of the increase in shiitake mushroom production over the last two decades, Delftree has been slowly playing a smaller and smaller role as a national shiitake mushroom producer. Sysco Food Services of Albany, a huge corporation and one of Delftree's distributors, keeps 6 different shiitake brands alone at its distribution center, which services New York, Vermont, Massachusetts and Connecticut.²⁰ Not surprisingly perhaps, it is the large farm operations that get the largest market share. Philips, a large mushroom grower in Pennsylvania, has turned organic and consequently has driven most of the small farmers out of the mushroom business. Clorox and Campbell's Soup, two large food corporations, began to import mushrooms from huge production centers in China and further decreased small farmer viability in the market. These large corporations also fixed prices and consequently segmented the market into large corporations and cooperatives where small farmers band together and share the infrastructural costs of composting, canning, and packaging to reduce overall costs. In order for a small farmer to remain economically viable in the market he must increase the quality of his mushrooms, to create a better valued product. Increased marketing to the right places, such as niche markets in cities, but also going directly to the market to diminish the in-between costs.²¹

¹⁷ Greenwald,

¹⁸ Article in The Record, Ari Schoenholtz, "Oh Shiitake!"

¹⁹ This report was released August 16, 2004 by the National Agricultural Statistics Service (NASS), Agricultural Statistics Board, U.S. Department of Agriculture

²⁰ Germain, May 5, 2005

²¹ Ferver, telephone interview April 7th, 2005

Mushroom prices

The USDA defines a specialty grower as having at least 200 natural wood logs in production or some commercial indoor growing area. They report that the value of sales for commercially grown specialty mushrooms in 2003-04 was \$40.0 million, up 16 percent from the 2002-03 season. The average price per pound was at \$3.04, up 15 cents from the previous season.²²

Currently, Delftree sells its mushrooms to Sysco at \$2/lb. At one point, however, when Deltree had extra and Sysco had a particularly large order to fill, the two parties made an arrangement whereby the mushrooms would sell at \$1.33/lb.²³ Although prices are in constant flux, compared to other shiitakes on the market, this price arrangement with Sysco is extremely low (see table below).

As of May 4, 2005–05–04, market prices for shiitakes were as follows:

Type	Price
Prince Edward Island Shiitake, large	\$5.33/lb
CT Shiitake, medium to large	\$3.33/lb
PA Shiitake, large	\$4.50-\$4.66/lb
“ “ medium-large	\$3.33-\$3.50/lb
“ “ Local Repack Shiitake	\$5.77/lb
“ “ Sliced, medium to large	\$6/lb

Source: USDA Agricultural Marketing Service, MA branch terminal office, Boston

Despite the range of mushroom prices and the fluctuation between types of shiitakes, as determined by such factors as size, quality, location and method of production, one study found that across the board, packaged mushrooms in general tended to sell at a premium over bulk mushrooms on a per-pound basis. This same study also found that the price of shiitake mushrooms was relatively inelastic to demand (at - 0.998), which means that up to a point, price increases would not lead to decreases in demand. This finding suggests that shiitake mushroom growers should be looking for ways to add value to their products, which would allow them to charge a higher price without fearing that they would drive their customers away.²⁴

Mushroom consumption

On average, it is estimated that Americans consume around 8 million pounds of shiitake mushrooms every year.²⁵ One study set out to determine exactly who the biggest consumers of mushrooms were in general, what constituted their economic impact on the mushroom industry as a whole, and what characteristics of this group explained their propensity for buying mushrooms. For this study, Patterson defined heavy users of mushrooms as those who buy 0.71 pounds of mushrooms per month, as compared to the

²² National Agricultural Statistics Service (NASS). August 16, 2004. Agricultural Statistics Board, U.S. Department of Agriculture.

²³ Germain, May 5, 2005.

²⁴ “Mushroom Demand: Analysis of regional product sales” by Paul M. Patterson and Timothy J. Richards, Arizona State University

²⁵ Shoenholtz, May 11, 2005.

average purchase rates of around 0.31 pounds per month. What he found was that, although heavy-user households make up only 11% of the total households that consume mushrooms, they account for 42% of all mushroom sales, which means they are an economically significant portion of the market. Like the general mushroom buying population, heavy buyers tended to prefer white mushrooms, which accounted for about 94% of the purchases. Compared to all mushroom buyers, heavy buyers in general seemed to have higher income, larger household size, older household heads, more professional employment, and higher levels of education than the other consumer groups.²⁶ What kind of effect this information will have on farmers is unclear, although it seems like it could be more relevant to marketers and distributors, and perhaps provide an opportunity for expanding the mushroom market to people who previously have not been inclined to consume a good deal of mushrooms (especially the more exotic varieties!).

In terms of the purchasing trends for food in general, Danielle, of the nonprofit organization Berkshire Grown, believes there is clear evidence that more and more consumers are demanding good, high-quality food that is produced in sustainable ways. Berkshire Grown is an organization that works locally to connect farmers directly to restaurants and consumers with the intent that farmers can get the higher, value-added prices they deserve and consumers can get the best quality produce they desire. Delftree is currently a member of Berkshire Grown's Business to Business program, and is listed in their directory as one of only a few organic mushroom producers in the region. According to Danielle, there is an increasing motivation for consumers to question where their food is coming from and under what conditions it is produced. In response, more and more farmers are moving towards increased transparency about their means and methods of production.²⁷

Recent research and innovation

Compared with other food products, there has been very little innovation in the fresh mushroom industry in recent years. About 50% of mushrooms sold are sliced; however, few uniquely new products have made their way to the stores and food aisles. There has also been a noticeable lack of innovative new marketing strategies for mushrooms as compared to other food products. To investigate the possibility for new, innovative products, Stanton and Tucc tested the reception of various product concepts on a sample of consumers. According to testers' responses, the concepts that ranked most highly were marinated portabella mushrooms ready to grill, "salad cut" mushrooms that were pre-washed, pre-cut and ready to eat with a bagged salad, and "pizza cut" mushrooms that were seasoned with herbs and garlic and ready for immediate use.²⁸ The result of this study emphasizes the importance of convenience and efficiency for today's consumers. This trend is supported by the range of new "fast food" food items found in

²⁶ "Mushroom Buyers: A Segmentation Analysis," prepared for the Mushroom Council by Paul M. Patterson, Arizona State University, July 1, 2003.

²⁷ Danielle. Telephone Interview. May 3, 2005. Berkshire Grown.

²⁸ "A Research Program for Evaluating Concepts for New Mushroom Products" by Dr. John L. Stanton, Dept. of Food and Marketing, St. Joseph's University and Dr. Louis Tucc, The College of New Jersey

grocery stores these days: everything from Pop Tarts to Gogurts.

PART II

LAW AND POLICY

Current Policies and Benefits

Policies currently in place for the Delftree Mill Building include zoning of the property as an I-2, Industrial 2 zone and designation of the property in an Economic Target Area. The approved functions within Industrial-2 zones are as follows: agriculture; distribution facilities; manufacturing; processing, printing, packaging, finishing, assembling of components of goods; plumbing, heating, general contracting, electrical, industrial and hardware buildings and uses; professional office and business services; public utilities; publishing, data processing and computer software manufacturing; research and development facilities; signs (in accordance with Sec. 14); truck and freight terminals; and warehouses.²⁹

Delftree is currently receiving industrial rates on electricity from the local utility, Mass Electric, although these rates are expected to increase by about 20% over the next three months due to increase in natural gas prices.³⁰ Delftree is also benefiting from special water-rate reductions from the Environmental Protection Agency due its status as a farm.

Background on recent funding for urban redevelopment in Massachusetts

For the fiscal year 2004, North Adams did not receive any non-federal aid for urban renewal and urban revitalization. However, similar towns in Massachusetts did receive this funding, for example, Fitchburg got \$659,306, Lawrence got \$590,000, Lowell got \$509,000, Pittsfield got \$118,000, Springfield got \$53,500, and Worcester got \$4,210,000. The sum total for all urban revitalization funding to municipalities in Massachusetts for the FY 2004 is \$4,339,806.³¹

Under Governor Romney, the CC initiative sets priorities for housing growth, economic development, and environmental sustainability, and helps to link state spending programs to municipal programs and projects that are in line with those priorities. Commonwealth Capital scores are used to evaluate the grant applications from each municipality and determine the suitability of each request as they apply to 10 state funding sources. The town of North Adams submitted an application for the Commonwealth Capital (CC) initiative for the fiscal year 2005.³²

In North Adams, the factory mills in which there is current activity are the Eclipse, Blackinton, Beaver, Berkshire, and Windsor mills. The Windsor Mill, the only one of which is owned by the city, has received around \$3 million in aid over the past 15 years from the Massachusetts State Housing and Urban Development Department.³³

²⁹ North Adams City Clerk office, spread sheet of uses by zone.

³⁰ Bill Greenwald, personal communication

³¹ MA Dept of Revenue, Division of Local Services

³² Berkshire Regional Planning Commission; <http://www.mass.gov/ocd/comcap.html>

³³ Secretary of the North Adams Community Development Office, personal communication

FUNDING

Funding is a crucial element of our project for two reasons: one, the necessary structural improvements to the Delftree mill are going to be costly, even if they are just temporary patchwork or “band-aid” fixes, and two, Delftree Corporation currently does not have the capital to pay for any renovation work above and beyond the day-to-day upkeep and operation of the building. Therefore, we researched various funding opportunities through four main sources: Farm Viability Grants, Innovative Technology Options, Rural and Community Development Programs, and Historical Commissions. We also spoke with officials in these three areas to determine how compatible Delftree’s needs were with the eligibility guidelines of the three programs.

Farm Viability Enhancement Program

The Massachusetts Department of Food and Agriculture has a Farm Viability Enhancement Program, which gives grants for covenants and provides technical assistance and business consulting. Farmers work with planning teams to develop areas to increase income and to preserve environmental resources. The farmer will receive funding once their land is put into an agriculture covenant for five or ten years.

The goal of the program is to promote agriculture in Massachusetts. If the land owner has a plan he/she is more likely to see the land continue and succeed in agriculture. Lehan has had prior contact with Bill Greenwald through Steve Rich, Bill’s Sales Vice President for 10 years, took a class in Agriculture Business training 4 years ago called “Next Level”. Rich’s main focus throughout the class was to increase productivity of certain strains of mushrooms. Unfortunately Bill had to lay Steve Rich off in the fall of 2004 due to their shiitake production problems. The unique nature of the Delftree mushroom farm leads one to question the applicability of this program to this situation.³⁴ Lehan was adamant that times change and a current “Next Level” course will be beneficial and result in new information pertaining to the market and issues of farmers today.

Mike Lehan, part of Berkshire Management that is contracted by Farm Viability to work with farmers, guessed there were 160-170 farms that have gone through the program in the last 10 years. Some are large corporations; others are small family farms, all in a variety of production. Lehan works on the business plan for Farm Viability Enhancement Program.

Craig Richov, the coordinator for the Farm Viability Enhancement Program stated that this program is not applicable to a warehouse farm such as Delftree. An open space bond fund gives money to this program and therefore wants to see open lands preserved through the program. These funds are put in place for capital gains to expand the open land in Massachusetts, not as operational funds for individual farmers. The other ways of preserving farm lands is through agriculture preservation restrictions (APRs) which are permits that limit future development on parcels of land. Open space is then extended beyond the farmer to the public benefit.

An option for our client is to partake in Agriculture Business Training Programs that help farmers develop business plans. It is an 8-10 week course that focuses on the

³⁴ Greenwald, personal interview

present needs of the farmers, mainly controlling production costs, establishing marketing, networking, and cost share situations. The price is between \$150 and \$200 for the course, and is administered by Rick Chandler (413) 577-0459.

Other ideas for increased farming viability for Delftree would require working with other farmers in the area to get state funding to create Agriculture Commissions. This commission would have a larger impact on the redevelopment that is occurring in North Adams than any one individual. An Agriculture Commissions will only work with devoted supporters. Thus, in order for the commission to be successful our client would need to devote time to increasing farmer's presence in North Adams, which could in turn be seen as time away from his own business and interest. Time our client may not have. The monetary resources for these state grants is minimal and would not benefit any one farmer directly, instead it would provide a means of creating a commission in North Adams. It would be one step in creating interactions between farmers in the area and residents. To continue having agriculture in a community one needs to make it viable and that gets down to the production methods, marketing, and support from the community.

Photovoltaic Panels on the Roof

The vast expanse of the Delftree roof seems like a good candidate for adding solar panels to help generate the building's electricity needs. There are a number of opportunities to incorporate solar panels onto a building. The Conservation Service Group, with corporate headquarters in Westborough, Massachusetts, is an organization that provides customized programs for implementing energy-related programs, including efficiency, building performance, and renewable energy options. CSGS researches, develops, installs, and maintains energy-efficient technologies such as photovoltaic solar panels on roofs throughout the country. Within the Berkshires they have a number of installations, which work on a "lease" basis. This means CSGS installs, maintains, and sells the excess electricity as "green energy certificates".

The owner, in this case Mr. Greenwald, would still pay for his electricity, but would do so directly from CSGS and at the market rate. Mr. Greenwald would provide his roof space for the photovoltaic panels, publicize and market the green power generated, and provide some immediate maintenance if the need be. There are some tax credits that arise through renewable energy sources, but these are difficult to piece together and at this time CSGS has complete control over the tax credits determined by the photovoltaics they install. Steve Cowell, at CSGS, says they are continually struggling to come up with a sustainable method of providing green energy to a developing market. Currently, it requires more money put into the technology and maintenance than what is returned via the market. Photovoltaics and "green energy certificates" are still in their incubator stage and it is hard to determine when they will take off and become profitable.³⁵

Incubator Start ups

Through the Massachusetts Technology Collaborative, there are two branches, the Renewable Energy Trust and the John Adams Innovative Institution. The Innovative Institute has evolved to promote growth through critical analysis of the issues of

³⁵ Cowell, interview May 1st 2005.

increasing the economy, through providing consulting and assistance to groups starting a cluster of economic development. These incubator businesses are meant to bring in early start ups with programs to assist with initial financing costs of infrastructure needs. They also provide resources through collaboration with private investors and state grants. One of these funds available is the Regional Fund, which supports regional technology-based economic development initiatives in Massachusetts. This grant is only available for public or non-profit organizations.³⁶ The main issues involved in starting up incubator business clusters are the start up costs to improve a building, and then the continual costs of staff and maintenance. These aspects could potentially come from public grant money, but Susan Moulton, the Regional Fund Manager, warns that “public money is crummy for bricks and mortar”. The successful multi-tenant facilities that house start up businesses are privately funded.³⁷

Historical

Upon further research into the historical status and implications of that status, we found that the Delftree Mill (Union Mill) is not accounted for in the National Register.³⁸ Thus, Delftree does not qualify for funding via historical status and the state of Massachusetts. In order to request funding the client must first apply to become recognized as a historical building. Once the title is assigned, one source of potential funding is through Massachusetts Preservation Projects Fund (MPPF). This is a state funded 50% reimbursable matching grant program founded in 1984 in order to support the preservation of properties, landscapes, and sites recognized in the State Register of Historic Places. However, in order to qualify, one must be a municipality or non-profit organization. Also once deemed historical, one must petition each time he anticipates making changes to the building and/or site. Thus, there seem to be ample restrictions/qualifications that make this source of funding an impractical match for our client.³⁹

List of registered historic places in North Adams ²⁷

Beaver Mill
Freight Yard Historic District
Hoosac Tunnel (also in Florida)
Monument Square-Eagle St. Historic District
Blackinton Historic District
Crowley House
Hathaway Tenement
Johnson School
Norad School
North Adams Multiple Resource Area

³⁶ Massachusetts Technology Collaborative. www.masstech.org

³⁷ Moulton interview April 29th. Application of this grant can be viewed at: [http://www.masstech.org/grants_and_awards/CE/Attachment%20A%20-%20Application%20PDFI%20\(June%2004\)\(final\).pdf](http://www.masstech.org/grants_and_awards/CE/Attachment%20A%20-%20Application%20PDFI%20(June%2004)(final).pdf)

³⁸ Janine V. da Silva, telephone interview. April 28, 2005.

³⁹ Massachusetts Historical Commission

Phelps house
William B. Sherman Farm
The Boardman
Windsor Print Works
Church Street-Cady Hill Historic District
Church Street Historic District
Eber Sherman Farm-Route 2
Armstrong House
Charles Brown House
Johnson manufacturing Company
Levanos building
Normal School Historic District
N. Adams Public Library-Blackinton Mansion
Saint Joseph's High School
Sykes House
Wells House

Community Funding

Under Governor Romney, the Commonwealth Capital initiative sets priorities for housing growth, economic development, and environmental sustainability, and helps to link state spending programs to municipal programs and projects that are in line with those priorities. Commonwealth Capital scores are used to evaluate the grant applications from each municipality and determine the suitability of each request as they apply to 10 state funding sources.⁴⁰

For the fiscal year 2004, North Adams did not receive any state aid for urban renewal and urban revitalization. However, similar towns in Massachusetts did receive state funding, including Fitchburg, which got \$659,306, Lawrence which got \$590,000, Lowell which got \$509,000, Pittsfield which got \$118,000, Springfield which got \$53,500, and Worcester which got \$4,210,000. The sum total for all urban revitalization funding to municipalities in Massachusetts for the FY 2004 was \$4,339,806.⁴¹

One of the programs administered by the Massachusetts State Housing and Urban Development Department under the state Capital Initiative is the Community Development Block Grant program. CDBG has been around since 1974, and every year, the town of North Adams submits an application, including the fiscal year 2005. If cities have more than 50,000 residents, such as Pittsfield, then they are automatically awarded a grant for community development from the federal government. If they have less than 50,000 residents, though, then they must compete with other cities for funding from the Massachusetts Department of Housing and Community Development through CDBG. North Adams has been very successful in getting money in past years, receiving everything from \$600,000 up to \$1,000,000, which they have used for a variety of purposes including infrastructure, housing, and city beautification.⁴² The North Adams Office of Community Development estimates that over the past 15 years, they have

⁴⁰ Berkshire Regional Planning Commission; <http://www.mass.gov/ocd/comcap.html>

⁴¹ MA Dept of Revenue, Division of Local Services

⁴² Nuvalle, telephone interview, May 4th, 2005.

received around \$3 million in aid for the Windsor Mill alone, which is a city-owned building with a variety of small tenants.⁴³

Although primarily a grant program for municipalities in Massachusetts, CDBG does have one element that allows municipalities to use their grant money and lend it out to struggling local businesses. This program, called the Massachusetts Community Capital Fund, is intended to help small businesses remain economically viable so long as they are in dire financial need and can demonstrate that they would be able to create jobs, stimulate the local economy, and have a high chance of success. From our research, it is clear that the application process is only one of the major hurdles for this program. In order to successfully acquire funding by this means, the business must also meet the goals of the town. From a pragmatic point of view, this essentially means having the support of the mayor, who has the final say on how the CDBG funds are allocated. In recent memory, North Adams has not given a loan to a private business in a very long time. At one point, Delftree did get a loan of this kind, and with it they bought a refrigerated delivery truck. However, both Michael and Barrett were skeptical as to whether Delftree had reached the other objectives of job creation and community benefit. There is typically a lot of red tape through which one must pass to get a CDBG. Often times, people will just take out loans from their local bank, which is how the majority of new, private development projects are getting off the ground in North Adams right now.⁴⁴

Funding Opportunities for Private Businesses

In general, it is much easier for private corporations to qualify for a loan than a grant. According to Nat Karns, executive director of the Berkshire Regional Planning Commission, it is highly unlikely that a private business would qualify for 100% grant funding for a development project, even if it had some demonstrable community benefits. Moreover, just putting together a funding plan for such a project requires significant logistical organization and initial expenditure, not to mention the effort of then writing up and putting the grant applications together. In Karns' experience, one grant proposal can cost around \$5,000-\$7,000 to put together. However a typical reuse building project might require anywhere from 5 to 10 different funding sources, which would put the total cost of hiring consultants, doing research and feasibility studies, and developing the final funding plan at around \$75,000. For a large scale building renovation costing around \$3 million, this would not be a relatively minor fraction of the total cost. However, for a small business without a lot of capital, this could certainly be a significant impediment. A quasi-public nonprofit organization like the Berkshire Housing Development Corporation would usually be hired by a developer to put the funding plan together for a large project, but this obviously costs money. Public organizations like the Berkshire Regional Planning Commission are also typically out of reach for small, private businesses since their primary mission is to assist municipalities with their development projects and goals.

Loans, on the other hand, are not a very attractive option either. Given Delftree's tenuous financial situation, it is unlikely that the Corporation would either be willing or

⁴³ Secretary of the North Adams Community Development Office, personal communication. April 28, 2005

⁴⁴ Nuwallie, telephone interview, May 4th, 2005.

able to service an increase in debt with the bank, especially for the size loan that mill building renovations would require.⁴⁵ Nevertheless, some of these opportunities could become appealing for Delftree in the future, provided the corporation acquires some extra capital, or can negotiate an arrangement with the bank so that both Delftree and the lenders are confident that the improvements to the mill and the mill uses have a reasonable return on investment and justify a temporary increase in debt in the short term.

The USDA Department of Rural Development has three programs that offer potential opportunities for Delftree Corporation.

The Business and Industry Guarantee Loan program will guarantee up to 80% of the loan that a business negotiates with their local bank for use in capital investments. About a month ago, primary discussion was initiated between Delftree Corporation, the USDA, and the bank.⁴⁶ However, due to the capital expenditure required, further negotiations have not been pursued.⁴⁷

The Value-added Products Program has two separate components: a planning portion that can be used to pay for a feasibility study, market study or business plan, and a separate working capital portion that can be used for inventory, marketing, salaries, or any other business investment that requires ready capital. The program will provide 50% of total project cost in the form of a grant, but requires that the business come up with the other half. For the planning portion, the maximum grant allowed is \$100,000 (for a total project cost of \$200,000) and for the working capital portion, the maximum grant is \$150,000 (for a total project cost of \$300,000). The program stipulates that a business cannot apply for both grants at the same time. In addition, to qualify for the working capital grant, a business must be able to demonstrate a comprehensive feasibility study and future business plan, although this does not have to be completed through the USDA, but can be commissioned by some other third party. The application process is rather detailed but there is no fee to submit an application. According to Richard Burk, who administers this program for CT, MA, and RI, there has been relatively positive success for businesses from this region. Each of the last 4 years has seen around 4 or 5 applications. Unfortunately, due to recent budget cuts, they were only able to fund 2 of the 5 projects that were submitted last year.

The renewable energy program is another potential funding opportunity that pays 25% of project costs in grant form, and 75% as a loan. Average grants are approximately \$125,000. This program is solely for the purpose of defraying the purchasing costs of energy efficiency measures or renewable energy technology (such as solar panels, wind or co-generation turbines, or biomass systems). Any of these options would most likely be contingent upon structural security of the mill building. However, the program is nonetheless appealing because it's funding is guaranteed for the next 2 years. Moreover, if the total cost of the project is \$200,000 or under, then there is no official feasibility study required, which would have to be completed by a professional engineer. Instead, for these smaller projects, all that is needed is a technical report, to be completed by the business and submitted along with the application. However, the program coordinator did say that competition is high, and being awarded the grant depends upon the organization and compelling quality of the grant proposal.

⁴⁵ Greenwald, email communication, May 4, 2005.

⁴⁶ Burk, phone interview, May 3, 2005

⁴⁷ Greenwald, email communication, May 4, 2005.

The federally administered Small Business Association could also be a potential resource for the Delftree Corporation. Like the joint grant-loan programs administered by the USDA Department of Rural Development, SBA can function as a gap financier, guaranteeing up to 80% of a bank's risk in loaning the money for a proposed project. However, this again requires that Delftree acquire more debt. Another service that the SBA provides for independent companies is free consulting and business advice. After an initial request is made (for Delftree this would be made to the Small Business Development Center in Springfield), business professionals will come out for a visit, meet with the business owners, and help the company put together a business plan. A business plan is not only beneficial for improving the day-to-day operations of a business; it is also an essential element of any future appeal to a conventional lending institution for a loan. These institutions typically have a much lower tolerance level for risk and a much higher requirement for demonstrable project feasibility.⁴⁸

SCORE is another potential resource for free business consulting and advice. SCORE is a voluntary organization sponsored by the SBA and is made up of approximately 10,500 business owners or managers, most of who are now retired. There are no requirements for participation in the program except the need or desire to speak with someone experienced in your respective field. The association takes it upon themselves to match up the business-management counselors with the clients based on area of expertise and geographical location. Business-management counselors are not paid, though they are compensated for travel expenses.⁴⁹

Some of the more conventional lending institutions that nevertheless tend to be more sympathetic to small businesses include Mass Development, the Massachusetts Business Development Corporation, and the Economic Stabilization Trust. Mass Development has a capital financing program called Capital Financing 501, which provides a direct loan of up to 40%, while the other 60% of the project cost is funded 50% through bank debt and 10% through equity loans to the owner. While they might be able to keep the loan at a low enough prime rate to be economically viable for some businesses, this is would probably not be suitable for Delftree. Similarly, the MBDC is much closer to a typical bank model, which essentially means that the chances of getting them to make a loan to a struggling business are not very good. According to Henry Longmeyer at the DHCD, The Economic Stabilization Trust might be more open to riskier proposals, but they also tend to be pretty expensive, and only provide short term financing of up to 3 years. This would not be suitable for the Delftree Corporation, which would most likely be looking to take out a long term loan that they could invest into the mill and some of businesses, and then pay back slowly over time, as economic situations stabilize.

⁴⁸ Longmeyer, phone interview, May 3, 2005.

⁴⁹ www.score.org

DESCRIPTION OF ALTERNATIVES

1) Status-quo

This option will not repair the roof, and will continue with variable money flow from the existing uses. Eventually the cash base of Delftree Corporation will be drained through continual small scale maintenance requirements. It is difficult to state a time frame, but Delftree will ultimately have larger holes in the roof causing leaking and internal structural instability. This will decrease the potential use of the building and eventually the structure will become so dilapidated that it will need to be abandoned. This scenario must be used as a baseline against which to weight the other alternatives.

2) Improve Roof/Maintain Current Uses

This alternative proposes a band-aid repair to the roof costing \$250,000, resulting in a temporary fix to the structure. The current uses within Delftree will remain. Currently rental space for the raw storage space goes for \$3 per square foot within Delftree. The price will decrease with the more space rented, and also with the signing of a yearly contract. Bill currently is leasing 7,000 square feet of space for \$2.50-\$2.75/sf., but a rough average number for rare warehouse space is \$3/sf. The self storage units go for more due to the complications of renting for short periods of time. A 4' x 6' x 8' space goes for \$25/ month, while a 8' x 8' x 8' space goes for \$55/month.



Delftree, second floor looking towards the self storage units.

The state of the self-storage units seems to have saturated the market for units with limited access, wet conditions, and possible rats. The industrial warehousing is mainly from Specialty Minerals in Adams, Massachusetts. There are reduced rates for bulk, warehouse storage, and is currently fluctuating in area of the building used for this.



Delfree first floor warehouse storage space.

There are small industries within the building that utilize the smaller structures of the old boiler and compressor rooms, and the shiitake mushroom farm in the “block” section. To improve the economic viability of the rental space within Delfree, Greenwald should seek to find more businesses that will pay rent with “in-kind” payments for large spaces. Currently North Adams Sheet Metal is renting the east wing of Delfree from Greenwald and paying \$3 per square foot, while renovating.



Area being renovated by North Adams Sheet Metal with “in-kind” rent payments. Photo by Katie Nicoll.

Greenwald presents a list of improvements to be done on the space, and the businesses then renovate the area and get the materials and labor deducted from the rent. This seems to be working extremely well with N. Adams Sheet Metal and would be an economically viable method for Greenwald to renovate the building as long as there is a cap on the improvements. If a cap is not determined and respected, infrastructure costs will be put entirely on Greenwald. The estimated cost to run Delfree without the mushroom business is \$80,000-\$200,000 per year. These costs come from continual maintenance and repair to keep the building in the current condition.⁵⁰

⁵⁰ Greenwald, personal interview April 21, 2005

3) Warehouse Space/Light Industry

As previously noted, Delftree was constructed as warehouse space for the initial Eclipse Mill, and therefore its space is most conducive to warehouse endeavors. The large open spaces, minimal windows, and dual-floor-drive-up access, makes it an easy space for warehousing, distribution, or light manufacturing assembly. The limitations to this type of development within Delftree are due to the low cash flow from these types of building use, and the difficulty in finding tenants. The benefits from further developing the warehousing and light industry is the low risk, low overhead, and low expenses that Greenwald would have to incur. The current unfinished space is optimal for this type of development, with potential for in-kind renovations. The easy access, being situated in down town North Adams along Route 2, and the dual floor loading access creates very usable space.

As stated in alternative 2, Delftree can improve its space with “in-kind” rent from small businesses. Companies use and fix up a space through paying either \$5 per square foot or \$3 per square foot with the labor and materials costs for the improvements deducted from rent.



Delftree Second Floor, open floor plan with minimal windows.



Delftree exterior with minimal windows, the few windows seen were punched out for the office.

Windsor Mill, North Adams, MA

The town owns and maintains Windsor Mill on Union Street in North Adams. Bill Mirante, the building inspector, gave some insight into the diversity of spaces available within the Windsor Mill. There are spaces ranging from 140,000 square feet to 800 square feet, and raw space for storage to finished carpeted areas. Some spaces contain concrete floors, windows and a very open floor plan. The current tenants include: a car dealership, Studio Works, Jenny's Dance center, Sauvé Guitars, Boxcar media, Becks Printing, MRA Labs, Carpenter, Performance ELE., Nassifs, Solid Surface Cabinetry, WT Bradley, and Berkshire Sports.



Windsor Mill, Union Street North Adams



Windsor Mill, west end (car dealer on the far left, and artist space on the right)



Windsor Mill, central area with “improved space” that goes for \$3/square foot.

A letter to the mayor is required to determine the space best suited for a business or individual, and the price for each rental space is then set by the mayor. For reference the improved space within Windsor Mill goes for roughly \$3 per square foot. The varying light industries and office spaces within Windsor mill are conducive to the sprawling footprint, abundant windows, and varying size and shapes of interior spaces. This mill has more versatility than Delftree because of these architectural aspects and therefore has the ability to accommodate many different uses.

Currently Windsor Mill does not have more than 10,000 square feet of raw storage space available that is loading dock accessible. Debby Leveick at the Community Development Office of North Adams named the Carridi Mill and Delftree as mills with large storage space. The Carridi Mill along Route 2 in North Adams, has a wide variety of spaces available for rent. An area the size of the batting cage in Delftree is for rent for \$600/month. It has some leaks, but the roof will be repaired within the year from private

money. They also have office space directly adjacent to Route 2, with windows, electric heat, carpet, and plumbing for \$500/month.⁵¹

4) Residential/Artist Space

We have received conflicting views as to the general state of North Adams. Some seem to be optimistic about the market, namely Mayor Barrett and Eric Rudd, who have demonstrated support through renovation and investment and are actively pushing towards further development of residential/artist space. However, there is also evidence of discontent and pessimism in regards to how North Adams is doing economically and as a community, and where it is headed. An unidentified artist living in N. Adams expressed frustration with the town for its lack of interest and support for local businesses, artists, etc. He/She made several claims regarding the state of the retail market and community in North Adams is not dependable. The community lacks a comprehensive economic development office that will tie together all the parts needed to create a diverse and healthy community. This artist did not believe Mass MoCA to be an asset to its immediate community members. Rather it was viewed as a vehicle that was actively, “sucking life out of downtown and into its gated area”.⁵²

To investigate this issue further and to see how this type of renovation may apply to Delftree we researched the various mills within the North Adams and Adams communities that have been renovated to fit the description of residential/artist space. This comparative analysis included the Eclipse, Beaver, and Blackinton Mills in North Adams, and the Berkshire Mill located in Adams.

Eclipse Mill, North Adams, MA

Originally erected as functioning parts of the same mill, the Eclipse Mill is located on Union Street directly across from Delftree. It is clear that Delftree’s intended use was one of storage. Thus, it is important to note that these two buildings have important structural differences. Delftree is a much larger space and lacks windows. The skylights that were once incorporated into the structure of the roof exist no more. The 125,000-square-foot Eclipse Mill has recently been renovated by Eric Rudd into spacious artist loft apartments.

⁵¹ Personal investigation, April 5th, 2005

⁵² Personal Investigation, interviewee wants to remain anonymous.



Eclipse Mill, Union Street North Adams, newly renovated for artist loft apartments.



Eclipse Mill, right-first floor interior, left-fourth floor interior hallway.

Beaver Mill, North Adams, MA

Both the Eclipse and Beaver Mills have been renovated through the direction and funding of Eric Rudd. These are upfront, capital-intensive investments that cater to the new artist community in the North Adams area. The Beaver Mill is located along Route 8 in North Adams.



Beaver Mill, front entrance.

The Beaver Mill is a 130,000 square foot historic brick mill on 27 acres of woodland. It is home of the Contemporary Artist Center that takes up 25,000 square feet comprising of artist galleries, residency hall, and studio space. This is a non-profit based initiative founded in 1990 by Eric and Barbara Rudd for working artists to have a place to share, learn, and exhibit their works, and to encourage the making and appreciation of contemporary art.⁵³



Beaver Mill, home of the Contemporary Artist Center (right) and Frog Lotus Yoga (left). Interior space of Frog Lotus Yoga. Photo from www.froglotusyoga.com

⁵³ www.thecac.org

Another tenant in the building is Frog Lotus Yoga, which opened in 2002. With the high ceiling, new oak floor, and large windows looking out at a wooded embankment, this space is appealing and appropriate for its use.

Berkshire Mill, Adams, MA

Another newly renovated mill in the area is the Berkshire Mill at 1 Berkshire Sq, in Adams, MA. Michael Capizzi, a Boston-based developer, did the \$5 Million restoration of the mill to three stories of luxury apartments, sixty units total, and the ground floor into retail space.⁵⁴



Berkshire Mill- Luxury Apartments and retail space.

Although most of the apartments are occupied, they are not housing that caters to the community as a whole. This is revealed in the retail space along the first floor of the mill. There are a couple small businesses, but all of the retail space is vacant.

⁵⁴ North Adams Advocate : Glenn Drohan, April 22, 2004



Berkshire Mill, Right-vacant first floor retail/office space. Left-Interior atrium.

The beauty of the space is appealing, with a huge central atrium that is topped with skylights. This space is perfect for an economic revival of the city, but the context of the community is necessary in developing successful redevelopment schemes. The beautiful spaces available in the Berkshire Mill are reflective of the aspirations of the community to redevelop, but also the failures of doing so in ways that are not conducive to the community.

Blackinton Mill, North Adams, MA

The newest project, which is headed by Eric Rudd, is the renovation of Blackinton Mill in North Adams. A 70,000-square-foot facility constructed in 1917, the Blackinton Mill was originally used as a warehouse. It has been an actively used space since its construction. In 1988, the owner stated his interest in seeing the space move towards a more artistic use. The live-work zoning ordinances are what will make this conversion possible. The space will probably go for around \$75 per square foot.



Blackinton Mill, projected renovations. Source: www.artstudioloft.com/blackmill.htm

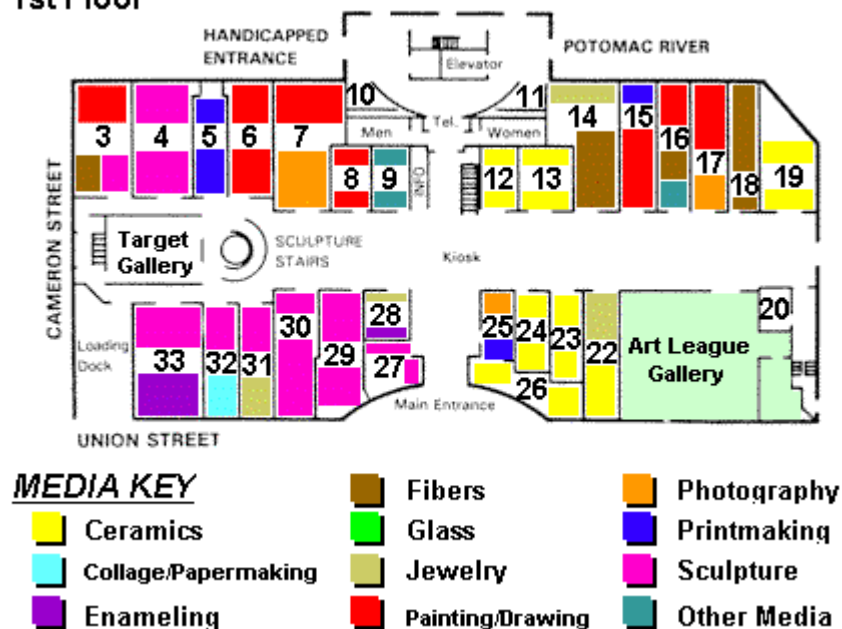
Torpedo Factory, Alexandria, VA



Aerial View of the Torpedo Factory Building circa 1920 source: www.torpedofactory.org

The Torpedo Factory in Alexandria, VA produced and maintained torpedoes for the U.S. military until the end of World War Two. In 1969 it was bought from the federal government by the Town of Alexandria, and in 1974, with the help of a group of artists, the building was converted into a visual arts center. Currently there are 84 working studios, and 6 galleries in the building and spaces are arranged by art type. The Torpedo Factory is a successful mixed-use example of a large building, using, advantageously, the context of Alexandria, VA as a tourist destination. The diverse uses within the building complement each other and attract visitors. Although the context of Alexandria, VA is very different from North Adams, it is a possibility with the increase of the Berkshire County tourist industry.

1st Floor



Layout of the Torpedo Factory, First Floor source: www.torpedofactory.org

5) Commercial

The retail space in North Adams seems to be underutilized because of the economic conditions of the area. The economic decline since the end of the industrial mill times has shown some signs of regenerating through the artist upheaval. But Main Street of North Adams still contains many vacant store fronts and office space.



Vacant store fronts in downtown North Adams.

Mass MoCA

Mass MoCA was a \$31.4 Million project that renovated and opened 300,000 sq ft of contemporary art exhibit space, retail and office space. The 600,000, 26 building complex in downtown North Adams currently houses an upscale restaurant and retail shop. There are also dot-com enterprises occupying some of the business space.



Mass MoCA complex. Source: <http://www.massmoca.org/about.html>

As of April 2005 there is 30,000 sq ft of ready-to-lease Class A office and storage space. The price for this office space is low compared to the New York City market for similar space, but in the context of North Adams it is very expensive. The renovation of Mass MoCA was from a \$22 M state grant, \$9 M private funds, and \$6 M from institutional funding.⁵⁵ The unique situation of this project cannot be replicated again in North Adams because the large state grant was a one time deal. Also the upscale office rental space seems saturated within North Adams. This urban redevelopment has hoped to spur economic development within North Adams, but the question has been raised to the success of such endeavors. Many of the small businesses in the area have not been successful and in the end, gone under.

Champlain Mill, Winooski, Vermont

A privately funded renovation of the Champlain Mill occurred in 1981 to convert the old mill into upscale retail and office space. The Mill consists of five floors each 300,000 sq ft, three are upscale retail space, and two are office space. In the mid-to-late 90's the retail market was affected by the big box stores that went up in Williston and also, by an economic downturn. Most of the owners of the retail stores in the Champlain mill are not running the stores for a profit, "they are more hobby stores, not for putting food on the table".⁵⁶

Currently the retail business is in a downturn and many of the stores have vacated the Champlain Mill during the extensive urban redevelopment that is occurring next to the mill. The parking lot is under construction and people are avoiding the mill due to temporary inconvenience. The new construction is the largest urban redevelopment in Vermont history. The first phase will comprise of a parking garage, 300 bedrooms for University of Vermont students, 230 rental apartments, which are 50% affordable and 50% market rate, 180 condominiums, and 16,000 square feet of retail spaces in seven units aimed at the service sector, such as coffee shops, banks, dry cleaners, etc. The aim is to create a pedestrian friendly area that is self sufficient and does not depend on cars. The Champlain Mill itself is expected to be two floors of retail and three floors of residential.

⁵⁵ Mass MoCA web page. www.massmoca.org

⁵⁶ Dayle Arango interview. April 7th, 2005.



Champlain Mill, area around undergoing redevelopment. source: <http://www.champlainmill.com/update.htm#>

The Champlain Mill will most likely continue to house upscale boutiques because of the beauty of the space and the relatively high rental rates compared to other retail spaces in the area. Arango stated that the office space is completely filled up and is likely to remain that way because of the nature of the space, the beautiful high ceilings, brickwork, and views of the Winooski River.

One of the problems all along for the Champlain Mill has been its location in Winooski, Vermont. It is a low income area, and therefore the upscale shops do not integrate smoothly into the immediate community. This is a challenge that Dayle Arango, the manager of the Champlain Mill, is constantly dealing with. The demand for retail space is high, but the quality of retail space within the mill will not fit into the lower scale needs. The context of Winooski is similar to North Adams, except that it neighbors Burlington, Vermont, a strong economic base to support the upscale retail and office spaces. In North Adams the local community will not support high end retail businesses.

Eastworks, Easthampton, MA



Picture of the Eastworks mill building source: www.eastworks.com

The Eastworks Redevelopment Project in Easthampton, MA involved the conversion of a four-story, 502,000 square foot mill building that used to serve as the headquarters for Stanley Home Products. Redevelopment provided a mix of commercial,

service and residential space for 75 businesses and 32 units of housing. Today, each floor exhibits a slightly unique personality: the first floor contains a restaurant and art gallery; the second floor contains a commercial darkroom and photography school, a jeweler, candy distributor and collectibles dealer. The third floor contains office suites for non-profit organizations and professional businesses, and the fourth floor contains 32 residential lofts suitable for artists looking for combined living and studio space. In estimation, this project will have provided 170 jobs and housing for at least 46 households. This project has also spurred the revitalization of other nearby mill buildings such as a nearby 55,000 square foot mill and another mill whose owner intends to convert 140,000 square feet to offices, studios and light manufacturing.⁵⁷

6) Recreation

Possible uses include the creation of a community center, recreation facilities, a track, or laser tag arena. The wide open space is especially amenable to these latter options it could be utilized year-round and by the youth of the community. Recreational space could include, for example, facilities similar to the batting cages seen below and provide an amenity unique to North Adams. There are two methods of getting recreation space developed. One is through private funds and initiatives like the batting cage operation. The other is through community development funds.

Batting cages represent the current recreational use in the Delftree Mill (seen below). David Bond and Bill Greenwald are partners in the batting cage business. It is too early to determine accurately the revenue the business will generate. However, once attained, this figure will help to determine a price for rent. The batting cages opened in February and with limited advertising (a few ads in the Pittsfield paper and word of mouth) the business seems to be doing very well. David Bond is optimistic about its success and hopes that it will play a key role in placing North Berkshire kids at the top of the “baseball food-pyramid.” He is looking to generate “All-Star” players and MVP’s. Bond is also planning on expanding the facility next winter to incorporate an indoor driving range, where golf fanatics can retreat during the winter months to pound a few balls.⁵⁸

Mayor Barrett, however, was unreceptive to the idea of taking it on as a community development, as he has no intention of taking on the liability of owning the mill. The City already owns two defunct mills – Windsor and Clark Biscuit – and they are proving financial burdens to the City, so much so that the City is “mothballing” the Clark Biscuit Mill until an acceptable sale price can be fetched. At the Windsor Mill, the City has taken to offering free rent to tenants in return for their improving the space “in kind.” Thus, the finances of the City’s current holdings do not permit it to take on yet another mill. Moreover, the proposed uses are not consistent with the Mayor’s vision for North Adams, and given his power, it is unlikely that such uses would see fruition without his support.

⁵⁷ www.eastworks.com

⁵⁸ Bond, phone interview May 2, 2005.



Delftree-Batting cages, a trial run at recreation use development.

Part III

BACKGROUND/METHODS:

A Modified Planning Balance Sheet (Please See Appendix)

We chose to analyze our data through a modified planning balance sheet as described by Donald McAllister in *Evaluating Environmental Planning*. A modified planning balance sheet gives us the ability to combine and quantify different types of data, which in turn allowed for a more detailed determination of impacts. For example, after completing our research we had fiscal quantities, such as construction cost per square foot, but we also had non-monetary quantities such as consistency with local policy. Both of these are important factors in our analysis, but on the surface it is difficult to compare \$25 per square foot to “consistent with local policy.” Tacking a monetary value to each item would have been misleading, unfeasible, and inaccurate. Thus, we adopted a model based on the mission of that of the planning balance sheet, allowing us to go beyond what a tradition cost-benefit analysis would have done. We attempted to account for constituent groups affected by the plan (client and community) while also accommodating the formally intangible and unmeasured impacts. Our designed method gave us the opportunity to put these seemingly different types of data into the same spreadsheet for analysis.

When considering the impact of the factors on each alternative, we assumed that the proposed alternative would be occupying the entire building. But we do not believe this assumption to be realistic (for many of the alternatives like having 250,000 sf of residential in non conforming building). However, it is useful in giving us a sturdy basis for comparison between each alternative. We also had to simplify our investigation of funding opportunities by assuming that any useful, eligible funding sources had to be applicable for immediate renovation of the roof, our client’s biggest priority. Lastly, we assumed that the local policy of the civic government was adequately expressed through the combined views of Mayor John Barrett, City Council President Michael Bloom, Office of Tourism director Rod Bundt, Housing Authority employee Marlene Walsh, The North Adams Community Development Office, and the Northern Berkshire Community Coalition.

Our process began by identifying the various impact factors based on our research and the context of our assignment. In working with a privately owned business, it is important that we address the client’s goals but also recognize the surrounding impacts as well. Within each alternative there will be impacts on the building, the community, the site, the client etc. We broke these factors down into two categories, non-monetary and monetary. We weighted each assessment factor on a scale of 1 to 3, three being extremely important and one being least important. The weights were research, project, and context based and we arrived at them through consensus among the group members. Since we are dealing with a private business, the consistency of the proposed use with the structure of the building (ranked 3) and potential market demand (ranked 3) are much more important to the success of the project than community service demands (ranked 1). Next we rated the success of each impact factors in relation to a specific alternative on a scale of 1 to 5, five being extremely successful and one being detrimental to the already

existing status. An example of this would be looking to see if an alternative would preserve the building long term (weighted 2). Status-quo encourages dilapidation and deterioration and thus receives a 1 (2-weighted) in this category, whereas residential requires immense renovations to the building, a costly process, that vastly increase the lifespan of the building. It received a 5 (10-weighted) in this category.

Next, we ranked the alternatives according to the results from the non-monetary and fiscal analyses. We also ranked our alternatives based on our client's preference. We weighted each of these overarching categories so that our client's preferences were the most important, then the non-monetary analysis and ultimately the fiscal analysis. At the completion of this process aggregate rankings were determined which allowed us to decide how to combine the alternatives that were determined viable and feasible.

The following section will explain the process behind evaluating each impact, why it was important to consider, and how the methodology was applied to each alternative, ultimately leading to a final assessment of best-ranked alternatives.

SITE

It is necessary to discuss each alternative in relation to the physical building and site. There are attributes and limitations that must be accounted for in this analysis. We determined the impacts to assess each alternative against are the preservation of the building in the long-term, consistency with the building structure, and the appropriateness to site. (see attached surveyor map at end for reference)

The preservation of the building into the long-term impacts the ability to use Delftree for our various alternatives, a building that is maintained at a higher quality will become a higher asset. This impact received a weighting of 2 (moderately important) since the structural integrity of the building is important to the uses within, but continuation of the same uses and minimal repairs can occur without it. The structural context of the building is integral to an appropriate use, so it received a weighting of 3 (most important). In this case, the majority of the square footage comprises of two 150,000 sf "weaving sheds" which have a ceiling height of 15 feet, width of 250 feet at the west end, width of 135 feet at the east end, and a length of 500 feet. (Refer to Building and Site Description in Part I).

The appropriateness to the site is the third site impact assessed, which was weighted as a 3 (highly important) since the team believed it important that the use be in line with the surrounding area.

POLICY

The policy impacts on each alternative were assessed through the consistency with zoning, and the funding available for the roof fix. For each alternative we propose there are varying degrees of alteration to the existing zone. Many require authorization upon insurance of a special permit, and others, most notably the residential option, are prohibited within the Industrial-2 zone, and therefore would require changing the zone or getting a special permit within the mill redevelopment plan. Refer to Part I Law and Policy for a comprehensive list of allowable uses with special permit changes, or zone

change. Acquiring a special permit within this mill redevelopment zone is encouraged by North Adams “creative economy” and therefore this impact was weighted as 1 (not as important).

The other policy aspect examined was the potential for outside funding to fix the roof, which is highly important to the structure and use of the building so was weighted as 3 (highly important). There are sources of funding available for businesses and private clients, but in order to research aspects to directly help Mr. Greenwald, we focused on immediate funding options directed specifically at the roof. After examining grants through USDA Rural Development, Massachusetts Historical Commission, Massachusetts Farm Viability Enhancement Program, and other state development programs, it is conclusive that there are no grants available for private clients to help with roof repair (refer to Part I: Law and Policy section).

COMMUNITY IMPACT BACKGROUND

Often, it is difficult, if not impossible to place a monetary value on the impacts that a proposed alternative would have on a community. When we were not able to compute predicted impacts in dollars, we either used another unit of measurement, or we recorded the change as an increase, a decrease or an inconsequential change relative to our baseline. We defined the baseline community impacts of Delftree Corporation on North Adams as the current employment, housing, and tax revenue provided to the town, the demand for services from the town, and the consistency with which the uses of the building align with the policies and goals of the community. All of these community impacts were given a weight of 1, except for the consistency with local goals, which was given a weight of 2. The reason we decided that the majority of the community impacts should have no multiplying effect on the final value is because the community is not our prime target for this project. We are working for a particular client, with a distinct set of goals and priorities, and as a result, we must weigh the costs and benefits of certain alternatives with the best interest of our client in mind. The reason we felt that consistency with local goals was important enough to merit a weight of 2 is because in a small town like North Adams, businesses and politicians have a lot to gain from working together. Not only can the two sectors benefit from sharing resources and information, but by cooperating on joint-ventures, they can also lend each other credibility and shield each other from financial and political risk. Our interviews, research and observations all strongly suggest that the more consistent a project’s goals are with the community’s, the greater the likelihood of success.

In addition to the non-monetary impacts discussed above, Delftree mill also provides intangible benefits to the community that did not make it into our modified planning balance sheet because they are subjective and impossible to quantify. From the late 50s through the 60s, North Adams underwent a phase of urban renewal in which the downtown was gutted and over half of the old Victorian-era buildings were torn down. This makes the fraction of the buildings that survived the demolition, and remain relatively intact today, all the more valuable and worth protecting. According to Michael Nuwallie of the North Adams Community Development Department, letting any of those old mill buildings deteriorate would be a shame and a real a loss to the community, as they provide a unique industrial charm and a visual reminder of the town’s past. Delftree

mill in particular has a distinctive saw tooth roof, which makes it unlike any of the other mills in North Adams. The building also serves as a reminder of the historical connection between the Delftree mill and the Eclipse mill, to which Delftree used to be the warehousing counterpart, and to which it used to be connected via aerial walkway (see photograph below).⁵⁹



*Delftree Mill on the right, connected to the Eclipse mill via an aerial walkway, February, 1940.
Source: Massachusetts Historical Commission.*

⁵⁹ Nuvallie, phone interview, May 4, 2005.

ANALYSIS OF ALTERNATIVES

ALTERNATIVE 1: STATUS-QUO

Site

The status quo will not preserve the building in the long-term, and thus was ranked very poor because this alternative does not structurally repair the failing roof. Without a sound roof the rest of the building will deteriorate quickly.⁶⁰ This in turn will be the worst alternative for preserving the building. The status quo is consistent with the building structure under the current uses. The physical attributes are unique to the Delftree building, such as the loading docks on both floors, and therefore is successful with its current mix of uses. It can be used as a medium indicator for its potential, since it will need larger structural repairs to increase the buildings usability, but has a mix of light industry and warehousing fit for the physical aspects of the building. This is very appropriate to the site, because of the site attributes lending to light industrial and warehousing.

Policy

There is no zoning change or special permit needed for the current uses within the building. Uses of the building remain consistent with local zoning law which designates the area as an I2 zone. Industrial 2 allows agriculture, packaging, distribution, and warehousing. Retail sales and services, and building materials and contractors' equipment require special permits; however Delftree Corporation was easily granted a special permit from the town when it wanted to convert part of the building into a batting cage.⁶¹ North Adams even has a precedent of amending zoning laws when they restrict development, as when the city council supported an amendment on April 13, 2005 allowing developers to put both art studios and apartments into existing mill buildings larger than 50,000 square feet, rather than the previous minimum of 100,000 square feet.⁶² On the other hand, the town of North Adams also has a very definite set of goals to which it aligns its policies and operations. For example, North Adams has not loaned out its community development block grant funding to small businesses in a very long time, even though in other towns, this is a common practice. North Adams's policy is generally to use these funds, or at least a third of them, towards infrastructure improvements, downtown beautification, and some housing assistance.⁶³ For this reason, we decided to give consistency with local policy a value of 2 for the no-change scenario.

In this option we do not repair the roof; therefore no funding sources are researched for this alternative.

⁶⁰ Burr, personal interview. May 3, 2005

⁶¹ Barrett, personal communication, April 14, 2005

⁶² Sequino, "Council Backs Zoning Change." The Berkshire Eagle. April 13, 2005

⁶³ Nuvalle, telephone interview, May 4, 2005

Community

Not changing any of the current uses of the building means not changing the employment status either. Currently, the Delftree Corporation employs 20 people,⁶⁴ which is significant considering that only a third of the manufacturing establishments in North Adams employ 20 people or more.⁶⁵ Thus, we decided to give the employment impact of the no-change scenario a relatively neutral value of 3. Because it provides no housing of any kind now, and obviously would not create any additional housing in the future, we placed the housing impact of the no-change scenario at a value of 1. Although the current uses of the building do not include any housing, the community service demands of the Delftree mill are not insubstantial. All together, the mushroom farm, warehousing, storage and batting cage require distribution of water and electricity, waste removal to a landfill, upkeep of the public roads, telephone lines, and sewage system, professional services, and finally, protection services such as police and fire department just to function safely and effectively. However, this list is not above and beyond what would go to any of the other buildings around the property, and is even less costly in sum than the services demanded by the Eclipse mill and the residential abutters. Because of this, we felt as though the no-change scenario merited a community service impact of 4, which is a “fairly good” and in this case means that not too many additional or costly community services would be required. According to the financial statement of December 2004, Delftree paid \$9,543.56 in annual property tax for the mushrooms; however there were no property taxes listed for either the warehouse or the equipment. This exemption from real estate tax could be due to the fact that the land lies within an identified Economic Target Area and is thus eligible for special tax exemptions.⁶⁶ Because it provides so little tax revenue for the town, we gave this impact the lowest value possible.

As stated in the Economic Enhancement Strategy for Downtown (1995) and by local town officials in interviews and discussions, the goals of the North Adams are to improve gateway corridors and the physical appeal of the downtown, to attract businesses, tourists and residents to the city, and to develop a “creative economy” that caters to the an artsy, cosmopolitan, and upscale clientele. Regional goals are similar in that they are looking to increase development of downtown areas and cultural sectors; however, the Berkshire region as a whole is probably a bit more explicit about the importance of job creation and affordable housing than North Adams. (For a more in-depth discussion of community and regional goals, please refer back to Part II). In light of these goals, Delftree’s current uses of agriculture, warehouse storage, light industrial and batting cages, while not objectionable to the leadership in city hall, are not exactly consistent with the vision of their “creative economy”. It is unlikely that Delftree would ever be forced to change its current uses; however, given Delftree’s large parking lot, proximity to the downtown, and orientation directly opposite a new upscale residential complex, it is likely that future uses which cater to the changing demographic trends in North Adams and the northern Berkshires might become more economic feasible further

⁶⁴ Greenwald, personal communication, April 21, 2005

⁶⁵ U.S. Census Bureau, 1997 Economic Census, *Berkshire County DATABOOK*, 2001

⁶⁶ Massachusetts Office of Business Development:

<http://www.mass.gov/portal/index.jsp?pageID=dbtsubtopic&L=4&L0=Home&L1=Business+Assistance&L2=MA+Office+of+Business+Development&L3=MOBD+Services&sid=Adbt>

down the line. For right now, however, the current uses in the Delftree mill are pretty much as pragmatic as they can be if the choice is between no change and an abandoned building. Any use is better than no use, which is why, in looking at the impact of this alternative on its consistency with regional goals, we decided that it merited a 4, for “fairly good”.

Another thing we had to consider with this alternative was the aggregate affect of some of these impacts over time. For instance, if the Delftree Corporation were to do nothing to improve the structure of the building, the value of the property would depreciate, resulting in less tax revenue for the town. Also, we would expect that as the building deteriorates and eventually collapses, there could be more risk to occupants of the mill and more liability for Delftree. There might also be the risk of abandonment, trespassing, improper use by local kids, and potential health risks to local residents, all of which would require an increase in community services proportionate to the amount and severity of deterioration. A falling down, dilapidated old building opposite a new residential development and right along a main gateway corridor into the city is also not something that exactly inspires confidence in the city’s new “creative economy”. In fact, such a visual blight along Route 2 is the exact antithesis of the community’s vision that old buildings “would be rehabilitated and maintained so that downtown North Adams capitalizes on its historic architecture.”⁶⁷

Market Feasibility

As it currently exists, the Delftree Mill has 187,000 of its 250,000 square feet occupied. The uses that occupy that space are the shiitake mushroom operation (~80,000 sf), the self storage business (~35,000 sf), and the industrial storage component (~72,000), which is occupied by several tenants. That leaves approximately 63,000 sf of the mill unoccupied.

Since the self-storage units are 80% occupied (Delftree has continued to expand this segment of the business since introducing the service), there is potential for that aspect to grow. Moreover, self-storage has shown to be a strong market in the Williamstown-North Adams region, with new self-storage facilities being built or having recently opened.⁶⁸

There is also potential to expand the warehousing component of Delftree, as David Carver of Scarfoni Realty believes there to be a reasonable market in warehousing and distribution space in the North Adams/Northern Berkshire area. Given Delftree’s dual at-grade loading docks and its location on Route 2, this use is appropriate for the site and the building.

Moreover, there is also potential for the expansion of the Delftree shiitake mushroom business, should demand warrant such growth. However, in 2005 production has shrunk with demand, leaving excess capacity, and therefore, expansion is not currently required.

Hindering such expansion, moreover, is the condition of the roof and floor. There are currently many areas of the building that suffer water damage from the leaking roof, and are therefore unsuitable to industrial, agricultural, or commercial use. Around the

⁶⁷ “Economic Enhancement Strategy 1995”, Downtown Development, Inc. and HyettPalma Inc.

⁶⁸ Nuvallie, phone interview, May 4, 2005

perimeter of the building, the wood floor is beginning to rot, which renders that area incapable of supporting the weight of the dry goods items in storage (such as Specialty Minerals' products). Consequently, without an appropriate roof and floor repair, Delftree curtails its potential for growth. Additionally, the condition of the building may deter potential tenants from leasing the space or purchasing a service (such as self-storage) from Delftree.

Fiscal Analysis

Capital Expenses

This analyzed option requires no capital expense for repairing the roof, floor, or interior space. As a result, continued deterioration of the building is expected. The result of this deterioration may be one of several things:

1. Increased continuous maintenance needs and costs;
2. Decreased desirability of space;
3. Decreased revenue due to lack of tenants;
4. Potential building failure;
5. Potential liability from building failure.

Therefore, while immediate capital expenses will be zero, the potential for long-term costs and liabilities do increase as a result of this option.

Fiscal Benefits

According to the Delftree Corporation's 2004 income statement, Delftree's net-income per square foot (assuming all 250,000 sf of the mill incurred overhead expenses) was \$0.52. This figure, Delftree Corporation's net-income per square foot, was equated to revenue per square foot because Delftree's current uses (as they are operated by the Delftree Corporation) do not pay rent to themselves, per se. Therefore, as the table below illustrates, the projected revenue per square foot is \$0.52 for this option.

To determine projected building valuation per square foot, the property's current assessed value (\$445,500) was divided by the building's 250,000 square feet to get its valuation of \$1.78 per square foot. Since there are no costs involved in this alternative, that \$1.78 figure is the alternative's projected income per square foot, as shown below.

		<u>Alternative 1</u> <u>Do-Nothing</u>
<u>FISCAL ANALYSIS</u>		
<u>Construction Costs</u>		
	Roof Costs	\$ -
	Renovation Cost psf	\$ -
	TOTAL COST PSF	\$ -
<u>Fiscal Benefits</u>		
	Projected Revenue psf/yr	\$ 0.52
	Projected Valuation psf	\$ 1.78
PROJECTED INCOME PSF		\$ 1.78

ALTERNATIVE 2: IMPROVE ROOF AND MAINTAIN CURRENT USES

Site

The improved roof in this case is the patch fix that will create more structural stability than the status quo, but will not result in a long-term fix for the building. The improved roof will increase the potential uses since more tenants and warehousing could take place in a building that has a good roof. The appropriateness to the site is very high, due to the previously stated attributes.

Policy

There is no zoning change or special permit needed for improving the roof and maintaining the current uses. In the current state of the building and businesses within there are no grants available to fix the roof, but as previously stated there are loans for private businesses that could be applicable for repairing the roof (refer to funding in Part II). There are also options to continue to have tenants rent space and pay with “in-kind” improvements, but this will not cover the \$250,000 overhead for band-aiding the roof.

Community

In terms of community impacts, the only difference between the no-change scenario, which maintains current uses and the improved-roof scenario, which would also maintain current uses within the building, is that we would not anticipate the same degree of property value depreciation over time if the roof were to receive a band-aid fix. Thus, assuming that the town could collect property tax on the warehouse, the benefit to the town would be slightly higher than if the building were to fall apart, which is why we gave the tax revenue impact of the improved roof change a value of 2 as opposed to its previous value of 1. Note, however, that the resulting weighted value of this impact remains low due to the fact that tax revenue to the town is not a high priority for the Delftree Corporation.

Market Feasibility

The market research for this alternative is the same as it is for the status-quo alternative (please see Market Feasibility section of Alternative 1: Status-Quo). A major difference, however, is that with roof repairs, the Delftree mill will remain a reasonably attractive space for industrial, agricultural, and commercial uses. Indeed, the quality of the space should improve under this option as the unsightly plastic sheeting and tarps currently required to protect the space from water damage will no longer be needed. Therefore, one can expect that the Delftree Mill will have an easier time growing its component businesses, notably the self-storage and industrial warehousing with an improved roof.

Fiscal Analysis

Capital Expenses

This improved roof alternative requires approximately \$250,000 for a band-aid fix to the roof. This figure was provided by our client, Bill Greenwald, who believes he and his staff could complete such repairs. As this option requires no additional capital expenses, the total cost per square foot is \$1.

Fiscal Benefits

This option assumes the same \$0.52 projected revenue per square foot (taken from Delftree's 2004 income statement and its \$0.52 per square foot net-income). However, given the roof repairs, this revenue stream was assumed to be continuous, unlike the assumption that revenue would decline that was made for the status-quo alternative.

Since this revenue stream is continuous, the appropriate way to create a valuation of the space is through the capitalization method. This requires developing an assumed capitalization (cap) rate. The cap rate measures "is a method used to convert an estimate of a single year's income expectancy into an indication of value... by dividing the income estimate by an appropriate [cap] rate".⁶⁹ The appropriate cap rate was ascertained from David Carver of Scarfoni Realty, and is based on market data, notably purchase price and annual income; he advised using a cap rate of 10 percent. As such, the projected valuation should be ten times the projected annual revenue (revenue was used instead of projected income because annual maintenance and operations costs were unavailable to the project team). Therefore, given the projected revenue of \$0.52 per square foot, the projected valuation for the improved roof alternative was \$5.19 per square foot.

Fiscal Assessment

Capitalizing the annual revenue per square foot accounted for the temporal issues is comparing the capital expenses with the expected revenue, and having determined the projected valuation, an assessment of this alternative could be made. Comparing the anticipated capital cost of \$1 psf to the projected post-construction valuation of \$5.20 shows that this option is economically feasible, creating \$4.19 of income per square foot, as shown in the table below. Furthermore, this option produces a return at a reasonably low initial investment, which is attractive to our client.

It must be remembered, however, that this alternative does not provide a long-term roof replacement, but rather a "band-aid" repair, which may require increased maintenance and continual investment in the long-term, including the possibility that a full-scale roof replacement still be needed in several years.

		<u>Alternative 2</u> <u>Improve Roof</u>
<u>FISCAL ANALYSIS</u>		
<u>Construction Costs</u>		
	Roof Costs	\$ 250,000.00
	Renovation Cost psf	\$ -
	TOTAL COST PSF	\$ 1.00
<u>Fiscal Benefits</u>		
	Projected Revenue psf/yr	\$ 0.52
	Projected Valuation psf	\$ 5.19
PROJECTED INCOME PSF		\$ 4.19

⁶⁹ <http://www.investopedia.com/terms/c/capitalizationrate.asp>

ALTERNATIVE 3: WAREHOUSE/LIGHT INDUSTRIAL

Site

To make the site suitable for warehouse/light industrial, a roof fix and a poured concrete floor would be required on the ground floor, as well as possible structural enhancements if the second floor is to be used for heavy storage. This alternative will structurally preserve the building in the long-term. The original use of the building makes it suitable for warehousing and light industry, since it used to be the storage area for the Eclipse Mill across Route 2. The dual floor loading dock access and the large open floor plan all make Delftree highly suitable for this use. Currently the structure of the second floor is suitable for a fork lift carrying bulk limestone, but may need structural additions in the future.

Policy

There is no zoning change or special permit needed for most uses except the following: bulk storage of cement; bulk storage of petroleum; manufacturing and/or storage of alcohol, plastics and chemicals; manufacturing of bricks, cement products, tile and terra cotta; yards for storage and sale of lumber, fuel, fertilizer and building materials and storing and handling. There are no grants available for private warehouses or industries to fix the roof, but as previously stated there are loans for private businesses that could be applicable for repairing the roof. There is also the option to continue with tenants and substitute rent space with “in-kind” improvements. However, this would not cover the overhead for a completely retrofit of the roof.

Community

In Berkshire County modern manufacturing and old warehouse buildings are “functionally obsolete” according to Nat Karns, executive director of the Berkshire Regional Planning Commission. 5 or 6 years ago, BRPC did an inventory of old mill buildings in the northern Berkshires, and what they found was that the majority were being used as warehousing storage because they provided such ready amounts of cheap, empty space.⁷⁰ Considering this, it is not surprising that our analysis of the warehousing and light industry potential for the Delftree mill provided more consistently positive values across community impacts than almost any other alternative.

In terms of employment, we projected that allowing warehousing and light industrial uses to take over the entirety of the Delftree building would allow businesses to capitalize on underutilized space, expand operations, and employ more people than the current uses do now. Although the mushroom farm would no longer be in operation, this use, while very labor intensive, is not necessarily very people intensive. In other words, expanding mushroom operations into unused space would definitely require more work, but it would not likely result in the hiring of many more people, nor would it result in a greater variety of job types, with differing demands for education, skill, and experience levels.⁷¹ Expanding warehousing/light industrial uses into the extra space on the other hand, could require more transporting, servicing, or manufacturing functions, which

⁷⁰ Karns, telephone interview, April 26, 2005

⁷¹ Greenwald, personal communication, 4/21/05

could conceivably lead to the hiring of more people with varying degrees of expertise. Obviously, projecting exact numbers would depend upon knowing the particular kinds of businesses that would be going in. We estimated that for the entire 250,000 square foot mill, there could be anywhere from 10 to 100 employees, depending on whether the use is all storage (former estimate) or all industry (latter estimate). Nevertheless, just the probability that this scenario would increase jobs put the employment impact value at 4, one higher than the improve roof-maintain use scenario.

As it does not add anything to the housing stock in the community, the warehousing/industrial alternative got a housing impact value of 1. The community service demands we projected were smaller for warehousing/light industrial than for even current usage and improved roof-maintain use scenarios because there would be fewer utility and resource requirements than the small levels currently required (though depending on the particular use, there may still be need for heat, light, and water). Thus, this alternative got the optimal value of 5, which means very few difficult or costly services required.

We expected tax revenue to go up from the improve-roof scenario, again by a factor of one, because the improvements that must be made in order to secure the structure and make it suitable for industrial warehousing use are more extensive than simply patching the roof. Ideally, fixing the floor and creating clean, dry interior space would make the space much more attractive to tenants, create a demand for the space, drive up rental rates, and increase the overall value of the property. However because it is not first class space being created, it is safe to place the value of tax revenue at 3—larger than the improve-roof, but potentially less than a more highly-valued use such as commercial or residential.

Again, because this alternative would not create the kind of high-end usage that the town is looking for, we were required to place consistency with local policy goals at a low value of 2. However, as we mentioned before in the discussion of local community goals vs. regional goals, the town is much more selective about what kinds of development it deems appropriate, let alone will support financially. Regionally, on the other hand, the prospect of creating jobs and drawing in businesses (even if they are industrial businesses) is inherently positive, which is why the warehousing/light industrial scenario warrants a value of 4 for its consistency with regional goals.

Market Feasibility

David Carver of Scarfoni Realty believes that warehouse/light industrial uses are appropriate to the Delftree property and mill building, and that there is a better market for industrial/warehouse space than there is for office/retail space. He commented that warehouse space could command \$1-2 per square foot, while light industrial uses could lease for \$3-5 per square foot. These numbers, however, appear low as Delftree currently leases warehouse and self-storage space for \$3 per square foot.

Matt Harris '94, of Village Ventures, a Berkshire County-based venture capital and real estate development firm, also believes that warehouse and light industrial space is appropriate to the building, site, and region. While manufacturing commands the highest rent, that market, he said, is no longer in demand in New England. Therefore, better uses would be warehousing and distribution. He concurred that \$3-5 per square foot would be a reasonable figure for these uses.

With self-storage facilities sprouting up throughout the Northern Berkshires, this use could certainly be expanded within the building. Desirability might improve if the space was cleaned up and the units made out of steel or gypsum, rather than plywood, which could possibly increase Delftree's revenue. The drawback of the Delftree units, compared to new, self-standing facilities is that they cannot be accessed at all times, due to the hours and security needs of the building.

Harris also commented that a potential use for the site could include a "high-touch customer service and distribution" center, which would integrate customer service call-center operations with warehouse and fulfillment (distribution) operations. Such a use for a large company could require upwards of 100,000 square feet with a combined rent (call center and warehouse space) of \$6-8 per square foot. The market for such a use could be significant given the relatively low cost of labor and space in North Adams, as well as its relatively well-educated workforce.

Fiscal Analysis

Capital Expenses

Alternative 3 calls for the full replacement of the existing roof. According to architect Andy Burr, the cost for replacement would be roughly \$10 per square foot of roof, which with approximately 150,000 of roof surface, would come to a total of \$1.5 million for the roof replacement.

In addition to the roof repairs, this alternative requires replacing the wood floor on the entire first floor with poured concrete. This will further buttress the building against water damage and deterioration, and provide potential tenants with peace of mind that their space will be protected. This work, however, is relatively expensive given the building's vast footprint and consequent difficulty of access. Thus, concrete would need to be brought into the building and poured by hand or by a specialized piece of equipment, rather than directly from the truck. Based on these factors, Andy Burr suggested that \$10 per square foot be allocated for the replacement of the floor. Since there is about 150,000 square feet of first floor space, an additional \$1.5-million is required for the floor replacement.

An additional \$10 per square foot was assigned to building improvements, ranging from installing additional bathrooms and fire access and egress to improving the existing loading docks, parking lots, and driveways for easier access by tenants. These improvements will help enhance the attractiveness of the space, which should draw additional interest from tenants. It is important to note that this \$10 per square foot figure is generous, but would greatly improve the space. Such improvements, however, may or may not be required by our client and his potential tenants.

Therefore, this option requires a total capital expense of \$5.25 million, or \$21 per square foot, consisting of \$1.5 million for the roof, \$1.5 million for the floor, and \$2.5 million for other improvements (\$10 per square foot).

Fiscal Benefits

Given the professional opinions documented in the market feasibility section, \$3 per square foot was assigned as the projected revenue per square foot; this seemed a reasonable, if conservative, figure. Capitalized at 10 percent, the projected valuation of the Delftree Mill given warehouse/light industrial uses is \$30 per square foot.

Fiscal Assessment

Comparing the capital expense of \$21 per square foot (\$5.25 million total) with the capitalized project valuation of \$30 per square foot (\$7.25 million) produces \$9 per square foot in income, as shown in the table below. This figure is certainly greater than what Delftree is currently making, however, this alternative does require a sizable capital commitment and filling the entire building with light industrial tenants willing to spend at least \$3 per square foot.

		<u>Alternative 3</u> <u>Warehouse/Industrial</u>
<u>FISCAL ANALYSIS</u>		
<u>Construction Costs</u>		
	Roof Costs	\$ 1,500,000.00
	Renovation Cost psf	\$ 15.00
	TOTAL COST PSF	\$ 21.00
<u>Fiscal Benefits</u>		
	Projected Revenue psf/yr	\$ 3.00
	Projected Valuation psf	\$ 30.00
PROJECTED INCOME PSF		\$ 9.00

ALTERNATIVE 4: RESIDENTIAL

Site

The roof fix with skylights and major internal restoration will increase the preservation of the building. However, given the size and configuration of the building, with half of the first floor becoming basement and the large interior spaces without direct access to an external wall, the building is not well-suited for residential use because of the majority of the interior spaces lack direct access to natural light. The resulting residential units would have to be extremely long and narrow to maximize the space within Delftree. Residential is also not appropriate to the site, since there is little eastern and southern exposure from the building. With the grade change the eastern side becomes a basement on the first floor and again limits the ability to convert to successful residential units.

Policy

Special permits are required for artist studios; bed and breakfast; homeless shelter; hotels; inns; mobile home parks; motels; nursing home; tourist cabins. Previously, a zoning change would have been required for dwellings for more than 2 families; home occupants; letting of rooms; single family dwellings; two family dwellings, but with the new mill redevelopment plan in North Adams, a special permit is all that is required to alter the use to residential. There are no grants available to fix the roof, but as previously stated there are loans for private owners that could be applicable for repairing the roof.

Community

According to Nat Karns of the Berkshire Regional Planning Commission, what Eric Rudd has done in taking decrepit old mills and turning them into upscale artist lofts in high demand from people in New York City and Boston is “pretty phenomenal.” In his opinion, you can’t be an amateur if you want to be successful in this business. The three main factors you do need are vision, leadership, and capital. This last factor is perhaps the most important, since with many of these large-scale residential conversions, you “can’t accomplish it on a shoestring.”⁷²

As far as community impacts go, the residential alternative is a lesson in extremes. Employment gets the least value because we anticipate that this alternative would result in fewer jobs than are currently there now. The team estimated that there would most likely be employment for no more than 5 people if the entire mill were to be converted to residential units. These jobs might include management, repair/maintenance, and custodial services. However, this is far less than the employment potential for warehouse/light industrial, and even less than not changing or improving the current uses at all. Thus we gave employment impact a 1. For obvious reasons, housing received a high value because the mill would be adding significantly to the housing stock in North Adams. However, one major question in determining the extent of community benefit is whether the type of housing that could realistically go into the Delftree mill is a type that would be useful and valuable for the city. There is a real possibility that the demand for

⁷² Karns, telephone interview, April 26, 2005.

high-class residential units could be saturated after completion of the Blackinton mill, although many of the realtors and developers we talked to seem to be optimistic about the future market strength for this type of housing. We also had to take into consideration some of the views expressed by individuals at the Housing Authority and the Northern Berkshire Community Coalition that indicated there was a need for decent, affordable housing units in North Adams.⁷³ Even the North Adams 1995 Economic Enhancement Strategy and Mayor Barrett, two of the town's biggest idealists, indicate that there might be an opportunity for developing moderately priced housing for students and elderly in the middle income bracket.⁷⁴ Demand for student-oriented housing would likely come from MCLA, which is located close to the downtown, while demand for housing suitable for the elderly is likely to come from the large percentage of North Adams' population that is getting increasingly older with each year⁷⁵. Mayor Barrett even suggested putting assisted living units into the Delftree mill, listing the benefits as high demand among residents and significant community benefit. However, since we don't know exactly whether assisted living units would be feasible in the Delftree Mill, we gave this alternative a conservative value of 4 for its impact on housing availability in the community.

The residential alternative received a value of 2, the lowest score of all the alternatives for impact on community services, because it would require more of these services than any of the other alternatives, especially in the form of public education. On the other hand, building residential units requires the highest input of resources to improve the building to its optimal condition, which would obviously increase the property value. Assuming that the town could tax this property under its new usage, we would expect the town to receive higher tax revenues from this alternative, giving it a value of 5. Residential use also gets a value of 5 because it is very much consistent with public policy and local goals. Practically everyone we talked to, from government agencies and nonprofits to planners, developers, architects and real estate agents, all agreed that residential was the way to go. Their general argument is that residential creation is not so much a case of over saturation but self-perpetuation. As skilled, creative people move into the region it attracts more skilled, creative people and this process keeps building on itself. In other words, in the creative economy Barrett talks about, the public is the most important resource and residential development is the most effective catalyst. Obviously there is an eventual limit to the number of people that will move out to North Adams, but no one thinks the city is anywhere near that point yet. This is true regionally as well. Why would a region want people with talent and creativity and cash to visit for a brief 3 months out of the year when they could come and settle permanently in the region, investing their resources and spurring the regional economy? This is a prevalent question throughout the Berkshires, where towns are greatly impacted by the seasonal flux of tourists. However, without enough information about the specific demand in the region, and not being able to distinguish between high-end and affordable housing for the purposes of this analysis, we decided on a conservative valuation of 4 for consistency with regional goals.

⁷³ Marlene Walsh and June Sherman, telephone interviews, April 12-13, 2005

⁷⁴ Barrett, personal communication, April 14, 2005 and "Economic Enhancement Strategy 1995"

⁷⁵ U.S. Census Bureau, North Adams Profile

Market Feasibility

Residential mill conversions have been very popular in recent years. Significantly in North Adams, artist-turned-developer Eric Rudd has been instrumental in converting mills to artists' lofts and condominiums. To date, Rudd has completed two mill conversions in the North Adams area, totaling about 250,000 square feet. Additionally, Rudd is set to begin construction on the Blackinton Mill during the summer 2005. This new building will house 25 units, ranging in size from 2,500 to 3,500 square feet and in price from roughly \$170,000 to \$270,000 per unit, depending on size, amenities, and orientation.⁷⁶ Though the project is not even through the approval stage, and despite being located well outside downtown North Adams, nearly half of the units have been reserved by buyers. The market for Rudd's lofts, however, is pretty defined, as only artists are allowed to purchase his units, creating a limited market.

Though on a greater scale North Adams has 777 vacant residential units throughout the city,⁷⁷ this does not necessarily indicate that the market is saturated for residential units. Indeed, politicians all agree that enhancing the city's residential options through the conversion of mill space to high-end residential units is in the city's long-range vision.⁷⁸ The success of the projects that have seen completion indicates that a market does exist. Furthermore, recent projects have been selling for record prices, illustrating the strong demand for such units in the city.

Fiscal Analysis

Capital Expenses

Alternative 4 calls for the upscale replacement of the existing roof with a new roof, which includes vast skylights on all of the saw-toothed risers. These skylights will flood the interior of the second floor with light from above, creating a bright, warm environment. This, however, comes at a very high price, estimated at \$4-5 million by Andy Burr. Thus, the median figure, \$4.5 million, was assumed to be a reasonable projection of the roof cost.

As in alternative 3, the residential alternative requires the replacement of the rotting first floor wood with concrete. The same \$10 per square foot projection was assessed for this work.

The interior work required to bring the space up to residential building code and desirability is very significant. All plumbing, electrical, and HVAC work and systems would need to be installed, as would fireproofing, fire access and egress, and, potentially, an elevator. Installing kitchen and bathroom equipment and fixtures would constitute a very large expense, as would punching new windows through the façade and installing them. All told, the interior improvements were estimated by Andy Burr to run about \$150 per square foot. This figure would allow for the creation of middle-of-the-road apartments, neither luxury nor affordable.

In sum, the residential option presented would cost roughly \$43.25 million in capital expenses related to converting the industrial space to residential code and marketing needs. This comes out to \$173 per square foot. Of this total, \$30 per square

⁷⁶ www.cirecorp.com/blackmill.html

⁷⁷ Census 2000, U.S. Census Bureau

⁷⁸ Barrett, interview; Bloom, interview; Nuvalle, interview.

foot (150,000 sf roof surface; \$4.5 million total) would come from roof replacement, \$10 per square foot (150,000 sf floor replacement; \$1.5 million total) for the first floor flooring replacement, and \$150 per square foot for the improvements to the space and infrastructure (\$37.5 million total).

Fiscal Benefits

Given the area's market and the success of comparable mill conversions, the team assessed that the Delftree Mill could command \$20 per square foot annually in rent.⁷⁹ Capitalized at ten percent, the valuation of the space came to \$200 per square foot

Fiscal Assessment

Comparing the capital expense of \$173 per square foot (\$43.25 million total) with the capitalized project valuation of \$200 per square foot (\$50 million) produces \$27 per square foot in income, as shown in the table below. This figure is much greater than what Delftree is currently making. On the other hand, this alternative requires a very significant capital commitment and the ability to fill the entire building with residential tenants willing to spend \$200 per square foot on a condominium outside the center of the downtown.

		<u>Alternative 4</u> <u>Residential</u>
<u>FISCAL ANALYSIS</u>		
<u>Construction Costs</u>		
	Roof Costs	\$ 4,500,000.00
	Renovation Cost psf	\$ 155.00
	TOTAL COST PSF	\$ 173.00
<u>Fiscal Benefits</u>		
	Projected Revenue psf/yr	\$ 20.00
	Projected Valuation psf	\$ 200.00
PROJECTED INCOME PSF		\$ 27.00

⁷⁹ Lisa Wright, Berkshire Housing Corporation. May 2, 2005.

ALTERNATIVE 5: COMMERCIAL

Site

The roof fix and internal restoration will increase the preservation of the building to its highest potential. This use is consistent with the building structure since wall partitions could be put in, which would allow for a range of possible office spaces. It is also moderately appropriate for the site given the location in downtown North Adams and along Route 2.

Policy

Special permits are required for art galleries; auto body-repair; cleaning, laundering agencies/coin-operated laundries; financial institutions; newspaper offices; portable sawmill; research, experimental, and testing laboratories; restaurants; retail package liquor stores; retail sales and services; shopping centers; taverns; theatres. A zone change is required for kennels and veterinary hospitals. There are potential Community Block Development Grants that can be awarded for potential to increase the economic base of the community through a wide variation of endeavors, but as previously stated these are most likely unavailable due to the focus of the economic development in North Adams. Other sources of funding do not support private endeavors. Loans could cover the initial overhead.

Community

The commercial alternative received a 5 for employment, the largest value given for this community impact, because it would obviously create the greatest number of jobs per square foot of space in the mill, provided the entire building gets turned into offices. On the other end of the spectrum, this alternative received a 1 for housing. For impact on community service demands, commercial use gets a 3 because it would require more services than warehousing/light industry, but less than residential. The tax revenue is a 4, which is again, a higher value than warehousing but a lower value than residential. The commercial alternative's consistency with local policy is a 4—one less than residential, but two more than warehousing—which is in line with the views of Barrett, Bloom and others which are that retail would be a great thing for the community. Nevertheless, the evidence compiled from the downtown, Mass MoCA and Scarfoni Realty clearly indicates that the market for commercial space is simply not strong enough to support the quantity that would be created from a complete conversion of the Delftree mill. Consistency with regional goals is again, 4 across the board, for reasons elaborated on in previous sections.

Market Feasibility

The market for office and retail space in North Adams is not very strong. David Carver estimates that over 20 percent of retail/office space in downtown North Adams is vacant. Since such a large portion of downtown commercial space on Main Street is in excess of demand, it does not seem likely that Delftree, located nearly a half mile from downtown, could draw commercial tenants. Indeed, Carver comments that there is no demand for additional such space in North Adams.

The possibility of utilizing the site for a big box store was also explored, even if that option involved demolishing the existing mill building. According to Carver, however, big box retailers or wholesalers “would not consider such a site for retail in general and certainly not in North Adams given the existing and newly proposed big box stores along Route 8. Therefore, the Delftree Mill is amenable neither to big box stores nor to smaller downtown-sized retail or professional office space, and cannot be recommended, especially with the current K-Mart plaza open for redevelopment and greenfield development sites along Route 8.

Fiscal Analysis

Capital Expenses

Completing the commercial conversion would require much the same construction and improvements as would the residential conversion option. The roof and floor would both need to be replaced, in addition to the need to upgrade the building’s interior and infrastructure. There are differences, however, in the assessed cost of the work for this option.

Alternative 5 calls for replacement of the roof. However, unlike alternative 4, only half of the roof will have skylights on the saw-toothed risers. Thus, the projected cost of the roof replacement and skylight installation is roughly \$3 million.

As in alternative 3 and 4, the commercial alternative requires the replacement of the rotting first floor wood flooring with concrete. The same \$10 per square foot projection was assessed for this work.

The interior work required to convert the space up to commercial building code and desirability is very significant. All plumbing, electrical, and HVAC work and systems would need to be installed, as would fireproofing, fire access and egress, and, potentially, an elevator. Punching windows through the façade would constitute a sizable expense, as would installing bathroom fixtures. All told, the interior and infrastructure improvements were estimated by Andy Burr to run about \$115 per square foot to create Class A office/retail space.

In sum, the commercial option presented would cost roughly \$33 million in capital expenses related to converting the industrial space to commercial code and marketing needs. This comes out to \$132 per square foot. Of this total, \$20 per square foot (150,000 sf roof surface area; \$3 million total) would come from roof replacement, \$10 per square foot (150,000 sf floor replacement; \$1.5 million total) for the first floor flooring replacement, and \$115 per square foot for the improvements to the space and infrastructure (\$28.75 million total).

Fiscal Benefits

Given the area’s comparable commercial rental rates of \$8-12 per square foot annually, \$10 per square foot was assumed to be a reasonable rental rate. Given a ten percent (10%) capitalization, the valuation of this alternative comes out to \$100 per square foot.

Fiscal Assessment

Alternative 5, the commercial conversion alternative requires roughly \$132 per square foot in capital costs for improvements to the space and replacements of the faulty

roof and rotting first floor flooring. Given the projected rental revenue per square foot (\$10 annually) and the consequent valuation of \$100 per square foot, the commercial alternative, *even if the space was rented in its entirety*, would not be fiscally feasible. Indeed, the analysis shown below indicates a loss of roughly \$32 per square foot. Therefore, this alternative cannot be recommended to our client.

		<u>Alternative 5</u>
		<u>Commercial</u>
<u>FISCAL ANALYSIS</u>		
<u>Construction Costs</u>		
	Roof Costs	\$ 3,000,000.00
	Renovation Cost psf	\$ 120.00
	TOTAL COST PSF	\$ 132.00
<u>Fiscal Benefits</u>		
	Projected Revenue psf/yr	\$ 10.00
	Projected Valuation psf	\$ 100.00
PROJECTED INCOME PSF		\$ (32.00)

ALTERNATIVE 6: RECREATION

Site

The roof fix and internal restoration needed for this alternative will increase the preservation of the building. Given the amount of space in the building, appropriate uses could include a large tubular playground for children, laser tag, or capture the flag arenas. The site is moderately appropriate for recreation since it is close to residential communities and North Adams city center, but it is unlikely these business endeavors could be supported by such a small population base as North Adams.

Policy

Special permits are required for assembly halls, indoor recreation; clubs, lodges, community centers; conference center; day care facilities; farm/garden stand; library; museums; nursery schools; parks and playgrounds; public garages including repair; public parking areas. There are Community Block Development Grants that can be awarded for potential to increase the economic base of the community through a wide variation of endeavors, but as previously stated these are most likely unavailable due to the focus of the economic development in North Adams.

Community

The State Department of Conservation and Recreation own the North Adams YMCA, which contains a swimming pool, fitness center, and skating rink (for which the town is currently requesting grant funding⁸⁰), a billiards hall, a bowling alley, and maybe a few more smaller indoor recreational facilities. Although these existing resources may not be the most pleasing or state of the art facilities, they do seem to be functionally serving the immediate needs of North Adams residents, and none of our research to date has indicated that there is a strong demand for additional facilities.

Recreation was a difficult thing to estimate community impacts for, since it depends entirely upon what kind of recreation being considered (there is quite a difference between putting in a fitness center and making a space suitable for paint-ball!) Lacking any feasible suggestions as to what kinds of recreation to evaluate, we based most of our estimates on information gleaned from the batting cage, one of the smaller, miscellaneous tenants within the Delftree mill building, which we then projected onto the mill building as a whole for consistency as well as simplicity's sake. According to the team's best-informed consensus, we estimate that a full conversion to recreation would probably employ between 25 and 50 people, giving it a relatively neutral value of 3. This value is the same as the value for the two alternatives maintaining current uses within the building. Housing clearly gets a value of 1. Community services gets a value of 4, which is better than commercial space simply because you wouldn't need all of the services required to outfit bathrooms, kitchenettes, and the like. However recreation still would require more in the way of heating, electricity, water, and sewage than warehousing or industrial. Compared to commercial space, the quality of the building for recreational use could be relatively rough. Because fewer improvements need to be made, the value is

⁸⁰ Nuvalle, phone interview, May 4, 2005

likely to be lower than commercial—probably about the same as warehousing, which gives commercial a tax revenue value of 3. Consistency with local policy gets a low of 3—less than commercial but more than warehousing—because, as Barrett made explicit in our meeting, North Adams is not going to “sell cheap” under his watch by putting penny arcades in prime empty space.⁸¹ Again, consistency with regional goals is a 4.

Market Feasibility

Market feasibility for this option is largely unknown, as the use is novel to the region. Inspiration comes from the Chelsea Piers complex in Lower Manhattan, which has been enormously successful. However, unlike the Piers’ Manhattan location, North Adams does not provide a large market for such a facility. Currently, one such business is in operation in the Delftree Mill, the batting cage complex. Moreover, our client has informed us that in a similar joint-venture he and a business partner are considering creating an indoor driving range inside the building.

It remains to be seen, however, whether a full-scale recreation operation could be successful. The Delftree Mill certainly has the space and open floor plan to accommodate it. However, the demand may just be weak or nonexistent. Currently, the batting cages are only open from 4-5:30pm Monday through Friday, which may indicate a lack of demand. As far as the batting cage venture, our client has yet to receive any rent (in the form of profit sharing) because the business has yet to turn a profit. Further market research would be required to determine if the Northern Berkshires could support additional recreation facilities such as a fitness gym, roller skating rink, indoor driving range, among many other options.

Fiscal Analysis

Capital Expenses

Alternative 6 requires the replacement of the roof and first floor flooring, as do the preceding three alternatives. The roof replacement would be standard, without skylights, at \$10 per square foot. Thus, the total roof work would cost roughly \$1.5 million. The floor replacement again would cost \$10 per square foot, for an additional total of \$1.5 million.

However, the cost of additional improvements is difficult to determine since it depends so much what the proposed uses are. Regardless of that decision, though, the building would need to be brought up to code, with fireproofing, fire access and egress, and HVAC installation. Additional work would need to be completed on the plumbing and electrical infrastructure and on installing bathrooms. Parking lot repaving and access issues would also need to be addressed. Assuming the space can be left in rough condition Andy Burr estimated capital costs of around \$70 per square foot.

In sum, the recreation option would cost roughly \$19 million in capital expenses related to converting the mill space to recreation needs and occupancy code. This comes out to \$76 per square foot. Of this total, \$10 per square foot (150,000 sf roof surface; \$1.5 million total) would come from roof replacement, \$10 per square foot (150,000 sf; \$1.5 million total) for the first floor flooring replacement, and \$70 per square foot for the improvements to the space and infrastructure (\$17.5 million total).

⁸¹ Barrett, Interview April 14, 2005.

Fiscal Benefits

Without an accurate picture of the potential market for such a use, determining the potential revenue per square foot was very difficult. Though New York's Chelsea Piers has been very successful, the Manhattan and North Adams market are not comparable, and therefore, one cannot draw conclusions from that case. For argument's sake, \$4 was assessed as the annual revenue per square foot, as the space represents a blend of industrial and commercial characteristics. At that rental rate, the building's value, given a ten percent (10%) capitalization rate is \$40 per square foot.

Fiscal Assessment

Though the capital expense and projected revenue numbers are very rough estimates and could vary considerably from the group's decisions, the recreation alternative does not appear to be fiscally feasible. The projected capital expenses came out to \$76 per square foot, while projected revenue was only \$40 per square foot, and as such the recreational uses could not cover the cost of improving the space, as shown in the table below, with a net-loss of \$36 per square foot.

		<u>Alternative 6</u> <u>Recreation</u>
<u>FISCAL ANALYSIS</u>		
<u>Construction Costs</u>		
	Roof Costs	\$ 1,500,000.00
	Renovation Cost psf	\$ 70.00
	TOTAL COST PSF	\$ 76.00
<u>Fiscal Benefits</u>		
	Projected Revenue psf/yr	\$ 4.00
	Projected Valuation psf	\$ 40.00
PROJECTED INCOME PSF		\$ (36.00)

SUMMARY OF FINDINGS

Top Three Ranked Alternatives

	WEIGHT (1-3)	1 <u>Do-Nothing</u>	2 <u>Improve Roof</u>	3 <u>Warehouse/Industrial</u>
TOTAL SUBJECTIVE SCORE		57	66	78
PROJECTED INCOME PSF		\$ 1.78	\$ 4.19	\$ 9.00
SUBJECTIVE RANK	2	6	2	1
FISCAL RANK	1	4	3	2
CLIENT'S PREFERENCE RANKING	3	2	1	3
AGGREGATE RANK		3	1	2
	WEIGHT (1-3)	4 <u>Residential</u>	5 <u>Commercial</u>	6 <u>Recreation</u>
TOTAL SUBJECTIVE SCORE		64	65	62
PROJECTED INCOME PSF		\$ 187.00	\$ (32.00)	\$ (101.00)
SUBJECTIVE RANK	2	4	3	5
FISCAL RANK	1	1	5	6
CLIENT'S PREFERENCE RANKING	3	6	5	4
AGGREGATE RANK		5	4	6

Subjective score (non-monetary)= sum of the weighted values

Projected income = Benefits – Costs

By combining the non-monetary evaluation, the fiscal evaluation and our client's preferences, three top alternatives were determined. It was decided to eliminate lowest ranking alternatives because although they appear to have very high projected incomes, all the additional factors makes them poor, unfeasible alternatives. The upfront expenditures necessary for each option is not practical at this point in time. Thus, we focus our attention to the top three alternatives.

Ranked first is the improve roof and maintain current uses option. It received a mediocre score in both non-monetary and projected income, but when we combine all factors together, it comes out on top. We believe it is the best fit for our client's goals as well as restrictions. It will increase income with relatively low upfront expenditures. Fixing the roof would allow for a better, longer-lasting structure. Looking at the second ranked option, converting the space to warehouse/light industrial, we notice both higher upfront expenditures, a full renovation of the roof and the floor, but also greater returns. We are not advising the status quo option. However, it is more feasible than the lower ranked alternatives of residential, commercial and recreation.

FINAL RECOMMENDATION

To ensure the best possible use of the Delftree Mill building for the future, we recommend a mixture of structural and operational improvements, as well as maintenance of some current uses. First and foremost we recommend fixing the roof so that the current operations within the building are not jeopardized and new business ventures are more willing establish themselves, thereby ensuring a steady flow of income for the corporation. We also recommend that the Delftree Corporation actively pursue increasing tenant occupancy in the mill so that they can reduce their role as manger-operator and increase their capacity as landlord. Currently, there are no long-term lessees in the building. The arrangement with Specialty Minerals is tenuous because they are under no long term obligation and could easily pull their business from the mill at the end of the month without any warning. This arrangement is also less than ideal because Delftree is currently providing most of the labor for loading, unloading and maintaining the material, rather than simply securing and presiding over the space.

We recommend that all of the current and newly-improved spaces in the smaller, adjoining buildings remain as they are. This includes the batting cages, A. Austin Trucking, and North Adams Sheet Metal. We also recommend keeping the mushroom business and the self storage units where they are in the larger weaving shed portion of the mill. We recommend keeping space for the Williamstown Theatre Festival on the second floor, but moving it from its current location to a space abutting the self-storage that is currently designated as “mixed storage and warehousing” but is only 30% full. These second floor uses will still have direct access to the east loading dock. This would free up approximately 40,000 sf of space on the second floor, along the western edge of the building by the loading docks, for an incoming tenant. On the first floor, we recommend getting rid of the industrial warehousing and vehicle storage, and making this 65,000 sf of free space available to the tenant as well.

Per our discussion with Matt Harris of Village Ventures, the kind of tenant we propose that Delftree seek out is a fulfillment distribution center—a business that receives, processes, packages and distributes orders all from one location. An example of such a business is Resolution Inc., a video duplication and DVD/CD service center that receives and ships orders from a warehouse where they keep their product until its ready for distribution. The idea is to have a center that houses the calls and distribution of small items that can be manufactured elsewhere. This use has minimal heavy machinery, with varying skilled and unskilled employment opportunities, while taking advantage of cheap national transportation costs. With the increase of telecommunications, the processing center can service an extremely large area, both national and international.⁸² The Delftree Mill would be most suitable to such a tenant if the upper story space were used as the call center (25,000 sf) since windows and skylights could be more easily constructed in that location. The ground floor space would primarily be used for storage and distribution. It is also likely to be attractive to such a business because of its old industrial character, large open spaces, multiple loading docks, nearby parking, and easy access.

⁸² Resolution Inc. South Burlington, VT. www.resodirect.com. 800-862-8900

Site

Due to the large eastern parking lot and Delftree's proximity to Route 2, the site is conducive to a large call and distribution center. There will be more large trucks on the site, but the eastern parking lot can accommodate a steady number. A repaving of the parking lot will be necessary along with a dual access into the parking and loading area. This would require removing part of the chain link fence currently dividing the parking lot and Union Street (Route 2).

Parking for the increased employees to the site is an issue that can be resolved with varying shifts the call center is open. Therefore, spreading the parking needs into three shifts will allow for less demand at one time. The other possibility is to get rid of some of the auxiliary buildings, which currently do not bring in much revenue for Delftree Corporation, to make room for more parking. Delftree also has some stake in land across Route 2, and further east of the building that could be used for near by parking.⁸³

Building

Delftree is configured for a successful call and distribution center because of the large open plan, and easy loading dock access. The mixed use of the building also benefits from the dual floor loading docks, since the second floor west loading dock will still be used to access the self storage units, along with the relocated Williamstown Theater Festival space. The western loading docks feed off of the large parking lot and can accommodate the distribution from the new center. The building will require a new roof and possibly other structural repairs, but this will help maintain the building as an asset into the future. The open floor plan and current floor construction allows for fork lifts and machinery on the first floor and minimal uses of these on the second floor. This facilitates the use of the second floor as the call and processing area, and beginning processing phases of the distribution. The first floor is functional for the storing and ultimate distribution aspects.

Improvement needs of the building will require roughly at \$1.5 million roof renovation that will structurally intact the roof and also provide some skylights into portions of the roof above the call center and distribution areas where natural light will be beneficial. The internal space will be renovated to Class B office space, functional, but not top notch space to show customers. Most of these internal renovations could be done by the developer to reduce the cost directly coming from Mr. Greenwald. These will secure the building well into the future.

Community

This new distribution/call center will benefit the city of North Adams by increasing jobs and stimulating the local economy. It will not affect the housing stock, and will cause slightly increased road traffic, thereby increasing the community service costs. The majority of the jobs will be service sector jobs.

This will result in a big employer near downtown North Adams, which should subsequently bring development into the downtown.

⁸³ Greenwald, Personal interview. May 12, 2005.

Fiscal Analysis

Capital Costs

The recommended action requires a total capital expenditure of roughly \$6.1 million. This includes \$1.5 million for a roof replacement, \$580,000 for the replacement of the wood floor with concrete on the first floor, and \$4 million for interior improvements. It is important to note that some of the interior improvements (beyond those of infrastructure or shared amenities) will be borne by the tenants.

While the roofing and flooring costs are roughly shared by the several Delftree business units (mushrooms, new customer service and fulfillment center, self-storage, Williamstown Theatre Festival, North Adams Sheet Metal, and the batting cages), the bulk of the interior improvements (\$3.43 of \$4 million total) are related to the conversion of the mill into the call center and distribution facility. This related the necessary infrastructure improvements, as well as the interior finishing that will be required. Other interior improvements are recommended throughout the building, to add amenities and bring it fully up to code. The attached table details the breakdown of these costs.

Financial Benefits

In the case of existing Delftree businesses or tenants (everything except for the call center) existing lease rates or net-income was used as a projection of future revenue. Thus, assuming improvements to the building lead to increased revenue, this is a conservative estimate.

For the call center and distribution facility, the team used an estimate of rental rates provided by Matt Harris of Village Ventures and David Carver of Scarafoni Realty. Since the space serves both as office and warehouse space, the lease rate will be lower than that of pure office space, but higher than that of pure warehouse. Weighted, the group, along with the two aforementioned professionals, valued the space at \$6 per square foot for all 118,000 square feet, for a total of \$708,000 per year.

Since the annual square footage projected revenue only provides the annual figure of a long-term revenue stream, the valuation was determined using a 10 percent capitalization rate, just as the group did in its analysis. Using this cap rate created a building valuation of nearly \$11 million. This far exceeds the \$6 million capital expenditure, leaving gross income of roughly \$4.8 million. As indicated, this figure is for gross, not net-, income, as it does not take into account the overhead of operating the building, with the exception of the mushroom business, which has its overhead computed into its project annual revenue. Currently, Delftree's overhead is roughly \$300,000, however, with streamlining and efficiency measures, that figure can probably be reduced.

Specifically for the call and distribution center, it is estimated that the tenant will contribute over \$700,000 to Delftree annually in the form of rent payments. The tenant will likely cover all utilities and taxes. Its valuation is therefore \$7.8 million. Given its total capital expenditure of \$4.86 million, its total gross income is roughly \$2.2 million.

These recommendations fulfill our clients need for increased income and cash flow as it provides the Delftree Corporation with a reliable tenant who will occupy a large portion of the building and provide ample monthly payments to allow for any ongoing maintenance needs as well as provide a profit to Delftree. The recommendations produce net-income that far exceeds that of its current situation.

Authors' note: Please refer to our appendix for research and recommendations on improving the current uses in the mill building right now. We believe that these improvements are necessary in the short term to help increase revenues and maintain the building until a larger tenant can be found to help provide capital for the large scale renovations.

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APPENDIX

A. Improve Current Use Recommendations

Delftree can continue to function within the status quo scenario with some slight alterations to marketing, production, and incorporation of innovative technologies. The mushroom production requires the most costs and inputs, while simultaneously generating enough revenue to cover the overhead costs of the building. With increased marketing, and possible diversification within the shiitake mushroom market, Delftree could expand into more niche markets. The quality of the mushrooms, whether grade A or B seems to fluctuate drastically and consequently can not be relied upon at this time. There could be possible research development into finding different strains to continually produce higher grade mushrooms, something claimed to be very difficult by Delftree.

The mushroom market has become driven by the large corporations. Philips, a large mushroom grower in Pennsylvania, has turned organic and consequently has driven most of the small farmers out of the mushroom business. In the last 20 years the production of mushrooms has shifted to a few large corporations. Clorox and Campbell's soup, two large food corporations, began to import mushrooms from huge production centers in China and further decreased small farmer viability in the market. These large corporations also fixed prices and consequently segmented the market into large corporations and cooperatives where small farmers band together and share the infrastructural costs of composting, canning, and packaging to reduce overall costs. In order for a small farmer to remain economically viable in the market he must increase the quality of his mushrooms, to create a better valued product. Increased marketing to the right places, such as niche markets in cities, but also going directly to the market to diminish the in-between costs.⁸⁴

Delftree could work to expand their market by offering alternative preparations of the mushrooms. Already they sell shiitakes with the stems removed to Williams College, and an expansion into cut, canned, or other preparations could be accommodated if price benefits were high enough. Delftree has by no means exhausted the market options for shiitake mushrooms, and increased investigation into these areas is needed to come up with constant as well as expanding opportunities.

There could also be incorporation into altering the input and output flows with innovative technologies. According to Buzz Ferver, a previous employee in the mushroom business in Pennsylvania and now currently employed at the Intervale Foundation in Burlington, Vermont, the sawdust waste of the logs are an incredibly organic and sought after compost material, especially when it's 100% certified organic. Delftree could eliminate the cost of removing the residual logs by selling them to a composting producer or direct to a farmer, due to the high compost potential of the waste material. A partnership with a farmer that is performing large scale composting, could be very beneficial. Currently, there are very few options to diversify the log by product into compost, although none are likely to become a significant source of revenue. The Center for Ecological Technology in Pittsfield, MA, has a food waste recycling project. They can provide assistance by helping to design, implement, and troubleshoot projects concerning organic waste recycling. These are grant-funded projects or on a fee-for-

⁸⁴ Ferver, telephone interview April 7th, 2005

service basis for private clients. Two possible local farmers accepting organic wastes for composting are Dicken Crane of Holiday Farm in Dalton, and Rob Martin of Martin's Farm in Greenfield. However, there is little opportunity to get paid for the disposal of organic waste on either of these farms.⁸⁵

Another alternative would be to dry the logs and burn them in a solid fuel. The dried log content has been examined and shown to have very high stored BTUs, and thus could potentially be burned in a solid fuel boiler to produce heat and possibly electricity for the complex. According to Charlie Cary of Biomass Combustion Systems, electricity production would not be cost-effective and likewise heat generation could not be financially justified unless the system were to be kept running all year long. Otherwise, to use the kind of biomass furnaces his company designs and installs would require that the substrate be 2 ½ inches or smaller and be less than 40% water.⁸⁶ Thus, the logs that Delftree produces would need to be dried out before burning to increase efficiency and this could be done by leaving them on the racks past the mushroom harvest. By incorporating this step into the production line there would be little extra work needed for the collection of logs for fuel. A solid fuel burner produces 10% of ash or less from the logs. Greenwald stated explicitly that he tried burning coal in a brand new, anthracite-fired (coal) boiler at one point and it was a nightmare. Greenwald also was on the board of directors of a wood pellet fuel company in Adams, MA, that went out of business because commercial-sized boilers of that nature are too much of a hassle for the savings they generate.⁸⁷ Even with the high increase of natural gas prices, Greenwald stated that he would never want to return to a central heating system.

According to David, a former researcher at Intervale and co-founder of Green Mountain Mycosystems, some mushroom farmers have been exploring ways to recycle their waste material and reuse it as substrate for further shiitake growth. No small danger with this method is the relatively high risk of contamination, which at the very least result in poorer quality mushrooms and at the worst, wipe out an entire crop. However, there has been some success with this method when the waste material is sterilized in a pressure cooker at 15 psi for 4 hours.⁸⁸ Other farmers have been known to use spent mushroom substrate as a nutritious additive to the feed they give to livestock, as oyster mushrooms have been shown to enrich the straw on which they grow with high concentrations of lysine, an essential amino acid. According to Brian, no studies have been done to determine whether shiitakes would have a similar affect, although this is another possibility to investigate further.

In one experimental setup of the Advanced Farm Ecosystems program at Intervale, researchers have been experimenting with a combination of mushroom, red worm and tilapia fish production, all of which benefit from one another in creative and synergistic ways. After it is served its purpose as mushroom substrate, the organic waste product (straw, sawdust, or whatever it may be) is used as a medium for growing red worms. The red worms not only decompose, aerate, and enrich the substrate, making it an attractive compost material, but they also fetch a high price themselves when sold for bait. What red worms are not sold get used as food for the tilapia fish, which is a tropical

⁸⁵ Majercak, email correspondence. May 2, 2005.

⁸⁶ Cary, May 5, 2005.

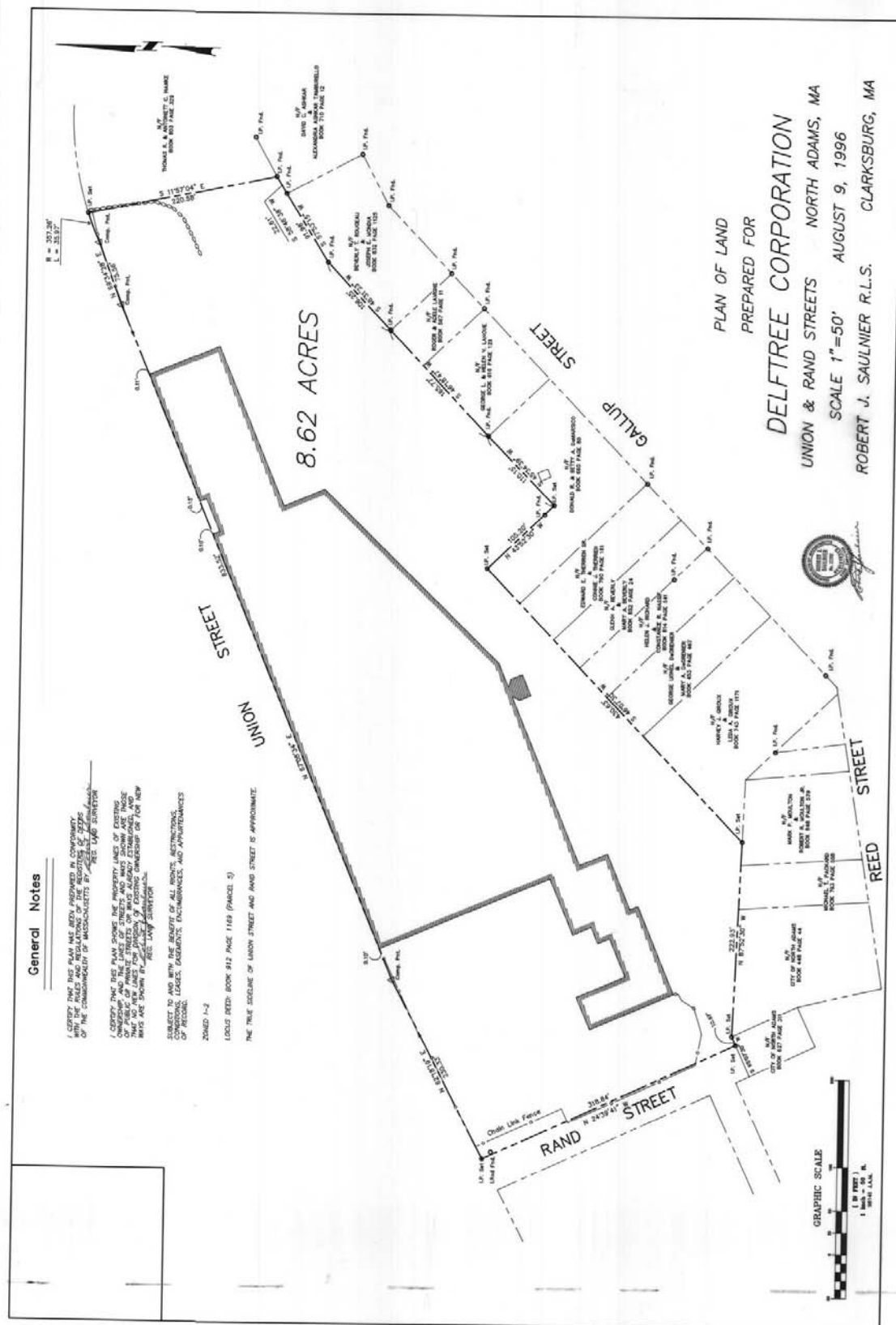
⁸⁷ Greenwald, personal interview.

⁸⁸ Demarest, May 5, 2005.

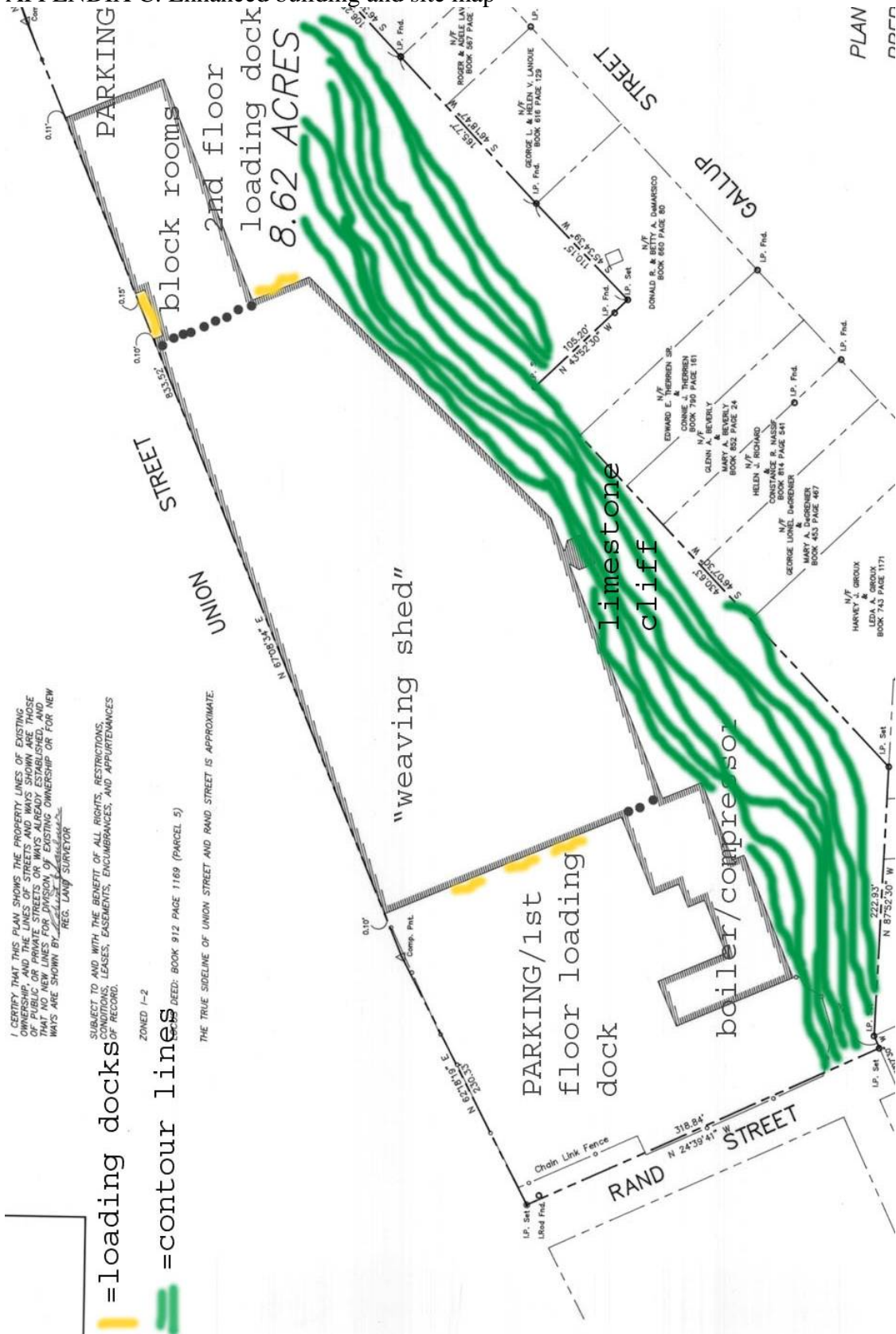
fish species that is typically grown in aquatic tanks at a temperature of 82 degrees Fahrenheit. The liquid fish manure can then be collected and added to the compost, enriching this material even further. The fish themselves are often sold to local restaurants or consumers and are apparently quite tasty.⁸⁹

⁸⁹ Demarest, May 5, 2005.

APPENDIX B: Site Map, Delftree Corporation



APPENDIX C: Enhanced building and site map



APPENDIX D: Alternatives Comparison

Delftree Mill Redevelopment - Alternatives Comparison						
	<u>Alternative 1</u> <u>Status-Quo</u>	<u>Alternative 2</u> <u>Improve Roof</u>	<u>Alternative 3</u> <u>Warehouse/Industrial</u>	<u>Alternative 4</u> <u>Residential</u>	<u>Alternative 5</u> <u>Commercial</u>	<u>Alternative 6</u> <u>Recreation</u>
Potential Use						
Potential Tenant Types	Current	Current, but find ways to shave costs, though efficiency, closed-loop, etc. processes	Industrial warehousing, light manufacturing, assembly, distribution	Artist's lofts, condos, affordable, senior housing, assisted living	Professional offices, back-offices, gallery space, retail, big box	Senior ctr, community ctr, after-school ctr, recreation, farmer's market
Zoning Needs	Approved	Approved	Approved	Zoning change / SP (studios)	SP	SP
Potential Funding						
Viable	Private, debt	Private, debt	Private, debt, in-kind TI, net-TI, joint-venture	Private, debt, joint-venture	Private, debt, in-kind TI, net-TI, joint-venture	Private, debt, joint-venture, in-kind TI
Non-Viable		Historic preservation, farm viability, CDBG				CDBG, North Adams
Construction Needs						
Roof Needs	N/A	Quick Fix	Major w/o skylights	Major w/skylights	Major w/w/o skylights	Major w/o skylights
Roof Costs	\$ -	\$ 250,000	\$ 1,500,000	\$ 4,500,000	\$ 3,000,000	\$ 1,500,000
Floor Costs	\$ -	\$ -	\$ 10	\$ 10	\$ 10	\$ 10
Renovation Cost psf	\$ -	\$ -	\$ 10	\$ 150	\$ 115	\$ 110
TOTAL COST PSF	\$ -	\$ 1	\$ 21	\$ 173	\$ 132	\$ 121
TOTAL COST	\$ -	\$ 250,000	\$ 5,500,000	\$ 43,500,000	\$ 33,250,000	\$ 30,500,000
Fiscal Benefits						
Projected Revenue psf py	\$ 0.52	\$ 0.52	\$ 3.00	\$ 36.00	\$ 10.00	\$ 2.00
Projected Net-Income psf (\$ 0.52	\$ (0.48)	\$ (18.00)	\$ (137.00)	\$ (122.00)	\$ (119.00)
Payback period (years)	0.0	0.9	6.0	3.8	12.2	59.5
Community Impact						
Employment	20	20	10-100	5	625	25
Housing	0	0	0	100	0	0
Community Service Demands	0	0	0	+	+	+
Tax Revenue	0	0	0	+	+	-
Consistency w/Local Policy	-	-	-	+	+	-
Consistency w/Regional Goals	+	+	+	+	+	+
Market Feasibility						
Current Market Saturation	N/A	N/A	Non-saturated	Unknown, lots in pipeline	Saturated	
Potential Market Demand	N/A	N/A	Reasonable	High	Little for retail, some offic	Unknown, potentially low

APPENDIX E: Modified Planning Balance Sheet

Delftree Mill Redevelopment - Planning Balance Sheet													

APPENDIX F: Recommendation Fiscal Analysis Sheet

DELFTREE MILL REDEVELOPMENT - FINAL RECOMMENDATION FISCAL ANALYSIS

Use	Customer Service & Fullfillment Facility				Self-Storage*		Theatre Festival	Sheet Metal	Batting Cages*^	
	Call Center		Distribution							
Square Feet	-	25,000	58,000	35,000	-	22,000	22,500	7,500	5,000	-
Floor Location	1	2	1	2	1	2	2		1	2
Financial Costs										
Roof psf	\$ -	\$ 20.00	\$ -	\$ 10.00	\$ -	\$ 10.00	\$ 10.00	\$ -	\$ -	
Roof total	\$ -	\$ 500,000.00	\$ -	\$ 350,000.00	\$ -	\$ 220,000.00	\$ 225,000.00	\$ -	\$ -	\$ -
Floor psf	\$ 10.00	\$ -	\$ 10.00	\$ -	\$ 10.00	\$ -	\$ -	\$ -	\$ -	
Floor total	\$ -	\$ -	\$ 580,000.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Interior psf	\$ 100.00	\$ 100.00	\$ 10.00	\$ 10.00	\$ 15.00	\$ 15.00	\$ 7.50	\$ 10.00	\$ -	
Interior Total	\$ -	\$ 2,500,000.00	\$ 580,000.00	\$ 350,000.00	\$ -	\$ 330,000.00	\$ 168,750.00	\$ 75,000.00	\$ -	\$ -
TOTAL COST	\$ -	\$ 3,000,000.00	\$ 1,160,000.00	\$ 700,000.00	\$ -	\$ 550,000.00	\$ 393,750.00	\$ 75,000.00	\$ -	\$ -
AGGEGATE TOTAL COST	\$ 4,860,000.00				\$ 550,000.00		\$ 393,750.00	\$ 75,000.00	\$ -	
Financial Benefits										
Projected Revenue psf/yr	\$ 6.00				\$ 2.78		\$ 2.50	\$ 2.50	\$ -	
TOTAL PROJECTED REVENUE/YR	\$ 708,000.00				\$ 61,220.86		\$ 56,250.00	\$ 18,750.00	\$ -	
TOTAL PROJECTED VALUATION	\$ 7,080,000.00				\$ 612,208.58		\$ 562,500.00	\$ 187,500.00	\$ -	
TOTAL GROSS INCOME#	\$ 2,220,000.00				\$ 62,208.58		\$ 168,750.00	\$ 112,500.00	\$ -	

Exclusive of building overhead costs

* As this is a Delftree Corp.-owned business, revenue psf/yr actually represents net-income for that business sector.

^ Revenue non-computable as this represents a joint-venture that has yet to turn a profit.

I CERTIFY THAT THIS PLAN SHOWS THE PROPERTY LINES OF EXISTING OWNERSHIP, AND THE LINES OF STREETS AND WAYS SHOWN ARE THOSE OF THE CITY OF LOS ANGELES, AND THAT THE LINES OF STREETS AND WAYS ALREADY ESTABLISHED, AND THAT NO NEW LINES FOR PERSONS OR OWNERSHIP OR FOR NEW WAYS ARE SHOWN BY _____
REG. LAND SURVEYOR

I CERTIFY THAT THIS PLAN SHOWS THE PROPERTY LINES OF EXISTING OWNERSHIP, AND THE LINES OF STREETS AND WAYS SHOWN ARE THOSE OF PUBLIC OR PRIVATE STREETS OR WAYS ALREADY ESTABLISHED, AND THAT NO NEW LINES FOR DIVISION OF EXISTING OWNERSHIP OR FOR NEW WAYS ARE SHOWN BY THIS PLAN.

SUBJECT TO AND WITH THE BENEFIT OF ALL RIGHTS, RESTRICTIONS, CONDITIONS, LEASES, EASEMENTS, ENCUMBRANCES, AND APPURTENANCES OF RECORD.

ZONED 1-2

LOCUS DEED: BOOK 912 PAGE 1169 (PARCEL 5)

THE TRUE SIDELINE OF UNION STREET AND RAND STREET IS APPROXIMATE.

Maintain Current Use - Mushrooms

8.62 ACRES

STREET 1

UNION

53,000 sf

NEW-Distribution

58,000 sf

Truck Access & Turn Around

Maintain
Current Use

PLAN OF LAND
PREPARED FOR

APPENDIX H: Recommendation 2nd Floor Building Plan

