



Northern Mills Market Analysis Lee, Massachusetts

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Prepared for:

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EPA's Office of Brownfields and Land Revitalization (OBLR) provides financial and technical assistance for Brownfields and Land Revitalization activities through an approach based on four main goals: protecting the environment, promoting partnerships, strengthening the marketplace, and sustaining reuse. The mission of OBLR's Land Revitalization Program is to restore land and other natural resources into sustainable community assets that maximize beneficial economic, ecological, and social uses and ensures the protection of human health and the environment. Through the program, Land Revitalization staff from the EPA Regional Offices work with OBLR to help local communities to plan and implement sustainable solutions that promote brownfields cleanup and the long-term viability of brownfields revitalization.

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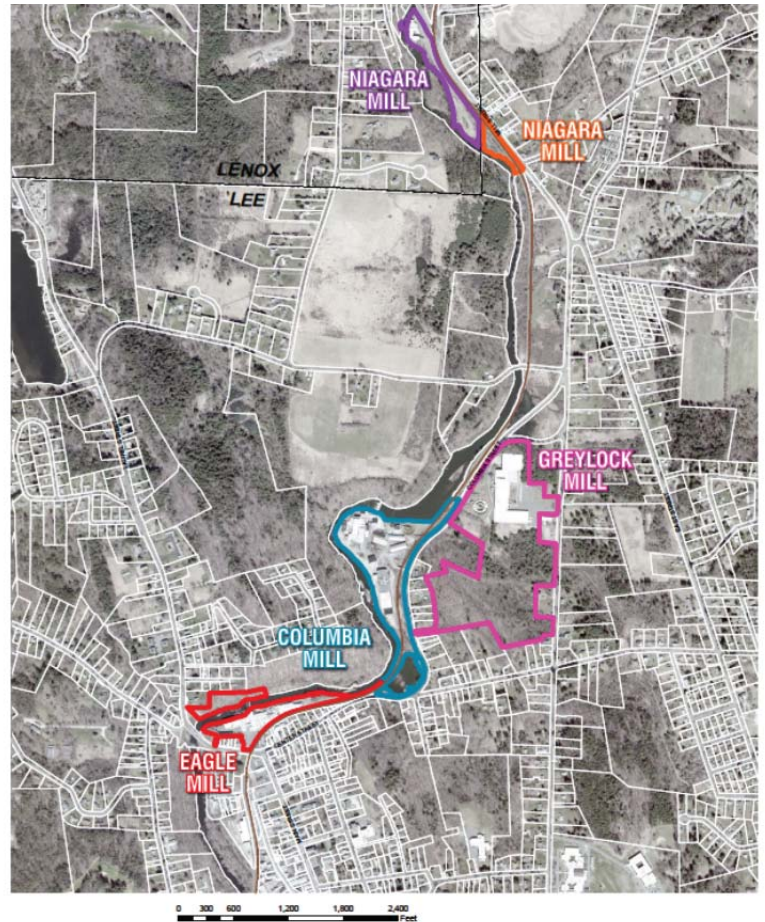
1. Introduction

The Lee Northern Mills Brownfields Areawide Planning (AWP) project area is a 700-acre historic, industrial area in the midst of densely developed residential neighborhoods, former mill housing, and a downtown. It consists of four former paper mills (located within 1.5 miles of one another) as the catalyst sites for the project. The main purpose of the project is to inform the environmental assessment, cleanup, and subsequent reuse of the mill properties. The project includes identifying community priorities, local infrastructure needs, market feasibility, and environmental conditions which would help determine viable future uses for the four catalyst/high priority brownfields. The AWP project champions within the community include the Berkshire Regional Planning Commission (BRPC) and the Lee Town Administrator. Other key project partners that make up the Stakeholder Group include the Housatonic Valley Association, Lee Community Development Corporation (CDC), Town of Lenox, MassDevelopment, and 1Berkshires, as well as former mill managers, representatives of the community, mill owners, and developers.

ICF began our assessment by providing a third party expert to review and identify gaps in previous market and economic assessment documents prepared for the Lee Northern Mills AWP project by a previous contractor. We captured those findings in a separate Gap Memo, found in Appendix A. This report presents a next-level discussion addressing local commercial and industrial market dynamics, and is intended to provide concepts applicable to an on-the-ground strategy and tactics for successful property reuse and redevelopment. The Town of Lee can incorporate the information in this report into their AWP project by using these concepts to validate community preferences and further refine proposed scenario redevelopment for the four mill sites. The information discussed in this report is intended to more specifically incorporate emerging economic opportunities into Lee's area-wide planning and frame the discussion regarding property reuse.

Section 2.0 presents an overview of the economic context for the Northern Mill site redevelopment by providing background on the regional economy and shifting economic trends, as well as the specific

Figure 1: Site Map



Source: The Cecil Group.

community priorities identified by the previous analysis. Section 3.0 discusses the local commercial retail market in detail. Because locally serving businesses are vital to creating an amenity-rich community, it is important to understand the retail and service potential, including local demographics, retail sales, demand, and leakage, in order to identify the retail sectors that have the most potential for success in Lee and the surrounding region. Section 4.0 discusses the commercial real estate context and potential space demands of likely uses. Lastly, Section 5.0 provides case studies of similar relevant successes and leverages the results of the previous analyses to identify development opportunities for each mill site. This final discussion of market alignment includes both the realities of the retail leakage and real estate market analyses in the context of what the community has shown enthusiasm. This final section provides a menu of development opportunities that potential developers should consider for these sites.

The Town of Lee is looking ahead and visualizing a resilient economy that balances a ‘sweet spot’ between: community priorities; economic development; and adaptive reuses and development that support modern business models.

2. Economic Context

2.1. Lee’s Economic History

The Town of Lee, Massachusetts was incorporated in 1777. Lee is part of the Pittsfield Metropolitan Statistical Area (MSA), which shares a common labor market, setting, and economic resources. Early industries included agriculture, lumbering, lime production, and granite quarrying. Abundant streams and rivers provided water power for mills which produced textiles and wire.

In 1806, papermaking became the principal industry with the construction of the Willow Mill by Samuel Church and by 1857 there were 25 paper mills in Lee. The Smith Paper Company was the largest producer of paper in the country from 1867 through the 1870s. Manufacturers and servicers located on the Lower Greenwater Stream made equipment, supplied repair parts, and provided maintenance service to keep the paper mills in operation. Notably, the Clark-Aiken Company was an important provider of metal components to the mills.

Since the closure of the Clark-Aiken Company and the remaining paper mills in 2008, the Town of Lee is rebounding from these economic shocks and the Great Recession. The economic base has broadened in recent years encompassing more small-scale manufacturing, research, and service industries and occupations.

2.2. Labor Force and Economy-wide Dynamics

Based on household income data collected from ESRI, the population within a 15 minute drive-time of Lee is dominated by an older demographic with 36% of households categorized as 65 years of age or older. The median age within this area was 48.9 in 2015, and it is expected to increase to 50.4 years by 2020, indicating that the population is aging, without a significant influx of young individuals. The area within a 30 minute drive-time of Lee has a similar demographic, with 32% of households categorized as 65 years of age or older. Interviews with county planning and economic development representatives indicate that the community’s younger population tends to leave the area for larger cities and greater economic opportunity, as evidenced by the 18 to 34 year old population comprising less than 18% of the population. This skew in age distribution may be due in part to Lee’s attractiveness to retirees; however the relatively low percent of younger population is notable. The available workforce likely follows a similar cohort trend.

Although there are a large number of second-home owners in the area and many visitors during the summer season, Lee is a place where people want to live. As cited in FXM Associates' Commercial Market Assessment¹, year-round housing tenures range from 24.1 years for home owners and 10.3 years for renters.

2.3. Shifting Economic Dynamics Lead to Shifting Business Opportunities

As noted by an overwhelming number of analysts, economic advancement tends to shift industry away from subsistence production and towards value-added businesses. This is true in Lee, a town that has evolved through agrarian and resource extraction-based industry, through paper and other processing, and most recently experienced a shift towards knowledge-and craft-based businesses. Throughout this continuum, local consumer tastes, visitors, and second-home buyers have created a local market for consumer goods and services. Lee's surrounding region has developed as a popular cultural arts destination, supportive of local craftsman and artists.

Regional economic developers have observed that while it is difficult for Lee to attract large business operations and corporate headquarters, the local economy is experiencing an expansion in the "creative economy" and "knowledge economy." Furthermore, there have been recent successes regionally with the creation of incubators, flexible work-space and makerspaces developed to support an increasing demand from the creative and knowledge economy.

There are many definitions of the **creative economy**. Creative skills cut across many industries and business types: large, small, and startup. Creative occupations cut across manufacturing and knowledge industries. In addition to providing employment opportunities, the creative economy contributes to the overall quality of life in the area. In turn, research indicates that areas that are rich with amenities are able to attract both knowledge and creative workers, thereby further reinforcing the perceived economic outlook for the region.

A 2013 report from the Creative Economy Coalition (CEC) analyzes creative occupations as experienced by different regions across the country. CEC summarizes the most typical occupations in this category, such as:

- Architects, except landscape
- Commercial and industrial designers
- Graphic designers
- Interior designers
- Landscape architects

Lee's proximity to a variety of cultural attractions draws seasonal residents and visitors from throughout the East Coast, and many of these part-time residents own condominiums or homes in Lee. With over 700 seasonal residents and many more daytime visitors, Lee experiences an increased population in the summer months. A 2012 Regional Transportation Plan estimates that the volume of summer traffic in Lee is approximately 10% higher than the annual average daily traffic (AADT), and can reach a maximum

¹ Technical Memorandum: Rental Housing Market Assessment, FXM Associates, July 31, 2014.

of 50% higher than the AADT.² Lee's economy benefits from this summer surge, as visitors spend their money at local businesses such as restaurants and retail stores. Although attractions in Lee do not draw as many guests as nearby towns, such as Great Barrington, Stockbridge and Lenox, visitors on their way to attractions in neighboring towns and the local outlet mall frequent Lee's downtown businesses, restaurants, bed and breakfasts, and gas stations. Nevertheless, Lee currently offers a diverse array of attractions for visitors and residents alike, including:³

- Jazz Festival in June
- Proximity to Tanglewood, in nearby Lenox
- Lee Premium Outlets
- Theater & Dance festivals throughout the year
- Farmers' Market (May – September)
- Animagic Museum of Animation
- Contemporary Art Gallery
- Glass Bottom Brewery
- Downtown Lee Walking Tour
- October Mountain State Forest
- Sandy Beach
- Oak N' Spruce health club
- Hiking trails & scenic drives
- Various restaurants & bed and breakfasts

The **knowledge economy** relies on intellectual capabilities rather than on physical inputs or natural resources. The knowledge economy is based on the concept that knowledge and education (human capital) are critical productive assets. As a basic industry, educational and innovative intellectual products and services can be exported from the region for a high value return. Examples of knowledge-based industries include the following industry sectors:

- Information (database, web programming, and other information services)
- Professional, Scientific, and Technical Services
- Educational Services
- Arts, Entertainment, Recreation
- Finance & Insurance
- Real estate and Leasing
- Health Care and Social Assistance

Lever, a North Adams-based incubator for entrepreneurship and social innovation is demonstrating that there is growing traction for the knowledge economy in the region. Cloud85, a co-working space, also in North Adams that spun out of Lever has been successful at tapping into the knowledge economy workforce and satisfying a demand for flexible office space in an amenity-rich community.

² Lee Open Space and Recreation Task Force, Lee Youth Commission, Lee Conservation Commission, Lee Planning Board, Berkshire Regional Planning Commission. Open Space and Recreation Plan for Lee, Massachusetts. July 14, 2015. http://berkshireplanning.org/images/uploads/projects/Lee_OS RP_Draft_for_Comment_7.14.2015.pdf.

³ Lee Chamber of Commerce. Official Guide 2015-16. <http://pubs.hawthorncreative.com/leechambers/>.

Lee already has demonstrated the ability to capitalize on this economy-wide trend towards the knowledge economy and its region's characterization as a creative, amenity-rich place to live and work by successfully transforming vacant or underutilized properties into modern work spaces. Berkshire Sterile Manufacturing, Inc., a biopharmaceutical startup company, is a prime example of a local knowledge-based business that makes its home in Lee. In 2014, Berkshire Sterile Manufacturing announced its plans to buy and renovate a 116,000-square-foot building in Lee. Renovation plans for the former KB Toys warehouse entailed a new manufacturing facility including clean rooms, labs, and work rooms for product formulation, final inspection, and packaging.

2.4. Community Priorities

According to 1Berkshire, Lee's location is not highly conducive to attracting corporate relocations and such business attraction efforts have been implemented without success, in part due to a lack of adequate broadband infrastructure. The community does not have the resources to support large business and instead economic growth will likely be generated from small, local businesses that will expand by hiring locally.

Community priorities voiced during the Brownfields AWP process for reuse of the Northern Mill Sites align with the regional economic growth strategy stated by 1Berkshire: growth from within. There is interest in redeveloping the sites that were once job generators to support new job generators, such as lifestyle amenities that support entrepreneurs, business owners, and the resident workforce that will manage and staff an emerging knowledge and creative economy.

Tenant types, ranked high and medium by the community during the outreach efforts conducted under the Brownfields AWP process are summarized in Table 1.

Table 1. Community Proposed Development Concepts

Tenant Type	Community Ranking	Potential Business Opportunity
Small-Scale Production	High	Micro-brewery, food production
Light or Small Scale Industry	High	Production/Distribution
Event space	High	Expositions, museum, art/culture
Mixed Use	High	Uses include boutique hotel, restaurant, commercial office and retail, new residential, performance/exhibition space
Office, co-working, medical offices	High/Medium	knowledge, technology, start-ups, co-work, medical
Recreation, Outdoor	High/Medium	Kayak/canoe landing, bike path/riverwalk
Recreation, Indoor	Medium	Organized sports venue/fitness center
Institutional	Medium	Technical training
Industrial	Medium	Warehousing and distribution/Aquaculture (possibly reusing WWTF including clarifiers)
Food/Food service	Medium	Riverside café/ restaurant

3. Local Retail Market Dynamics

Local serving businesses are vital to creating an amenity-rich community. The market is recognizing this need as evidenced by recent business openings in Lee including at least six new, relocated, or expanding businesses that have opened along the Route 20 corridor, including a pizza restaurant, a craft beer store, a lawn equipment sales and service shop, a consignment boutique, a pet supply store, and a southern California-style café. Therefore, to assess the retail and service potential of the Northern Mills area, ICF profiled the business activity within a 15 minute and 30 minute drive-time of the Lee mill properties, and identified the demand gap for goods and services based on the socio-economic and demographic characteristics of the community. See Figure 2, below. The analysis relies on profiles of the retail marketplace prepared by ICF using 2015 data from ESRI and Infogroup, Inc.⁴

⁴ Copyright 2015 Infogroup, Inc. All rights reserved.

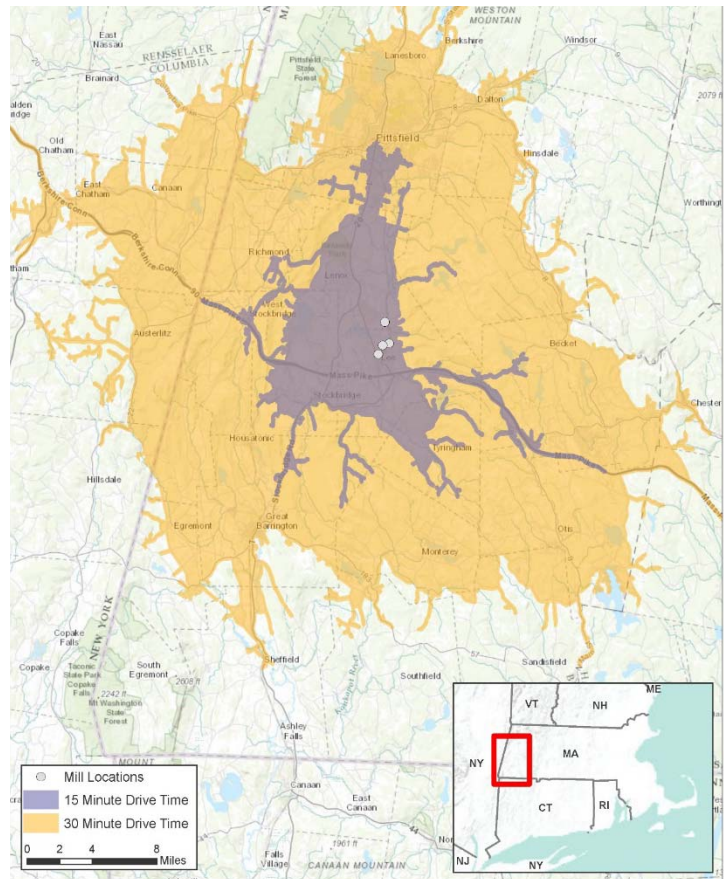
The 15 minute drive-time trade area was chosen as most representative of the Town of Lee; the trade area encompasses a total of 61.23 square miles. The 30 minute drive-time area was chosen to represent the Lee-Pittsfield trade area, which is commonly traversed by locals in the region. The latter trade area contains a large outlet mall located along I-90, a major interstate with significant ridership, connecting local residents, visitors, and I-90 travelers to retail opportunities in Lee and the surrounding area.

3.1. Retail Business Opportunities⁵

This section of the analysis compares the retail market within the immediate trade area of the Northern Mills brownfields sites (15 minute drive-time from the Northern Mills area) with the retail market within an expanded area of the site (30 minute drive-time from the Northern Mills area). A population of 18,480 lived within a 15 minute drive of the Northern Mills area in 2015. With approximately 2.12 residents per household, there were 8,433 households within a 15 minute drive-time in 2015. These households earned an average annual income of \$70,259, with a median household income of \$54,452. The per capita income in this area was \$32,087 in 2015, and approximately 45% of households earned less than \$50,000. Within a 30 minute drive-time radius around the Northern Mills sites the 2015 population was 84,208. Within this area, there were 36,975 households with an average household size of 2.20 residents. The average household income in 2015 was \$67,283, with a median household income of \$50,017. Residents earned a per capita income of \$29,675, and approximately 50% of households in this area made less than \$50,000 in 2015.

Business owners, developers and planners can use the following information to better understand the characteristics of the trade area and the types of local-serving retail businesses with the greatest potential for success and greatest community benefit. Within a 15 minute drive-time, there are 356 registered businesses, 256 of which are in retail trade (e.g., home furnishings, motor vehicles, clothing stores) and 100 of which are in the food and drink industry (e.g., restaurants or bars). The top 10 largest industry sectors are indicated in Figure 3.

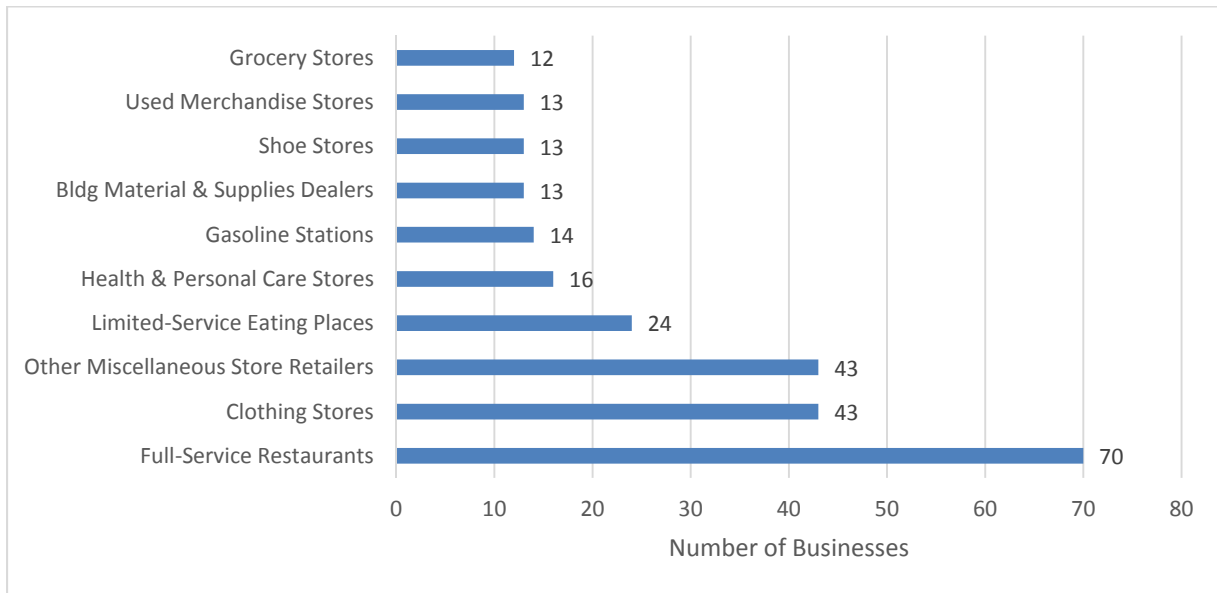
Figure 2. Drive-time Trade Areas



Source: Esri Retail Marketplace Profile, Prepared by ICF

⁵ All data for the Retail Market Demographics Section comes from Esri Forecasts for 2015 and 2020, which rely on the U.S. Census Bureau, Census 2010 Summary File 1.

Figure 3. Number of Businesses by Industry Group within a 15 Minute Drive-time

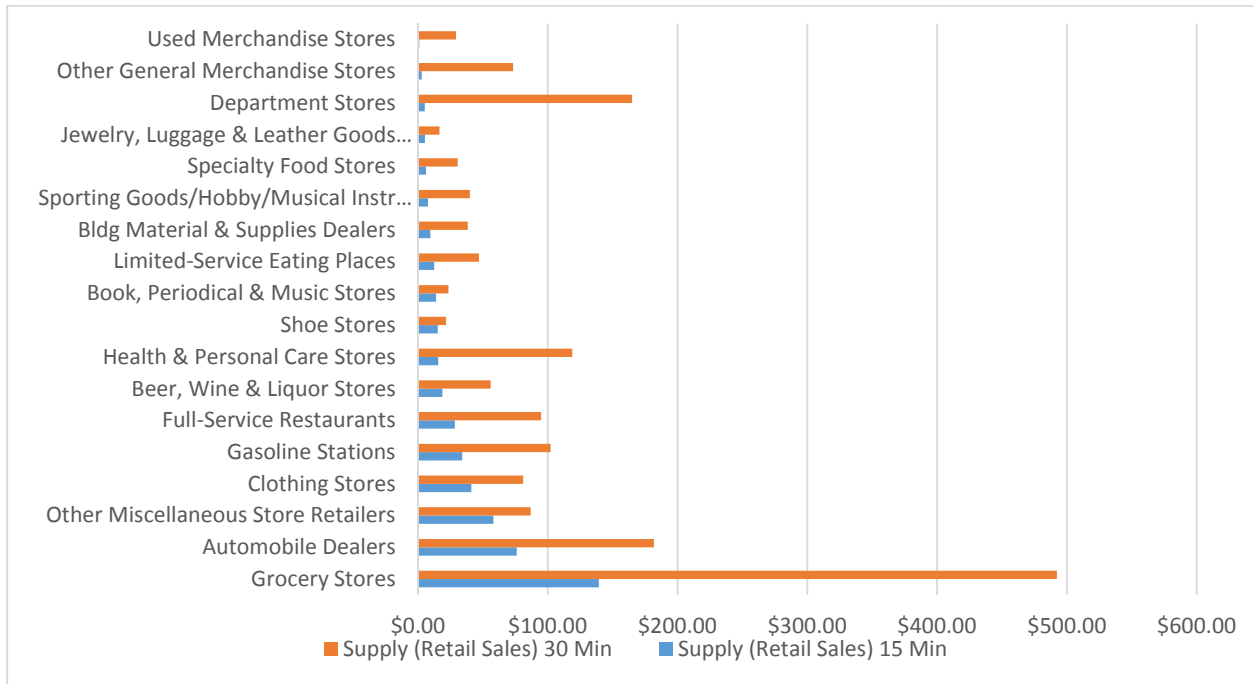


Source: Esri Retail Marketplace Profile, Prepared by ICF International

Broadening the study area, data indicates that there are 1,278 registered businesses in the 30 minute drive-time area, 918 of which are in retail trade, and 360 of which are in food and drink services, the majority of which are full-service restaurants. The businesses and industry sectors in the expanded area differ slightly from the businesses located within the immediate vicinity of the site. Full-service restaurants and clothing and retail stores still dominate the industry profile, with 243 and 200 registered businesses, respectively.

Retail demand, measured in terms of 2015 retail sales, demonstrates spending that is occurring within the trade area, including spending by consumers who have travelled to the area to purchase a good or service. Within a 15 minute drive-time of the Mill sites, grocery stores draw the most in retail sales, with over \$139 million in sales annually. Grocery stores also earned the most in the 30 minute drive-time area, with approximately \$492 million in 2015 retail sales. Automobile dealers earn the second most in retail sales, with over \$76 million annually within the 15 minute drive-time area and over \$181 million reported for the 30 minute drive-time area. Figure 4 illustrates a comparison of the annual retail sales by industry within each study area.

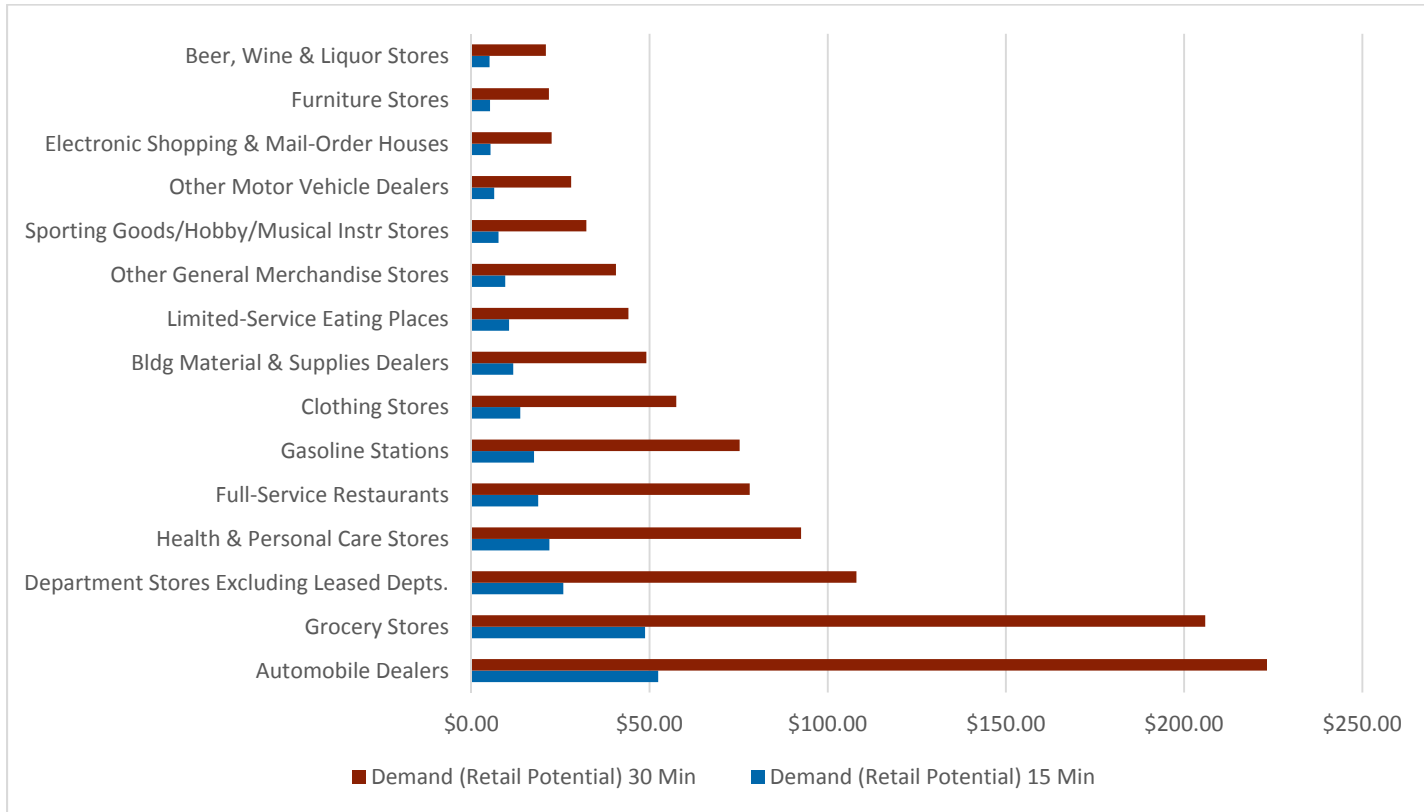
Figure 4. Annual Retail Sales (\$ millions) by Industry within a 15 Minute or 30 Minute Drive-time from the Northern Mills Area



Source: Esri Data, Compiled by ICF International. Data is for 2015.

The sales information provides a good picture of the current demand, but what is more useful in this context is to understand the retail potential, or the amount of money that consumers in the area are willing to spend on each industry. Figure 5 depicts retail potential (or demand) by industry within the 15 minute drive-time trade area. Demand is greatest for automobile dealers, grocery stores, and department stores; however, some of that demand is already met by the supply, therefore the most appropriate measure of which industries could expand in the area is actually the gap between the demand and supply, or the retail potential.

Figure 5. Annual Retail Demand (\$ millions) by Industry within a 15 and 30 Minute Drive-time



Source: Esri Data, Compiled by ICF International

Tables 2 and 3 provide information about the retail gap within the immediate and surrounding trade area. As shown in Table 2, within the 15 minute drive-time trade area, the types of establishments that are facing an untapped retail potential are department stores, other general merchandise stores, health and personal care stores, electronic shopping and mail-order houses, other motor vehicle dealers, furniture stores, building material and supplies dealers, and auto parts, accessories, and tire stores. While Lee might not prioritize these uses for the redevelopment of the Northern Mills, the retail market could support more of these types of businesses.

Table 2. Top 10 Industries by Retail Gap within a 15 Minute Drive-time, 4 Digit NAICS Code

Industry Group	NAICS Code	Retail Gap 15 Minute Drive-time (\$ millions)
Department Stores Excluding Leased Depts.	4521	\$20.55
Other General Merchandise Stores	4529	\$6.67
Health & Personal Care Stores	4461	\$6.33
Electronic Shopping & Mail-Order Houses	4541	\$5.34
Other Motor Vehicle Dealers	4412	\$5.27
Furniture Stores	4421	\$4.34

Bldg Material & Supplies Dealers	4441	\$2.21
Auto Parts, Accessories & Tire Stores	4413	\$1.52
Lawn & Garden Equip & Supply Stores	4442	\$0.87
Florists	4531	\$0.52

Source: Esri Data, Compiled by ICF International

As shown in Table 3, within the 30 minute drive-time trade area, the types of establishments that are facing an untapped retail potential are quite similar to the more immediate trade area.

Table 3. Top 10 Industries by Retail Gap within a 30 Minute Drive-time, 4 Digit NAICS Code

Industry Group	NAICS Code	Retail Gap 30 minute drive-time (\$ millions)
Automobile Dealers	4411	\$41.56
Electronic Shopping & Mail-Order Houses	4541	\$22.50
Bldg Material & Supplies Dealers	4441	\$10.74
Other Motor Vehicle Dealers	4412	\$5.73
Direct Selling Establishments	4543	\$2.97
Florists	4531	\$1.35
Special Food Services	7223	\$1.11
Vending Machine Operators	4542	\$0.13
Auto Parts, Accessories & Tire Stores	4413	\$0.04
Jewelry, Luggage & Leather Goods Stores	4483	-\$0.31

Source: Esri Data, Compiled by ICF International

The main goal of the commercial market analysis is to provide context in terms of the types of retail the region could support, as well as those activities that lack demand in the commercial market. Understanding the market for lifestyle-related retail, such as florists, specialty food, health and jewelry stores, can help justify the demand for lifestyle retail as well as household and personal services, discussed below.

The market analysis quantifies the retail potential in the Lee region, and while that does provide some context to future growth areas, it does not identify non-commercial opportunities. Furthermore, the market analysis does not account for three changing dynamics that are critical to the development context in Lee and thus need to be considered in the context of the Northern Mills redevelopment effort:

1. the national economy's movement towards knowledge-based industries and emerging technologies;

2. the influence of an amenity-rich region; and
3. the opportunity to transform vacant or underutilized properties into modern work spaces.

3.2. Household and Personal Services Opportunities

The retail opportunities present only half of the commercial market. Services, which comprise the other half, are going to be even more important in a location like Lee that is capitalizing on its local amenities, and thus should be considered heavily in the redevelopment of the Northern Mills sites.

Services include household expenditures for non-retail businesses such as doctors, dentists, allied health professionals, laundry services, financial services, and similar consumer businesses. These businesses can range in size from small to medium and often adaptively reuse existing space, from 500 to 1,000 square feet for a single optometrist, or up to 5,000 square feet or larger for child or adult day care centers. These business types are not classified as retail and therefore do not show up in the retail analysis. However, these business types are important to supporting Lee's quality of life and resident lifestyles.

4. Creating Functional Real Estate Options for Business Growth

The previous section explored the aspects of market context and demand in terms of retail potential. However, an understanding of the real estate and space context is also necessary to vet potential redevelopment opportunities.

4.1. Existing Real Estate Market Conditions

The following sections provide separate snapshots for Berkshire County and the Lee-Pittsfield area real estate market performance during first quarter 2016 and an average performance over the past five years. These are high-level market evaluations are intended to portray the County as background; and a more focused portrait for the Lee-Pittsfield market area. Due to the unique location and market dynamics, a separate feasibility study would be necessary to truly identify the extent of development opportunities in Lee.

Berkshire County Commercial Real Estate Market

A survey of commercial properties in Berkshire County as of first-quarter 2016 and similar surveys for the five previous annual periods were evaluated, as shown below in Table 4. The County office market is stable. Overall, a 2.8% vacancy is considered a good market and the five-year average of 2% is even stronger. With no new construction on the horizon, the office market is expected to remain stable. The addition of new office product to the market may be viable.

The County industrial market has a 7.1% vacancy, which is considered a soft market. The current market is underperforming the five-year trend with slightly lower rental rates and significantly higher vacancies. The current rate may be an anomaly in the survey date, due to business relocations or closings, or an aging building stock. With no new construction on the horizon, the industrial market may strengthen. However, at this point in time indicators show it may not be viable to introduce additional speculative industrial space to the market. A detailed evaluation of underlying market factors may inform a market outlook and strategy.

The County retail real estate market is performing above the five-year trend with higher rental rates. While vacancy rates have been increasing, a 2.7% vacancy has been maintained. This indicates a strong market. With no new construction on the horizon, the retail market is expected to remain stable, if not tighten. The addition of new retail product to the market appears viable.

Table 4. Berkshire County Commercial Real Estate Market Overview – Q1-2016

Market Indicator	Office	Industrial	Retail
Q1-2016 Gross Rent/SF	\$13.30	\$4.01	\$11.18
5-Year Average Rent/SF	\$13.76	\$4.10	\$10.90
Q1-2016 Vacancy	2.8%	7.1%	2.7%
5-Year Vacancy	2.0%	4.4%	2.7%

Source: CoStar Group, Inc.

Lee-Pittsfield Local Commercial Real Estate Market

As shown in Table 5, local office market vacancy rates have remained flat at a very low 2.4, but the rental rates are underperforming the five-year trend. With no new construction on the horizon, this is indicative of a market with stable demand but tenants shifting business locations and forcing landlords to compete over rental rates. Currently the market shows to be in a tentative stable but fragile state. It is not a market that would readily support speculative new construction, but a strong economic development strategy to grow existing businesses and start-ups could push the market into supporting new construction in the next few years.

Table 5. Lee-Pittsfield Office Market Q1-2016

Availability	Q1-2016	5-Year Avg	Inventory	Q1-2016	5-Year Avg
Gross Rent (\$ per SF)	\$13.11	\$14.15	Existing Buildings	228	228
Vacancy Rate	2.4%	2.4%	Existing SF	3,343,957	3,337,854
Vacant SF	78,867	79,584	12 Mo. Const. Starts	0	0
Availability Rate	4.8%	5.3%	Under Construction	0	0
Available SF	159,909	176,039	12 Mo. Deliveries	0	0

Source: CoStar Group, Inc.

As shown in Table 6, the local industrial market is also stable with first quarter 2016 rents slightly exceeding the five-year trend, and vacancy staying virtually flat. These market indicators hint at positive change in the near future, particularly with virtually no new construction currently in the supply pipeline. A 4.3% vacancy is considered at equilibrium with the market and an increase in business expansion and start-ups may greatly improve feasibility for new construction in the next few years. However, at this point in time, indicators show it may not be viable to immediately introduce additional speculative industrial space to the market. An effective economic development strategy would greatly enhance feasibility for new build-to-suit, and possibly speculative industrial space.

Table 6. Lee-Pittsfield Local Industrial Market Q1-2016

Availability	Q1-2016	5-Year Avg	Inventory	Q1-2016	5-Year Avg
Gross Rent (\$ per SF)	\$4.91	\$4.69	Existing Buildings	121	121
Vacancy Rate	4.3%	4.1%	Existing SF	5,860,518	5,860,518
Vacant SF	250,381	241,700	12 Mo. Const. Starts	0	0
Availability Rate	12.6%	11.9%	Under Construction	0	0
Available SF	740,648	699,887	12 Mo. Deliveries	0	480

Source: CoStar Group, Inc.

As shown in Table 7, the local retail market is performing above the five-year trend with notably higher rental rates. Vacancy rates have falling from 2.6% to 2.1% even with market supply growing by about 30,000 square feet. The additional square footage may be accounted for by recent build-to-suit activity, which is also an indicator of positive strength in the retail market. With no new construction currently in the supply pipeline the local retail market is expected to remain strong, if not tighten. The addition of new retail product to the market appears viable, although a feasibility analysis would further define this opportunity.

Table 7. Lee-Pittsfield Local Retail Market Q1-2016

Availability	Q1-2016	5-Year Avg	Inventory	Q1-2016	5-Year Avg
Gross Rent (\$ per SF)	\$12.77	\$11.46	Existing Buildings	535	533
Vacancy Rate	2.1%	2.6%	Existing SF	6,072,913	6,042,756
Vacant SF	124,522	157,544	12 Mo. Const. Starts	0	7,500
Availability Rate	2.8%	3.8%	Under Construction	0	18,169
Available SF	170,044	231,834	12 Mo. Deliveries	0	37,042

Source: CoStar Group, Inc.

Real estate market conditions for Berkshire County and the local Lee-Pittsfield market have been reviewed to gain a high level understanding of underlying regional market dynamics. The Lee-Pittsfield market appears to be on a positive path and performing well in comparison to the County. While new industrial and office development may still be a few years away, the mill properties provide an

opportunity to provide space through adaptive reuse. The retail market shows itself to be healthy and potentially strong enough to support near-term adaptive reuse and possible additional build-to-suit development. This outlook has not considered physical and locational conditions for the existing building stock; and the implementation of economic development strategies that will focus on matching space needs to growing and start-up businesses.

4.2. Potential Space Demands

Given the commercial market and real estate characteristics discussed above, startups and growing businesses in Lee are anticipated to include the following types of tenants and space-users:

1. **Independent Craft Businesses.** These types of creative economy entrepreneurs and businesses use their own set of skills to start and run their businesses. They tend to use their hands and minds and includes, but not limited to: Custom Architectural Woodwork and Millwork; Wood Kitchen Cabinet and Countertop Manufacturing; Independent Artists, Writers, and Performers; and Graphic Design Services. These businesses tend to utilize shop and studio space.
2. **Information-Based Businesses.** These types of opportunistic entrepreneurs and knowledge economy businesses have the skills and vision to start and run a business. These businesses can be independent or small-businesses that opt to employ/hire other skilled people to run their businesses. They tend to be knowledge-based and utilize office-style space.
3. **Maker Industries:** Maker industries are stand-alone businesses, such as artisans, that produce goods, typically by hand or with a small set of tools. Generally they are full-time producers and sole proprietors or micro-businesses. These businesses typically require 400 to 600 square feet of space. They may prefer interior spaces for production-only use, or they may desire micro-retail frontage with production in the back.
4. **Small-Scale Manufacturing:** This space is attractive to small manufacturing businesses, possibly those experiencing growth. These enterprises have dedicated production space and utilize their own equipment and tools. They generally have 2-20 employees and often sell through wholesale outlets as well as online and at local markets. These producers generally require 2,000 to 5,000 square feet. These businesses will not need retail frontage and may prefer existing industrial spaces or back of the building spaces.
5. **Production at scale:** Small-scale manufacturing includes small businesses producing products for wide distribution. These businesses generally use 5,000 to 30,000 square feet of space, but may want additional space availability for future expansion. These users may need access to loading facilities for larger truck deliveries and may be noisy.
6. **Small Producer.** Small-footprint retail and service operations include retail store frontage or micro-store front outlet as part of craft or small manufacturing operations. These might include maker Industries, small-scape manufacturing, retailers, household services, health services, personal services. These businesses can range from 500 to 6,000 square feet of space, but may want additional space availability for future expansion.
7. **Household and Personal services.** Small-footprint retail and office style spaces and stand-alone buildings providing child care, adult care, doctors' offices, dentists' offices, chiropractors, therapists, dry Cleaners, laundry, banks, and similar businesses. These can range from 500 to 6,000 square feet of space, but may want additional space availability for future expansion.

Broadly speaking, commercial real estate has encompassed traditional office, industrial, and retail space. Table 8 expands traditional real estate concepts and links tenant types to types of modern commercial buildings and spaces that could be relevant to Lee.

Table 8. Potential Space Demands

Space Type (Commercial Real Estate Supply)	Features (Meeting Tenant Needs)	Tenant Types (Commercial Real Estate Demand)	Potential Tenant Square Footage
Makerspace	Facilities with access to shared tools. They provide a combination of manufacturing equipment, and may offer education on designing, prototypes, and creating tangible items. These spaces may offer tools in	Independent craft entrepreneurs and businesses including textiles, wood, metal, 3D printing and others	3,000 to 30,000
Shared Kitchen/Shared shop	Provide shared access to tools of the trade	Micro and small maker industries;	2,000 to 15,000
Creative Spaces	Space profiles ranging from private desks and/or private space and features shared collaborative areas Gensler reports the most productive office space focuses first on primary individual work space, next on alternative spaces that allow for collaboration without sacrificing focus, and lastly on providing mobility to various workspaces.	Information-based businesses; incubator or accelerator space, or simply cost-effective desk space in a shared environment	Size and functionality varies with the types of small businesses they intend to serve
Knowledge Worker Spaces	Traditional office and/or Hybrid office-shared space.	Information-based entrepreneurs and businesses	Varies by type and size of business, and, according to NAOIP Commercial Real Estate Development Association, averages about 175 square feet per worker
Retail, lifestyle space and hybrid outlet	Traditional retail store frontage or micro-store front outlet as part of craft, small-scale manufacturing, or consumer rental operations.	Maker Industries, Small Producers, retailers, household services, health services, personal services	500 to 6,000
Household and Personal services	Retail and office style spaces and stand-alone buildings.	Child Care, Adult Care, Doctors' offices, Dentists' Offices, chiropractors, therapists, Dry Cleaners, Laundry, Bank, and similar businesses	500 to 5,000 or larger

5. Next Steps for Consideration

In alignment with the regional strategy of ‘growth from within’, Lee’s economic growth will largely be generated by small business growth and startups. The Northern Mills redevelopment approach should take advantage of the rich cultural environment, lifestyle recreational activities, and anticipated growth in local entrepreneurial activity.

Before exploring specific uses for each of the mill sites, ICF presents a series of illustrative case studies that align with the Northern Mills development context and the proposed uses for consideration.

5.1. Case Studies of Success

The case studies presented below provide examples of successful redevelopment opportunities that are relevant to the Northern Mills sites. The first few studies profile knowledge worker, makerspace, and creative spaces that have been created in the Lee/Pittsfield, Massachusetts region. According to conversations with local planning groups, the growing demand for these types of spaces may indicate that they would be a good fit for the Northern Mills properties. Other case studies present retail and lifestyle spaces, such as a micro-brewery, as well as hybrid spaces that combine retail and recreation. These case studies provide a sense of the use-mix and scale of successful, relevant efforts.

Shire City Sanctuary

A former church in the heart of Pittsfield, Massachusetts now offers a collaborative, creative space for community artists. After years of renovation, the church has been transformed into “the Berkshires’ first makerspace,” offering shared equipment and space for a range of projects including screen-printing, sewing, baking and cooking, performing arts, and large events.⁶ Over 1,000 square feet of space



are available for meetings, classes, or workshops, as well as for showcasing art in a gallery format. Shire City also hosts popular community events, such as the annual Food Truck Rodeo and a holiday season marketplace. A recently launched fundraising campaign will raise money for state of the art equipment, such as a 3-D printer, a wood carving router, a vinyl cutter, and equipment for the commercial kitchen. The space hopes to expand and offer even more opportunities for community engagement.⁷

Cloud85⁸

⁶ Shire City Sanctuary. <http://shirecitysanctuary.com/about/>

⁷ The Berkshire Eagle. Shire City Works to Create Makerspace. April 18, 2016. http://www.berkshireeagle.com/the413/ci_29781148/shire-city-works-create-makerspace

⁸ Cloud85. <http://www.cloud85northadams.com/about/>.



In January 2015, North Adams, Massachusetts celebrated the launch of Berkshire County's first co-working space. Cloud85 provides rentable office space for telecommuters, journalists, entrepreneurs, and professionals from all fields, offering an office setting for those who may not typically work in an office, or who are interested in having a collaborative but focused place to be productive. The 31 work spaces can accommodate private meetings, permanent or temporary desk space, and group work, and the space has access to Wi-Fi, printing, and fax machines.⁹ The newly renovated



building has leasable office space available on higher floors, and the developers hope that Cloud85 will serve as an incubator for startups, supporting fledgling businesses until they require more office space and consider making downtown North Adams their permanent home. Cloud85 was founded by Lever, a local organization dedicated to supporting economic development and maximizing the talent of young graduates from colleges in the Berkshire region.¹⁰

Makers' Mill

Makers' Mill in North Adams, Massachusetts is a shared workspace for artists looking to advance their craft, meet new people, and exchange ideas. Interdisciplinary by design, Makers' Mill allows book binding, sewing, weaving, and printing to occur under one roof.¹¹ Members pay a monthly fee to gain access to equipment, but representatives from the project have emphasized that keeping the space affordable is a top priority.¹² Makers' Mill hosts community events, workshops, and programs for families, and hopes to extend its reach even further to engage community members of all interests and backgrounds.

Iron Duke Brewing & Ludlow Mills Complex



established 2013 ■ easthampton, ma

Iron Duke Brewing in Ludlow, Massachusetts is located in the historic former Ludlow Mills complex. Stockhouse 122, the building that now houses the brewery, was once used to store jute in the early 1900s and is situated along the banks of the Chicopee River.¹³ Iron Duke's brewery operations and tasting room occupy approximately 3,000 square feet of former mill space.¹⁴ In 2015, the brewery opened an outdoor patio offering views of the Ludlow Mills Riverwalk.¹⁵ The Ludlow Mills have seen a flurry of redevelopment activity beyond Iron Duke. The effort to revitalize the mills is expected to take 15 to 20 years with a budget of \$300 million, but portions of the project are underway or already complete. The initial 1.1 miles of the Ludlow Mills Riverwalk have been completed, and the extended path is expected to cost

⁹ The Berkshire Eagle. Launch of Cloud85 Seen as a Plus for Downtown North Adams. http://www.berkshireeagle.com/local/ci_27365143/launch-cloud-85-north-adams-seen-plus-downtown.

¹⁰ Lever. <http://www.leverinc.org/>

¹¹ North Adams Makers' Mill. <http://northadamsmakersmill.org/about/>.

¹² The Berkshire Eagle. Area Artisans Stitch Together Makers' Mill in North Adams. July 6, 2015. http://www.berkshireeagle.com/local/ci_28436270/area-artisans-stitch-together-makers-mill-north-adams.

¹³ Iron Duke Brewing. <http://www.irondukebrewing.com/story>.

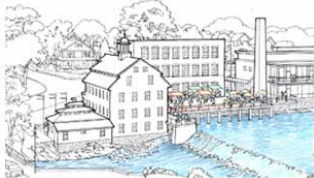
¹⁴ Mass Live. Word is Spreading about Iron Duke Brewing in the Ludlow Mills. December 15, 2014. http://www.masslive.com/business-news/index.ssf/2014/12/word_is_spreading_about_iron_duke_brewin.html

¹⁵ Mass Live. Iron Duke Brewery at Ludlow Mills Adding Outdoor Patio. June 10, 2015. http://www.masslive.com/news/index.ssf/2015/06/iron_duke_brewery_at_ludlow_mi.html.

\$600,000 in total.¹⁶ Another completed component of the redevelopment project is the HealthSouth rehabilitation hospital, a \$26 million facility providing access to high-quality medical services in the area.

Abandoned Building Brewery

Founded in 2013 as Easthampton, Massachusetts first craft microbrewery, the aptly named Abandoned Building Brewery is an example of an old industrial property that has been repurposed as a trendy brewery. Located in an old mill building that was once home to a plastic bag manufacturer, the brewery now hosts a taproom, brewery operations, and local community events. The building required extensive cleaning and renovation to meet the vision of the developers.¹⁷



Whitin Mill Case Study¹⁸

Revitalization of Whitin Mill, located in Northbridge, Massachusetts, transformed a 19th century mill into a modern, mixed use space capable of meeting a diverse array of community needs. During its operational years, the mill was home to a variety of manufacturing processes, ranging from textile to steel rings. The community collaborated with developers to craft a vision for site reuse that would provide an engaging, mixed use space where residents and visitors could participate in diverse activities and enhance Northbridge's social capital. The 6,300 residents of Northbridge will benefit from the various uses planned for redevelopment, including a restaurant, open plaza, retail stores, a living museum, affordable apartments, and civic space for conferences, performance, and art. In addition, the space will host the program center for Alternatives Unlimited, an organization dedicated to improving the lives of persons with developmental or psychiatric disabilities by providing residential programs, employment services, volunteer experiences, and services that enhance connections with communities.¹⁹

Clock Tower Place Case Study²⁰

Maynard, Massachusetts has an industrial history; between 1840 and 1998, the economy of this small town had manufacturing at its core. At the heart of this industry was a 40-acre property comprised of 13 red brick mill buildings, covering over 1 million square feet of space. In 1998, the mill ceased operation and was purchased by the Wellesley/Rosewood Maynard Mills L.P., an entity with experience in adaptive reuse projects, construction, property management, and marketing. The mill was well-suited for business tenants, and there was a strong market demand for office and light manufacturing.²¹ By July



¹⁶ WWLP. Checking on the Progress of the \$300M Ludlow Mills Project. April 29, 2016. <http://wwlp.com/2016/04/29/checking-on-the-progress-of-the-300m-ludlow-mills-project/>.

¹⁷ Abandoned Building Brewery. <http://abandonedbuildingbrewery.com/>.

¹⁸ Massachusetts Executive Office of Energy and Environmental Affairs. Smart Growth/Smart Energy Toolkit--The Mill Revitalization District Case Study: Whitin Mill, Northbridge, MA. http://www.mass.gov/envir/smart_growth_toolkit/pages/CS-mr-whitin.html

¹⁹ Alternatives: Community Life for People with Disabilities. <http://www.alternativesnet.org/about-us/>

²⁰ Massachusetts Executive Office of Energy and Environmental Affairs. Smart Growth/Smart Energy Toolkit--The Mill Revitalization District Case Study—Clock Tower Place, Maynard, MA. http://www.mass.gov/envir/smart_growth_toolkit/pages/CS-mr-maynard.html.

²¹ Merrimack Valley Planning Commission. Mill Revitalization Districts (MRD) Smart Growth/Smart Energy Toolkit. <http://mvpc.org/wp-content/uploads/MRD-municipal-1.pdf>.

2000, over 1 million square feet had been leased to over 85 companies. Between 1,500 and 2,000 people currently work in Clock Tower Place, bringing the economic center back to Maynard.

5.2. Development Opportunities for Lee Northern Mills

Tables 9 through 12 below lay out the redevelopment opportunities associated with each mill site. Each table contains the strategic development opportunities voiced by the community and captured throughout the Brownfields AWP planning process, the relevant space-type associated with each use, and the market alignment in terms of the 1) regional strategy, 2) commercial market, and 3) real estate market.

The regional strategy encompasses two main themes; grow from within and leverage existing amenities to attract and grow the creative and knowledge economies. Because all of the business opportunities identified through the Brownfields AWP planning process were proposed by the community, they all have the potential to leverage entrepreneurial activity and grow the region organically. Furthermore, many of the proposed redevelopment options provide space for local lifestyle-serving businesses, such as a brew pub, restaurant, boat launch/landing, fitness center and café, which would further enhance the characterization of Lee as a destination for visitors as well as an amenity-rich community to live and work. Other redevelopment options align with the knowledge economy, such as small business space, office space and space for technical training. Lastly, there were other proposed redevelopment opportunities that could be considered in support of growing the creative economy by providing small-scale industrial space/maker space for small batch manufacturing or crafts. Therefore, ICF found that all of the redevelopment opportunities proposed through the Brownfields AWP planning process align with the regional economic strategy.

Furthermore, the results of the commercial market analysis conducted by ICF reinforced the importance of lifestyle-related retail, such as florists, specialty food, health and jewelry stores to the growth of the Lee economy. The retail, hybrid and mixed-use spaces all support business opportunities that align with the specifics of the market data.

Lastly, the results of ICF's real estate market analysis demonstrates stable but not growing markets for the office and industrial space markets. While the success of regional flexible co-working spaces and small-scale maker spaces was demonstrated by the case studies, those opportunities may be more successful if designed to fit a specific tenant.

Based on the collective market studies, planning documents, and independent research contained herein, the most promising reuses for each of the mill sites are below:

- The **Niagara Mill** site could serve the community by providing lifestyle, small-scale production, restaurant, and personal services.
- The **Greylock Mill** could serve the business community by providing small manufacturing, educational, and business conference facilities.
- The **Columbia Mill** could provide mixed-use space that could support office and/or shared-workspace, provide educational opportunities for residents as well as businesses, and provide lifestyle amenities to serve to people in these uses.
- The **Eagle Mill** could be well suited for mixed-use residential, commercial, and lifestyle retailers and services.

The tables below are not intended to identify a single redevelopment path for each mill site, but instead to present several opportunities that might intrigue developers to consider the market further.

Specifically, the discussion in the final column, associated with market alignment will help identify particularly strong opportunities for each site, under current economic conditions.

Table 9. Niagara Mill Reuse and Redevelopment Options.

Business Opportunity	Space Type	Features	Proposed Gross Square Footage ²²	Market Alignment
Brew Pub/Micro-brewery	<ul style="list-style-type: none"> • Production • Distribution • Retail • Hybrid outlet 	Good parking area is available on site. A low impact design is possible to substantially reuse building.	Brewery: 5,000-8,000 sf	Brewery reuse aligns with successful case studies and a community-voiced target for local entrepreneurship. This could include production, tasting room, and full service brew pub configurations.
Restaurant	<ul style="list-style-type: none"> • Retail • Shared Kitchen 	Good parking area is available on site. A low impact design is possible to substantially reuse building	Restaurant with Kitchen: 2,000 sf	Market study found healthy demand for full-service restaurants and other lifestyle amenities.
Exhibition space/Museum	<ul style="list-style-type: none"> • Lifestyle Space • Retail • Hybrid Outlet 	Good parking area is available on site. A low impact design is possible to substantially reuse building	10,000 sf -15,000 sf	Market study found healthy demand lifestyle amenities. This use will augment other assets in the Lee region, aligns with community-voiced demand and could also include artist/maker-spaces.
Small business center/medical center	<ul style="list-style-type: none"> • Office • Knowledge Worker Spaces 	Good parking area is available on the site. Building can create interesting office spaces with minimal effort.	Varies by type and size of business, and, according to NAOIP Commercial Real Estate Development Association, averages about 175 square feet per worker	Market study found stable real estate market for office space but growing demand for flexible co-working spaces, as demonstrated by case study. Potential option to create health/medical related office use.
Kayak/canoe launch	<ul style="list-style-type: none"> • Lifestyle Space • Retail • Hybrid Outlet 	Good parking area and operations area are available on the site, with long river frontage for choice of access point. The site is upstream of reach with possible landing on southern end of reach at Columbia Mill property before dam.	2,500 sf	Market study found healthy demand lifestyle amenities. This use will augment other assets in the Lee region, aligns with community-voiced demand and leverages local entrepreneurship.

²² Taken directly from recommendations provided in Cecil Group report: Lee Northern Mills Brownfields Area-Wide Planning Program: Strategic Development Opportunities Guide. July 2015.

Table 10. Greylock Mill Reuse and Redevelopment Options

Business Opportunity	Space Type	Features	Proposed Gross Square Footage	Market Alignment
Small-scale Warehouse and distribution	<ul style="list-style-type: none"> Industrial 	Well suited, requires no new utility connections or other significant improvements, unless there is a requirement for alternative access. Market demand is available.	Northern building wing: 39,960 sf Southern building wing: 30,940 sf East-center building office space: 6,200 sf Parking area: 40,000 sf	Market indicators show stable market for industrial space, focus on build-to-fit space demanded by local entrepreneur.
Organized sports venue/ Fitness center	<ul style="list-style-type: none"> Retail Lifestyle Space 	Clear span building sections on north and south ends are potentially appropriate. Ceiling height may be too low for certain field sports while center section requires substantial improvements to make it viable for use.	Northern building wing: 39,960 sf Southern building wing: 30,940 sf Outdoor field: 42,000 sf Parking area: 40,000 sf Outdoor recreation area: 10,000 sf Access to highline walk: 2,500 sf	Market indicators show healthy demand lifestyle amenities. This use aligns with community-voiced demand and leverages local entrepreneurship.
Expositions/Event Space	<ul style="list-style-type: none"> Lifestyle space Office Retail Warehouse 	Does not require substantial building improvements for use.	10,000 sf	This could support the anticipated growth in the creative and knowledge economies and offer a venue for lifestyle events.
Small-scale co-working spaces	<ul style="list-style-type: none"> Office Knowledge Worker Spaces 	Portion of building were formerly used for offices could be designed to accommodate smaller co-working spaces	East-center building office space: 6,200 sf	Market indicators show growing demand for small, flexible co-working spaces, as demonstrated by case study.
Technical training	<ul style="list-style-type: none"> Office Maker space Shared space Household and Personal Services space Knowledge Worker Space 	Portion of building formerly used for offices could be repurposed for classrooms, remainder of building could be used for a variety of training programs with equipment.	Northern building wing: 39,960 sf Southern building wing: 30,940 sf East-center building office space: 6,200 sf Parking area: 40,000 sf	This would support the anticipated growth in the creative and knowledge economies.
Manufacturing	<ul style="list-style-type: none"> Industrial Maker Space 	Portions of building excellent for many manufacturing operations. Water and wastewater utilities may not be suitable if process water is used and produced in manufacturing operations.	Northern building wing: 39,960 sf Southern building wing: 30,940 sf East-center building office space: 6,200 sf Parking area: 40,000 sf Outdoor recreation area: 10,000 sf Access to highline walk: 2,500 sf	Market indicators show stable market for industrial space, but greater focus on small-space users instead of traditional industry.

Table 11. Columbia Mill Reuse and Redevelopment Options

Business Opportunity	Space Type	Features	Proposed Gross Square Footage	Market Alignment
Office	<ul style="list-style-type: none"> Office Knowledge Worker Spaces Household and Personal services space 	Office space available with minimal improvement to reuse for office.	Southern warehouse, Storehouse F: 61,700 sf Rehab for offices: 8,300 sf Access to highline walk and kayak/canoe launch: 8,000 sf Support to all uses: 74,000 sf	Market indicators show stable market for office space but growing demand for flexible co-working or incubator spaces, as demonstrated by case study.
Materials processing/warehouse	<ul style="list-style-type: none"> Industrial Maker space Shared Shop Space 	Existing warehouse buildings are available for different size operations. Water and wastewater utilities may not be suitable depending on processing water and wastewater treatment needs.	Southern warehouse, Storehouse F: 61,700 sf Rehab for offices: 8,300 sf Access to highline walk and kayak/canoe launch: 8,000 sf Support to all uses: 74,000 sf	Market indicators show growing demand for small, flexible co-working spaces, as demonstrated by case study.
Aquaculture (possibly reusing WWTF including clarifiers)	<ul style="list-style-type: none"> Industrial 	WWTF clarifiers may be appropriate for holding tanks. Rest of treatment system needs to be evaluated for reuse for aquaculture waste water treatment; may be difficult obtaining permits for system.	Support to all uses: 74,000 sf	Market indicators show growing demand for small, flexible co-working spaces, as demonstrated by case study.
Riverside café/ brewery	<ul style="list-style-type: none"> Retail Lifestyle Space 	Good locations on site along the riverfront with excellent views. The site design is difficult because of the complex building configurations. The use must be part of other reuse options to create destination. Water supply may not be of suitable flow.	Commercial food service: 5,000 sf	Market indicators show healthy demand for full-service restaurants and other lifestyle amenities. Brewery reuse aligns with successful case studies and community opportunities / local entrepreneurship.
Kayak/ canoe landing	<ul style="list-style-type: none"> Retail Lifestyle Space 	This is the southern end of the reach from a recommended launch at Niagara Mill property, and so could be a commercial venture. Ample area on riverfront available for operations. Must be supported by other related commercial ventures.	Access to highline walk and kayak/canoe launch: 8,000 sf	Market indicators show healthy demand lifestyle amenities. This use will augment other assets in the Lee region, aligns with community-voiced demand and leverages local entrepreneurship.
College / Technical training	<ul style="list-style-type: none"> Office Maker space Shared space Household and Personal Services space Knowledge Worker Space 	Office space suitable for reuse as small classrooms. Larger spaces available for equipment training. Office space is relatively small. Water supply may not be suitable flow for fire safety.	Southern warehouse, Storehouse F: 61,700 sf Rehab for offices: 8,300 sf Access to highline walk and kayak/canoe launch: 8,000 sf Support to all uses: 74,000 sf	This would support the anticipated growth in the creative and knowledge economies.

Table 12. Eagle Mill Reuse and Redevelopment Options

Business Use	Space Type	Features	Market Alignment
<p>Mixed use - Boutique hotel, restaurant, commercial office and retail, new residential, performance/exhibition space</p>	<ul style="list-style-type: none"> Mixed Use 	<p>Water supply is not at required standard for fire flows.</p>	<p>Reuse scenario is being advanced by current owner, but requires tax credits and subsidies. Market study found healthy demand for full-service restaurants and other lifestyle amenities. Reuse aligns with successful case studies.</p>

Occupancy and rental rates

Appendix A: Gap Memo

MEMORANDUM

DATE: February 26, 2016

TO: Berkshire Regional Planning Commission– Melissa Provencher, Senior Planner
EPA Region 1 –Dorrie Paar, Jessica Dominguez
EPA OBLR HQ – Aimee Storm, Patricia Overmeyer

CC: Kevin Palaia

FROM: Eliza Johnston

RE: Gaps Identified in Previous Market Analysis and Additional Proposed Analysis for Lee Northern Mills Brownfields AWP Project

This memorandum summarizes the gaps identified during ICF’s review of previous market and economic assessment documents prepared for the Lee Northern Mills Brownfields Area-wide Planning (AWP) project. It also outlines ICF’s recommendations for additional analysis.

Document Review

At the offset of this assessment, ICF reviewed the following documents prepared by previous consultants:

- Existing Conditions and Reuse Potential Report (December 2014)
- Strategic Development Opportunities Guide (drafts dated June 2015 and July 30, 2015)
- Commercial Market Assessment Memo, developed by FXM Associates (Dated July 31, 2014)
- Rental Housing Market Assessment Memo, developed by FXM Associates (Dated July 31, 2014)
- Real Estate Market Assessment Summary, developed by FXM Associates (Dated July 31, 2014)
- Cecil Group scoping document

Findings and Data Gaps

Based on our review of these documents, ICF has identified the following gaps that we feel compromised the usefulness of the previous analysis.

1. The Strategic Development Opportunities Guide does not include a robust or integrated discussion of the current economic market conditions. The Market Opportunities section is brief and located at the end of the report. The market data presented in the report identifies the overall square footage of industrial / warehouse space that could be absorbed, but does not provide details on types of use overall or in regards to the proposed opportunities for the Northern Mill sites. While the market discussion identifies the three commercial sectors that have the most significant demand, it does not specify the retail gap in terms of market demand dollars nor does it quantify the likely square footage of space that could support that demand.

Overall, because the guide does not integrate any of the market data into the discussions of proposed opportunities at each mill site, it is very hard for the reader to understand the context of the market data and if the proposed opportunities would be realistic from an economic/fiscal perspective.

2. The Commercial Market Assessment Memo provides a robust discussion of the methodology and findings of the industrial and commercial (retail) market analysis. The methodologies used in this assessment are reasonable, however very little of this analysis is integrated in the Strategic Development Opportunities Guide and nowhere in either document are the proposed development opportunities vetted against the granular market data.
3. Given the local context and commuting patterns in the region, it might be more appropriate to include an expanded drive-time analysis to capture the 30-minute trade area, which will include the nearby town of Pittsfield.

Recommendations

Based on our assessment of the previous market and economic assessment documents, ICF feels that the methodologies used in the Commercial Market Assessment Memo are robust but can be improved upon. Therefore, we propose to re-analyze the market data in the context of the specific development opportunities identified in the Strategic Development Opportunities Guide.

The methodologies used by ICF to assess the market will be fairly consistent with the approach undertaken in the previous market study, using updated retail market data (2015) and a broader trade area (15 and 30-minute drive-time catchment areas). We also propose to profile the proposed industrial and commercial uses. We will then integrate these findings into a revised assessment of market opportunities, which will include the following data analysis/discussion:

1. Local demographic data on residents living within 15 and 30 minute drive times of the four mill locations
2. Industry-specific retail sales, consumer expenditures, and retail opportunity/gaps within 15 and 30 minute drive times of the four mill locations
3. Commercial real estate market data for proposed uses to identify rental rates, occupancy trends, and absorption expectations
4. Alignment of market data with proposed uses identified in the Strategic Development Opportunities Guide for each mill site to assess feasibility of proposed business development activity
5. Recommendation for the most viable use(s) at each mill site, based on the economic/market conditions.

Appendix B: Full Case Studies

Shire City Sanctuary

A former church in the heart of Pittsfield, Massachusetts now offers a collaborative, creative space for community artists. After years of renovation, the church has been transformed into “the Berkshires’ first makerspace,” offering shared equipment and space for a range of projects including screen-printing, sewing, baking and cooking, performing arts, and large events.²³ Over 1,000 square feet of space are available for meetings, classes, or workshops, as well as for showcasing art in a gallery format. Shire City also hosts popular community events, such as the annual Food Truck Rodeo and a holiday season marketplace. A recently launched fundraising campaign will raise money for state of the art equipment, such as a 3-D printer, a wood carving router, a vinyl cutter, and equipment for the commercial kitchen. The space hopes to expand and offer even more opportunities for community engagement.²⁴



Cloud85²⁵



In January 2015, North Adams, Massachusetts celebrated the launch of Berkshire County’s first co-working space. Cloud85 provides rentable office space for telecommuters, journalists, entrepreneurs, and professionals from all fields, offering an office setting for those who may not typically work in an office, or who are interested in having a collaborative but focused place to be productive. The 31 work spaces can accommodate private meetings, permanent or temporary desk space, and group work, and the space has access to Wi-Fi, printing, and fax machines.²⁶ The newly renovated building has leasable office space available on higher floors, and the developers hope that Cloud85 will serve as an incubator for startups, supporting fledgling businesses until they require more office space and consider making downtown North Adams their permanent home. Cloud85 was founded by Lever, a local organization dedicated to supporting economic development and maximizing the talent of young graduates from colleges in the Berkshire region.²⁷

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Makers’ Mill in North Adams, Massachusetts is a shared workspace for artists looking to advance their craft, meet new people, and exchange ideas. Interdisciplinary by design, Makers’ Mill allows book binding, sewing, weaving, and printing to occur under one roof.²⁸ Members pay a monthly fee to gain access to equipment, but representatives from the project have emphasized that keeping the space affordable is a top priority.²⁹ Makers’ Mill hosts



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²⁴ The Berkshire Eagle. Shire City Works to Create Makerspace. April 18, 2016. http://www.berkshireeagle.com/the413/ci_29781148/shire-city-works-create-makerspace

²⁵ Cloud85. <http://www.cloud85northadams.com/about/>.

²⁶ The Berkshire Eagle. Launch of Cloud85 Seen as a Plus for Downtown North Adams. http://www.berkshireeagle.com/local/ci_27365143/launch-cloud-85-north-adams-seen-plus-downtown.

²⁷ Lever. <http://www.leverinc.org/>

²⁸ North Adams Makers’ Mill. <http://northadamsmakersmill.org/about/>.

²⁹ The Berkshire Eagle. Area Artisans Stitch Together Makers’ Mill in North Adams. July 6, 2015. http://www.berkshireeagle.com/local/ci_28436270/area-artisans-stitch-together-makers-mill-north-adams.

community events, workshops, and programs for families, and hopes to extend its reach even further to engage community members of all interests and backgrounds.

Western Massachusetts Breweries

The Western Massachusetts craft brewing scene has flourished lately, with new breweries sprouting up across the region from Greenfield to Springfield, Lee to Amherst, and just about everywhere in between.

In Lee, Massachusetts, Glass Bottom Brewery is a small operation completely devoted to its craft. Proudly proclaiming itself “Berkshire’s homegrown beer,” Glass Bottom Brewery has a regional focus. The recipes were created in Lee and the founders have demonstrated a commitment to engaging the community by participating in local events such as the Connecticut River Brewfest, Berktoberfest in Pittsfield, and beer tasting events at community centers throughout the Berkshires.



Many breweries in the region have similar dedication to their communities, to the environment, and to creating quality products from local ingredients. However, a few breweries have the distinction of repurposing abandoned factories and mills to meet their needs and transforming old industrial space in to modern meeting places. Founded in 2013 as Easthampton’s first craft microbrewery, the aptly named Abandoned Building Brewery is one such example. Located in an old mill building that was once home to a plastic bag manufacturer, the brewery now hosts a taproom, brewery operations, and local community events. The building required extensive cleaning and renovation to meet the vision of the developers.³⁰

Iron Duke Brewing in Ludlow, Massachusetts is located in the historic former Ludlow Mills complex. Stockhouse 122, the building that now houses the brewery, was once used to store jute in the early 1900s and is situated along the banks of the Chicopee River.³¹ Iron Duke’s brewery operations and tasting room occupy approximately 3,000 square feet of former mill space.³² In 2015, the brewery opened an outdoor patio offering views of the Ludlow Mills Riverwalk, under construction as of 2015.³³

Ludlow Mills Complex

The Ludlow Mills have seen a flurry of redevelopment activity beyond Iron Duke. The effort to revitalize the mills is expected to take 15 to 20 years with a budget of \$300 million, but portions of the project are underway or already complete. The initial 1.1 miles of the Ludlow Mills Riverwalk have been completed, and the extended path is expected to cost \$600,000 in total.³⁴ Another completed component of the redevelopment project is the HealthSouth rehabilitation hospital, a \$26 million facility providing access to high-quality medical services in the area. The hospital covers 74,000 square feet of space and features private rooms complete with modern equipment for rehabilitation patients, as well as outpatient

³⁰ Abandoned Building Brewery. <http://abandonedbuildingbrewery.com/>.

³¹ Iron Duke Brewing. <http://www.irondukebrewing.com/story>.

³² Mass Live. Word is Spreading about Iron Duke Brewing in the Ludlow Mills. December 15, 2014. http://www.masslive.com/business-news/index.ssf/2014/12/word_is_spreading_about_iron_duke_brewin.html

³³ Mass Live. Iron Duke Brewery at Ludlow Mills Adding Outdoor Patio. June 10, 2015. http://www.masslive.com/news/index.ssf/2015/06/iron_duke_brewery_at_ludlow_mi.html.

³⁴ WWLP. Checking on the Progress of the \$300M Ludlow Mills Project. April 29, 2016. <http://wwlp.com/2016/04/29/checking-on-the-progress-of-the-300m-ludlow-mills-project/>.

therapy.³⁵ Other development planned for the mills includes a \$24.5 million senior housing project with 75 one- and two-bedroom units, as well as a possible restaurant and leased space for small businesses.³⁶ In 2015, the Ludlow Mills project was featured at the U.S. Environmental Protection Agency's National Brownfields Conference.³⁷ The Ludlow Mills redevelopment is projected to create and retain more than 2,000 jobs.³⁸

Whitin Mill Case Study³⁹



Revitalization of Whitin Mill, located in Northbridge, MA, transformed a 19th century mill into a modern, mixed use space capable of meeting a diverse array of community needs. During its operational years, the mill was home to a variety of manufacturing processes, ranging from textile to steel rings. The community collaborated with developers to craft a vision for site reuse that would provide an engaging, mixed use space where residents and visitors could participate in diverse activities and enhance

Northbridge's social capital. The 6,300 residents of Northbridge will benefit from the various uses planned for redevelopment, including a restaurant, open plaza, retail stores, a living museum, affordable apartments, and civic space for conferences, performance, and art. In addition, the space will host the program center for Alternatives Unlimited, an organization dedicated to improving the lives of persons with developmental or psychiatric disabilities by providing residential programs, employment services, volunteer experiences, and services that enhance connections with communities.⁴⁰

Developers are utilizing alternative energy sources at the site, and are committed to achieving environmental goals while also meeting and exceeding the energy demands of the site. A combination of hydropower, solar photovoltaic devices, and geothermal energy will power the site, leading to an estimated \$100,000 in energy savings each year.

Alternatives Unlimited is leading the redevelopment of the Whitin Mill property, and the estimated cost of redevelopment is approximately \$9.1 million, including \$3.5 million in state grants and donations.⁴¹ Funding sources include donations from public and private entities, as well as affordable housing grants from the Community Development Assistance Corporation (CDAC).

³⁵ MassLive. Outlook 2014: HealthSouth Opens New \$26 Million Rehabilitation Hospital on Site of Former Ludlow Mills; Senior Housing Planned. February 9, 2014. http://www.masslive.com/business-news/index.ssf/2014/02/outlook_2014_healthsouth_opens_new_26_mi.html. s

³⁶ MassLive. Development of Ludlow Mills Moving Ahead in 2015. February 5, 2015. http://www.masslive.com/business-news/index.ssf/2015/02/development_of_ludlow_mills_moving_ahead.html.

³⁷ WAMC. Ludlow Mills Project to be in Spotlight at National Conference. May 20, 2015. <http://wamc.org/post/ludlow-mills-project-be-spotlight-national-conference#stream/0>.

³⁸ MassLive. Development of Riverwalk Project at Ludlow Mills Kicks Off Thursday. April 15, 2015. http://www.masslive.com/news/index.ssf/2015/04/development_of_riverwalk_proje.html.

³⁹ Massachusetts Executive Office of Energy and Environmental Affairs. Smart Growth/Smart Energy Toolkit--The Mill Revitalization District Case Study: Whitin Mill, Northbridge, MA. http://www.mass.gov/envir/smart_growth_toolkit/pages/CS-mr-whitin.html

⁴⁰ Alternatives: Community Life for People with Disabilities. <http://www.alternativesnet.org/about-us/>

⁴¹ Merrimack Valley Planning Commission. Mill Revitalization Districts (MRD) Smart Growth/Smart Energy Toolkit. <http://mvpc.org/wp-content/uploads/MRD-municipal-1.pdf>.

Clock Tower Place Case Study⁴²

Maynard, Massachusetts has an industrial history. Between 1840 and 1998, the economy of this small town had manufacturing at its core. At the heart of this industry was a 40 acre property comprised of 13 red brick mill buildings, covering over 1 million square feet of space. The property has always been home to innovation, manufacturing carpets in the 1840s, blankets for Union soldiers in the Civil War, flannels in the 1920s, plastics in the 1950s, and computers in the 1980s and 1990s. In 1998, the mill ceased operation and was purchased by the Wellesley/Rosewood Maynard Mills L.P. (WRP), an entity with experience in adaptive reuse projects, construction, property management, and marketing. The mill was well-suited for business tenants, and there was a strong market demand for office and light manufacturing.⁴³ WRP rebranded the property, naming it Clock Tower Place, and used innovative techniques to draw realtors and tenants to the property. Namura Bank provided phased funding for the revitalization effort, and WRP also used Tax Increment Financing to fund renovation and building improvements. By July 2000, over one million square feet had been leased to over 85 companies. Between 1,500 and 2,000 people currently work in Clock Tower Place, bringing the economic center back to Maynard.



Wood Mill Case Study⁴⁴

Lawrence, Massachusetts is home to one of the largest former mill buildings in the world. Described as a “horizontal skyscraper,” this 1.3 million square foot brick building was the center of the textile industry in the past, but is now a modern mixed-use community, complete with apartments, restaurants, retail shops, entertainment venues, and artist spaces. The building was constructed in 1906 and sits along the banks of the Merrimack River. The revitalization project, “Monarch on the Merrimack,” has an estimated cost of \$200 million and includes 600 residential units, 90,000 square feet of retail and restaurant opportunities, as well as a movie theater and a spa. Bob Ansin of MassInnovation was the lead development entity for the revitalization, and has previous experience in converting factories to mixed use properties. Investments in the project began in 2003 and residential units were available approximately four years later. The waiting list for the apartments quickly reached capacity, indicating the strong market demand for luxury apartments in the city. The community prides



⁴² Massachusetts Executive Office of Energy and Environmental Affairs. Smart Growth/Smart Energy Toolkit--The Mill Revitalization District Case Study—Clock Tower Place, Maynard, MA. http://www.mass.gov/envir/smart_growth_toolkit/pages/CS-mr-maynard.html.

⁴³ Merrimack Valley Planning Commission. Mill Revitalization Districts (MRD) Smart Growth/Smart Energy Toolkit. <http://mvpc.org/wp-content/uploads/MRD-municipal-1.pdf>.

⁴⁴ Massachusetts Executive Office of Energy and Environmental Affairs. Smart Growth/Smart Energy Toolkit--The Mill Revitalization District Case Study—Wood Mill, Lawrence, MA. http://www.mass.gov/envir/smart_growth_toolkit/pages/CS-mr-lawrence.html.

itself on its diversity and working class heritage, and continues to welcome a diverse, international population of visitors and tenants.⁴⁵

The Wood Mill project also embraced green building practices, offering clean energy to its residents in the form of a geothermal heating and cooling system. Reclaimed materials and energy efficient appliances also were incorporated into the building's design. The complex features connections with nature, such as an indoor waterfall, rooftop gardens, and interior plant installations. The property continues to offer economic prosperity to the community through its creative and unique reuse.

Baker Chocolate Factory

In 2013, a repurposed chocolate factory in the Dorchester neighborhood of Boston, Massachusetts celebrated over 30 years as a multi-family housing apartment complex.⁴⁶ The 14-acre Baker Chocolate Factory, situated along the Neponset River, suffered from dilapidation and decay after manufacturing operations ceased in 1965. In the early 1980s, a development firm called The Architectural Team began planning and implementing the adaptive reuse of the factory into multigenerational, mixed-



income apartments. By 1983, 143 apartments began opening to the public, although development continued to evolve throughout the years. The project was officially completed in 2010, although it was in use before then. The factory became a space for artist lofts and galleries, an assisted-living facility, and meeting rooms and workspace, bringing innovative uses to the factory's multiple buildings.

The design takes advantage of the unique open-air spaces between the property's buildings, as well as geological features such as rock outcroppings along the river, creating a complex that embraces the natural characteristics of the area.⁴⁷

The Architectural Team was awarded the National Historic Preservation Award by President Regan for their efforts at the property.⁴⁸ The revitalization of this historic property has brought prosperity and energy to the former factory and the surrounding neighborhood.

⁴⁵ Merrimack Valley Planning Commission. Mill Revitalization Districts (MRD) Smart Growth/Smart Energy Toolkit. <http://mvpc.org/wp-content/uploads/MRD-municipal-1.pdf>.

⁴⁶ PR Web. Turning Point for Reviving New England's Historic Mills: The Architectural Team Celebrates 30 Year Milestone of Award-Winning Adaptive Reuse of Boston Chocolate Factory. January 8, 2013. <http://www.prweb.com/releases/2013/1/prweb10300953.htm>

⁴⁷ The Architectural Team. Baker Chocolate Factory Complex. <http://www.architecturalteam.com/projects/baker-chocolate-factory-complex/>

⁴⁸ Curbed. Once Decrepit Old Chocolate Factory Now Sweet Rental Lofts. August 26, 2013. <http://www.curbed.com/2013/8/26/10204568/once-decrepit-old-chocolate-factory-now-sweet-rental-lofts>