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Commonwealth of Massachusetts Mill Building Repurposing Pilot Project (Twist Mill - Athol, MA)

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Commonwealth of Massachusetts

Mill Building Repurposing Pilot Project

Twist Mill – Athol, Massachusetts



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L.P. Athol Corporation
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I. INTRODUCTION

Project Background and Purpose

Athol, MA is a proud community located in the northwestern portion of Worcester County known as the North Quabbin Region. The town has a rich history of industrial innovation that is exemplified by an active downtown that is in the shadows of the L.S. Starrett Tool Company and the L.P. Athol Corporation facility. The blue-collar heritage of the area remains clear today, but slowly declining manufacturing opportunities, and limited outside investment in the region has created significant challenges in terms of generating new economic development within the community and region as a whole.

Town leaders have succeeded in recent downtown revitalization efforts that include Main Street infrastructure improvements, a public library expansion project, YMCA rehabilitation work, and a new downtown senior center. Construction is also under way on the North Quabbin Commons Retail Park located just off of Massachusetts Route 2. This incremental success has created a solid foundation for Athol to focus attention on the challenging task of repurposing the L.P. Athol Corporation facility, commonly referred to as the Twist Mill. This 365,000 square foot former tool manufacturing facility is located within a short walk of the town's main commercial corridor, and has remained largely underutilized since the early-

1990's. Residents, local leaders, and regional agencies have identified this site for priority development due, in large part, to its potential to serve as a social and economic centerpiece for the reemerging North Quabbin Region. Local legislators also believe that a project of this type has the potential to serve as model for advancing statewide economic growth through the redevelopment of vacant mill buildings, particularly in rural and western portions of the Commonwealth.

L.P. Athol Corporation leadership has worked closely with a variety of stakeholders to develop an action plan to realistically move this project forward amidst a host of obstacles that are common to industrial reuse projects such as this. Additionally, planning for this project continually incorporates a variety of established Massachusetts economic development goals that are outlined in the 2014 *Choosing to Compete in the 21st Century* plan. Project stakeholders have worked diligently to promote public, private, and academic collaboration in an effort to fully engage the North Quabbin Region in the Massachusetts "Innovation Economy" through the utilization of

"Our Goal is to make sure that every region in the state is fully engaged in the Massachusetts economy and reaping the benefits of its innovation economy. We work with local municipal and regional leaders to ensure that they have the means to attract and encourage business investment and job creation, thereby facilitating regional growth in an integrated, sustainable way"

- Commonwealth of Massachusetts,
Choosing to Compete in the 21st Century
Economic Development Plan, 2014

economic development incentives, labor force development, residential development, regulatory reform, and clean energy initiatives.

The purpose of the UMass Amherst Department of Landscape Architecture and Regional Planning's participation in this project is to establish a redevelopment action plan that incorporates the ownership's clear vision for reuse of the site, proposes solutions to various obstacles that have hindered progress, and serves as a guiding model in terms of improving the feasibility of similar projects throughout the state.

The project team gathered information from a variety of resources, and conducted three distinct phases of analysis in order to complete this redevelopment action plan. The Phase I: Inventory examines the physical, regulatory, and financial context surrounding the current site in order to gauge its condition as a viable location to foster desired economic development for the region. The Phase II: Assessment utilizes these inventory findings to identify clear challenges that impact the redevelopment potential of the site in an effort to reduce overall project roadblocks. The Phase III: Implementation provides strategies to alleviate these challenges moving forward, in the form of clear recommendations for local, regional, and state level regulatory improvements.

Phases I and II were conducted in the fall of 2013, and Phase III was conducted in the spring of 2014.

Particular thanks for guidance on this project are extended to L.P. Athol Corporation ownership, Dr. John Mullin of the UMass Amherst Center for Economic Development, State Representative Denise Andrews of the Franklin County Second District, State Senator Stephen Brewer, State Senator Stanley Rosenberg, Congressman James McGovern, and the Town of Athol.

Executive Summary

The L.P. Athol Corporation facility is a 365,000 square foot former tool manufacturing complex located in downtown Athol, Massachusetts. The property consists of 5 adjacent parcels along the Millers River and remains largely vacant aside from several tenants that primarily rent small portions of the facility for storage and office use. The complex served as a significant economic driver for the region, and remains as an area icon that represents opportunity and prosperity in the heart of the North Quabbin Region. The structures themselves provide adaptable interior space within an historic exterior design that is located directly between the town's downtown commercial district and surrounding residential neighborhoods. The site also provides attractive views of surrounding natural resources.

The L.P. Athol Corporation property is privately owned and has been identified as a transformative community asset that may serve as a catalyst for regional economic development if strategic investment and stakeholder collaboration can result in successful redevelopment of the site. Property owners, area leaders, and local residents envision a mixed-use facility that provides local jobs, commercial and retail opportunities, creative public activities, and affordable residential units.

The facility's layout lends itself to phased redevelopment in which 146,500 square feet of light manufacturing space and 90,000 square feet of rental housing serve as the foundation for redevelopment, and 71,000 square feet of small business incubator space, as well as a riverside restaurant, provide subsequent amenities for the region. An additional 35,000 square feet is slated for demolition due to structural condition and increased parking requirements that accompany this proposed vision for redevelopment.

Energy efficiency is also a primary focus for future reuse of the site, as two active hydroelectric turbines produce an average of 1 million kilowatt hours of energy annually. The incorporation of future solar and geothermal technology is intended to augment this existing clean energy source, and result in a sustainable facility that will enhance the region's position as a leader in energy policy and renewable energy utilization in the Commonwealth.

An initial inventory of the North Quabbin Region, the town of Athol, and the L.P. Athol Corporation site depicts a strategically located yet underserved region that has worked persistently to capitalize on local resources and industries. Despite an affordable cost of living and a skilled labor force, job opportunity in the area has declined and become less diverse over the course of the last 20 years. This economic stagnation resulted in a local decline in median household income and education attainment that the region has yet to fully recover from.

The local need for jobs and the region's dedication to the preservation of open space has resulted in a regional economic development strategy that is focused on vacant and underutilized industrial infrastructure that runs through the heart of the region along the Millers River, the historic Mohawk Trail (MA Route 2), and the Pan Am Southern Patriot Rail Corridor. Several industrial facilities along this route present significant reuse potential, with the L.P. Athol Corporation site emerging as a prime opportunity to strategically implement this identified regional economic development strategy.

A more thorough evaluation of the L.P. Athol Corporation site reveals 6 key financial, physical and regulatory roadblocks to successful redevelopment. These identified topics include:

1. The financial feasibility of undertaking a mill redevelopment project of this scope based on available public/private resources and the local market ability to support proposed uses of the property
2. 2010 Massachusetts automatic sprinkler installation requirements that deter incremental property redevelopment
3. Identifying and attracting viable light manufacturing tenants to anchor and sustain successful redevelopment of the property
4. Municipal zoning and parking requirements that are not conducive to proposed future uses of the property
5. Insufficient vehicular and rail access to the property
6. The lack of historic site designation and subsequent tax credits associated with investment in the redevelopment of a state and federal designated historic property

These identified topics are not intended to guarantee successful redevelopment of the L.P. Athol Corporation property, but rather serve to inform recommended action steps that best prepare the site for future redevelopment that is dependent on developer investment and continued stakeholder collaboration. These topics represent issues that reduce the redevelopment potential of the property, and should be improved in order to provide the best environment to advance ongoing redevelopment efforts.

With these identified roadblocks in mind, deliberate action steps at the site, municipal, region, and state level have been established in an effort to promote cohesive improvements by a variety of regulatory entities. These recommended improvements not only enhance the feasibility of successful redevelopment of the L.P. Athol Corporation property, but also stand to streamline similar adaptive re-use projects in Massachusetts. Recommended action steps include:

Financial Feasibility

1. Estimate total project renovation costs and cash flow analysis
2. Assess the municipal fiscal impact of a fully occupied L.P. Athol Corporation facility

L.P. Athol Ownership

1. Target viable anchor tenants
2. Seek flexibility for incremental rehabilitation work through the Commonwealth of Massachusetts Fire Safety Commissioner's Automatic Sprinkler Appeals Board
3. Initiate conversation with the Massachusetts Department of Transportation (MassDOT) regarding freight rail access funding through the Industrial Rail Access Program (IRAP)
4. Determine the most appropriate process to maximize the impact of New Markets Tax Credit financing

Town of Athol

1. Pursue a public-private partnerships with the L.P. Athol Corporation in order to obtain project funding through the Commonwealth's MassWorks Infrastructure Program
2. Examine the benefits of a Smart Growth Zoning Overlay District for downtown Athol
3. Establish a Downtown Athol Historic District through the Massachusetts Historical Commission (MHC)

Montachusett Regional Planning Commission

1. Include a secondary access road to the L.P. Athol Corporation property on the Regional Transportation Improvement Program (TIP) project list
2. Continue to highlight downtown Athol initiatives in the region's Comprehensive Economic Development Strategy (CEDSD) report in order to attract financial support and technical assistance to the area

Commonwealth of Massachusetts

1. Establish incentives to support fire safety upgrades for vacant and underutilized industrial property in Massachusetts
2. Expand the Economic Development Incentive Program's (EDIP) Manufacturing Retention tax credit to non-Gateway City communities or certified industrial facilities
3. Adopt a Mill Revitalization Act similar to Rhode Island's 1996 Mill Building and Economic Revitalization Act in order to alleviate soft costs and provide technical assistance (Historic Preservation & New Markets Tax Credit strategies) for Massachusetts mill redevelopment projects

These recommended action steps incorporate various regulatory entities that maintain jurisdiction over specifically identified L.P. Athol project challenges. Many mill redevelopment projects integrate creative municipal and financial adjustments to improve the feasibility of success, but a more comprehensive strategy that includes regional and state level procedures must be implemented in order to support proposed projects that can not effectively fill the gap between existing available resources and overall project impediments.

Mill redevelopment projects, particularly within smaller Massachusetts cities and towns, exemplify smart growth and energy efficient principles that are increasingly endorsed by state activity across a variety of governmental divisions. Not only do these types of local projects embrace desired future growth for the Commonwealth, they serve to improve the overall quality of life for local residents through appropriate job creation, improved housing options, the preservation of important cultural and natural resources, and positive municipal property tax growth.

II. INVENTORY

Overview: North Quabbin Region

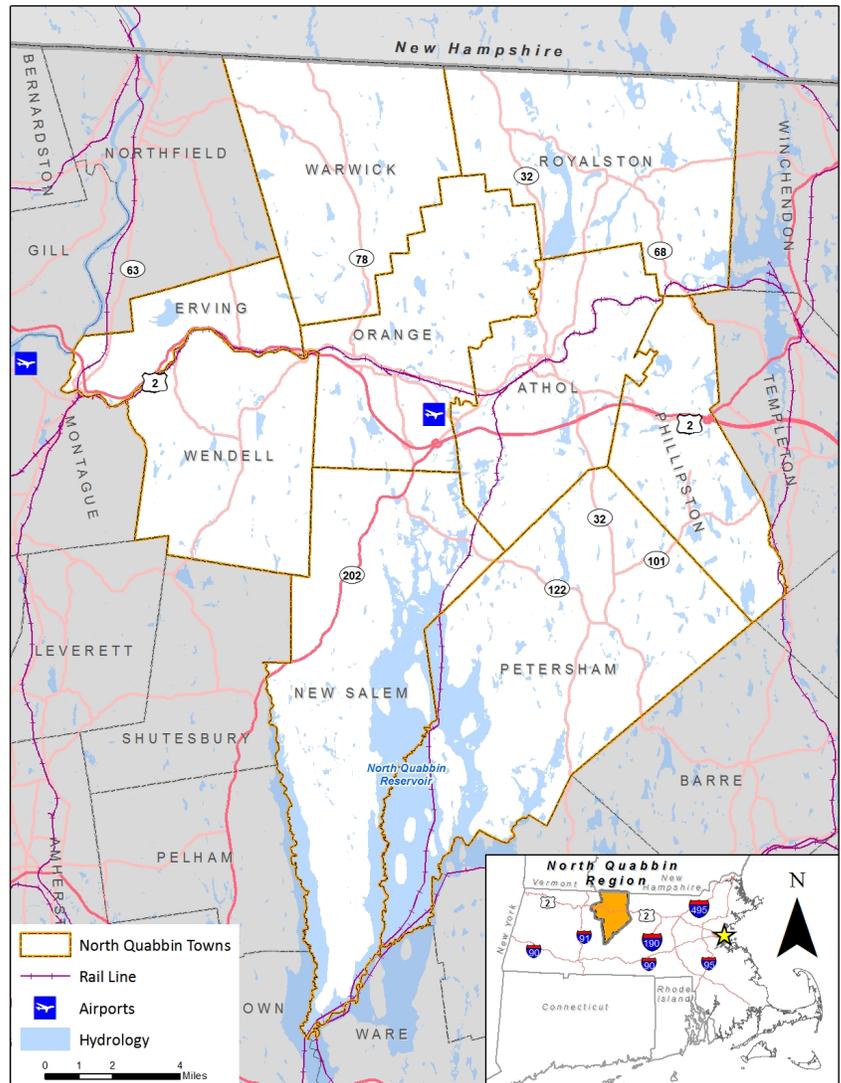
Context

The North Quabbin Region consists of 9 municipalities located on the border of Worcester and Franklin Counties in north central Massachusetts (Figure 1). Approximately 28,000 residents take advantage of the distinct pastoral and small town character that is provided by these communities. The towns of Athol and Orange serve as the region’s social and economic anchors, as they maintain a large percentage of area population and employment opportunity (MRPC, 2012). There is a long tradition of successful industries, innovative skilled trades, and competitive global manufacturing within these anchor communities that are situated along the Millers River that flows from east to west through the heart of the region.

Figure 1: North Quabbin Region

Along with a distinct small town charm, North Quabbin communities also provide strategic access to both local and regional metropolitan areas. Several major New England population centers including Boston, MA, Worcester, MA, Hartford, CT, and Manchester, NH are all within a two-hour drive of the region. Local freight rail access also offers reliable service south to New York City, west to upstate New York, and east to Boston. Additionally, the Orange Municipal Airport provides daily non-commercial flight service for businesses located within the region (Athol Master Planning Committee, 2002).

North Quabbin Region communities are separated by county jurisdiction and regional planning agency service areas. Erving, New Salem, Orange, Warwick, and Wendell are located in Franklin County, and therefore work closely with the Franklin Regional Council of



Governments (FRCOG) during planning activities. Athol, Petersham, Phillipston, and Royalston are located in Worcester County, and predominately work with the Montachusett Regional Planning Commission (MRPC). This dynamic does not often hinder collaboration but does present an additional challenge when discussing potential community improvements for the North Quabbin Region (FRCOG, 2013; MRPC, 2013).

The region is known throughout the state for outstanding recreational and outdoor activities. Hiking trails, small farms, lakes, rivers, and state forests are located throughout the region (Young, 2003). The prominent Quabbin Reservoir also serves as the primary source for greater Boston's water supply and provides unique recreational activities like bird watching and environmental learning programs. An expanding retail presence that is highlighted by the Quabbin Commons Retail Park, along with local vocational and academic institutions, continues to bolster the areas labor force and demand for quality housing options. Unfortunately, these regional assets are often matched by a perception of declining employment opportunity and rural isolation for the region (Athol EDIC, 2005).

Demographic Trends

The North Quabbin Region maintains a population of 28,096 residents. This number has increased by nearly 4% since 2000. The majority of this population is White (92.7%), and provides a median age (41.2) that is higher than Worcester County (39.4) but consistent with other surrounding counties (Please see Appendix D for data sources for this section).

North Quabbin residents present an interesting distribution of education attainment across the 9 communities. In general, a significant portion of residents over the age of twenty-five have not completed high school (12.4%). This phenomenon is particularly noticeable in Athol (14.5%), Orange (13.4%), and Erving (12.3%). These communities are all well above the state average of 11.1%. The North Quabbin Region also lags behind state and county averages in terms of post high school education. Approximately 13.9% of residents have completed a four-year college program, with a clear concentration of this population in Wendell (43.1%), Petersham (30.4%), and New Salem (26.5%). It should be noted that education attainment has improved in the North Quabbin Region since 2000, but this trend has also been experienced across large portions of the state.

The median house value for the North Quabbin Region is \$183,425. This is well below the median value for the state at \$335,500. North Quabbin median house values also slip below that of both Worcester and Franklin County. Similarly, the median household income for the region (\$51,012) is comparable to Franklin County (\$52,308), but again well below the state (\$66,658) and Worcester County (\$63,687).

Despite these median income disparities, the majority of North Quabbin communities produce a high percentage of the population that participates in the labor force. Athol, Orange, Petersham, and Wendell are the only communities with lower labor force percentages than the state (67.9%). Many North Quabbin residents are working, but often they receive less pay, and must travel further for that work.

Economic Base

Major employers in the North Quabbin Region include the L.S. Starrett Company (500+ employees), the Athol Memorial Hospital (250-500 employees), the Quabbin Valley HealthCare (QVHC) (100-250 employees), Erving Industries (100-250 employees), and MBW Incorporated (100-250 employees). An estimated 44% of North Quabbin residents work in manufacturing, education, and healthcare industries. This specific industry reliance produces a North Quabbin economy that is less diverse than both Franklin County and Worcester County. This consistency in local employment opportunity can produce specialized regional economies that may be successful in attracting similar industries and skilled labor. However, this economic specialization potential is dampened slightly when considering the fact that manufacturing jobs have declined in the region, and medical and education jobs have not increased as rapidly as the state rate over the last ten years (*Appendix D*).

Several North Quabbin communities have acknowledged this industry dependence through master planning efforts. New business opportunities should be attracted to the region, while locally owned small businesses should be supported as much as possible (*Athol Master Planning Committee, 2002*). Potential new businesses often cite a lack of market demand due to the region's minimal population, but 2013 data indicate that nearly 256,273 residents live within a 20-mile radius of downtown Athol. This number is also projected to increase moving forward. Retail market analysis similarly indicates that the demand for a variety of industry products is not currently met by the local supply. Particular industries of note in this analysis include food and grocery stores, building material and supply stores, and medical and personal care stores (*Appendix D*).

Steady population growth, combined with affordable rental rates and an expanding demand for goods and services, should serve to attract new business development to the region moving forward.

Overview: Town of Athol

History

Athol, Massachusetts is located in the heart of the North Quabbin Region, at the intersection of MA Route 2 and U.S. Route 202. The town maintains an active downtown that is surrounded by lower density single and multi-family homes (*Athol Master Planning Committee, 2002*). Main Street runs parallel to the Millers River and provides a mix of retail stores, office space, banks, and restaurants (*Figure 2*). The downtown is bookended by the L.S. Starrett Tool Company and the L.P. Athol Corporation facility to the east, and the South Main Street Bridge to the west. The active downtown reflects the close community that exists within the town, as it is common to see families utilizing public space and manufacturing employees walking downtown during lunch breaks. The importance of the Millers River is constantly on display as it winds through and around downtown Athol.

Figure 2: Main Street – Downtown Athol

Source: J. Phelan



Athol was first settled in 1735, and incorporated as a township in 1762 (Lord, 1953). Early town residents, as with many North Quabbin communities, relied heavily on farming and hunting until the late 1700's. Waterpower generated by the Millers River was critical to establishing gristmills, sawmills, and textile mills that served as the foundation for industrial and economic expansion. The Athol Woolen and Cotton Factory was established in

1814 and served as the first regional industry for the area. The construction of the Fitchburg Railroad in 1879 further spurred industrial expansion as it connected Athol to Boston, Worcester, and upstate New York through reliable rail service (Karr, 1989).

By the late 1800's, Athol became widely known for its metal tool manufacturing that still exists to this day. The L.S. Starrett Tool Company continues to serve as a major industry anchor for the region, while the former Union Twist Drill Company (now the L.P. Athol Corporation facility) dealt a serious blow to the region's economy when it relocated out of state in the late 1980's. This relocation removed over 500 jobs from the local economy overnight, and contributed to the economic strain and population reduction that the region still has not fully recovered from. This facility continues to serve as a reminder of the town's impressive industrial past and continued redevelopment potential.

Despite this decline in the late 20th century, Athol has maintained relative stability through strategic investment, local entrepreneurship, and political leadership, but more diverse local industry growth is required if Athol is to regain its vibrant economy and quality of life.

Municipal Leadership

Athol political leadership consists of a Town Manager, Selectboard Members, and Town Meeting Voters. This political structure does allow for swift local regulation change if public support and consensus can be achieved (Athol Town Moderator, 2006).

Athol municipal leadership has incorporated several programs that are intended to encourage economic development, particularly near downtown. The Town Manager oversees a Tax Incremental Financing Committee that reviews all application requests regarding tax relief to improve the feasibility of revitalization projects (Athol EDIC, 2004). The Town Planning Department has also achieved recent success in attracting a 2011 MassWorks Infrastructure Grant to complete Traverse Street infrastructure upgrades. This project was completed in 2013 in order to improve

Figure 3: Traverse Street – Downtown Athol

Source: J. Rosa

pedestrian safety and access to downtown amenities (MA DHCD, 2011). This project also enhanced pedestrian and auto access to the local Community Transit Services (CTS) bus terminal and YMCA (Figure 3).



In 2005, Athol designated two community locations as Priority Development Sites. The downtown district and the North

Quabbin Commons Retail Park have been supported with expedited permitting (43D) in an effort to streamline development and encourage private investment in these strategic locations. The Downtown Economic Opportunity Area designation also qualifies the area for a variety of incentives that are associated with job creation, including New Market Tax Credits and the Massachusetts Economic Development Incentive Program (MA DHCD, 2012).

Athol also achieved Green Community Designation in 2010 through the Massachusetts Department of Energy Resources (DOER). This designation qualifies the town for state funding related to municipal energy efficiency upgrades. The L.P. Athol Corporation's hydroelectric efficiency was prominently included in this successful designation application (MA DOER, 2012).

The Athol Historical Commission has worked diligently to push forward a proposal to create a designated National Historic District that covers much of downtown, but currently this process remains in the inventory and planning stage. Several independent town sites are included on the National Register of Historic Places, including the Old Athol High School, The Old Town Hall, and the Pequig Hotel (Chaisson, 1986).

Athol municipal leadership has laid the groundwork for continued local and regional revitalization efforts by utilizing existing resources and collaborating with state political officials. This sustained collaboration highlights the region's flexibility in terms of creating an environment that is more conducive to ongoing economic development.

Tax Base

The current property tax rate for residential, commercial, and industrial uses in Athol is \$15.48 per thousand-dollar valuation. The total tax levy for the community increased every year since 2003 before declining 3.5% from 2012 to 2013. Residential property taxes account for the greatest portion of the town's total tax levy, contributing 86.8%, while commercial (7.65%) and

industrial (2.45%) uses produce significantly less revenue for the town (*MA DOR, 2013*). This tax rate was increased to \$18.43 for FY2014, following a March 2014 Athol town meeting vote. Despite this recent rate increase, Athol's affordability and single tax rate can be extremely attractive for potential incoming businesses.

Land Uses

In 2002, the town of Athol adopted a new master plan that was created by city officials with assistance from the Franklin Regional Council of Governments' Planning Department and the Montachusett Regional Planning Commission. This document describes residential land use that is concentrated around historic village centers that are located in close proximity to the modern-day downtown. Relatively new residential development has emerged along corridors that funnel away from the downtown including Route 32, Pleasant Street, and Daniel Shays Highway. Similarly, commercial and industrial uses that were established during the town's 19th century industrial expansion continue to extend alongside the Millers River (*Athol Master Planning Committee, 2002*).

Currently, about 15% (3,180 acres) of town land is considered developed while 85% (18,174 acres) remains as undeveloped forestland, open space, and farmland. 3,700 acres of Athol land is permanently protected from future development and 3,100 acres are temporarily protected, largely due to the work of the Athol Conservation Commission and the Mount Grace Land Conservation Trust (*Athol Department of Planning and Development, 2008*). This commitment to open space reflects the community's support for the preservation of natural resources and rural characteristics.

The North Quabbin Commons Retail Park, initiated by the town's Economic Development and Industrial Corporation, is currently under construction on previously undeveloped land located southeast of the downtown area. This facility marks a significant adjustment to long-standing land uses in an effort to attract new employment opportunities and enhance the local tax base. The retail park is located adjacent to along Petersham Road, adjacent to Route 2, and was financed largely through state and federal funding (*Athol EDIC, 2005*).

The primary recommendation of this Athol planning and land use report is the diversification of employment and housing opportunity in order to fit the needs of potential new residents while decreasing local dependence on few major employers. Additionally, a priority is placed on infill development, and the redevelopment of underutilized properties, in order to more efficiently utilize town land. Other North Quabbin communities including Orange and Erving have duplicated this planning approach.

Zoning

There are seven primary zoning districts in Athol. Rural Single-Family Residential (RC) is the most common zoning district, accounting for almost 90% of Athol's total land area. This zoning regulation covers large tracts of town land that are northeast and southwest of the downtown. Medium Single-Family Residential (RB) and Multi-Family Residential (RA) encircle Athol's Main

Street commercial corridor, which is zoned primarily as General Commercial (G) and Central Commercial (CA) (*Athol Zoning Bylaw Review Committee, 2013*).

The L.P. Athol Corporation property is zoned entirely for General Commercial use. This zoning distinction is remarkably conducive to mixed-use development and local job creation, particularly related to office, commercial, and light manufacturing uses. Special permits are required for heavier industry uses, more than four upper floor residential units, assisted living facilities, and outdoor commercial activities.

Athol's Major Commercial Overlay District (MCO) was approved in 2010 and provides additional flexibility and provisions to any proposed redevelopment of the L.P. Athol site. This district encourages collaboration between private developers and municipal officials when considering designated locations within the community (town lots receiving 43D expedited permitting). Collaboration activities include pre-application meetings, the creation of a project management team that is comprised of various relevant town board/commission members, and site plan reviews. In exchange for this transparency, underlying zoning regulations may be relaxed in order to advance large-scale commercial development within the town. Reduced zoning regulations may include lot dimensional provisions as well as parking and loading requirements. This Athol overlay district is similar to Mill Conversion Overlay Districts that are commonly utilized to improve the feasibility of mill redevelopment projects that are almost always non-conforming to more modern municipal zoning regulations (*Athol Zoning Bylaw Review Committee, 2013*).

Athol Zoning Bylaws also enforces two additional zoning overlay districts in an effort to maintain water quality and public safety. The Flood Plain District and Groundwater Protection District both prohibit hazardous material storage that may contaminate rivers and public water supply. Portions of the L.P. Athol Corporation property are located within this Flood Plain District (*Appendix A*).

Parking and Loading

Parking regulations are clearly stated within the Athol Zoning Bylaw, and are consistent with other communities throughout the state. Retail businesses and business offices require one space for every one hundred and fifty square feet of floor space dedicated exclusively to that specific use. Restaurants require one space for each three seats within the establishment and for each three employees. Retail dwellings require two parking spaces per dwelling unit, and Industrial/Wholesale uses require one parking space for every two employees if the structure is located within the General Commercial District.

Loading requirements vary based on retail, office, and industrial uses in Athol but, in general, one loading berth is required for facilities under 8,000 square feet. Facilities that exceed 8,000 square feet must be reviewed by the Board of Selectmen in order to determine the adequate capacity of off street loading and unloading requirements.

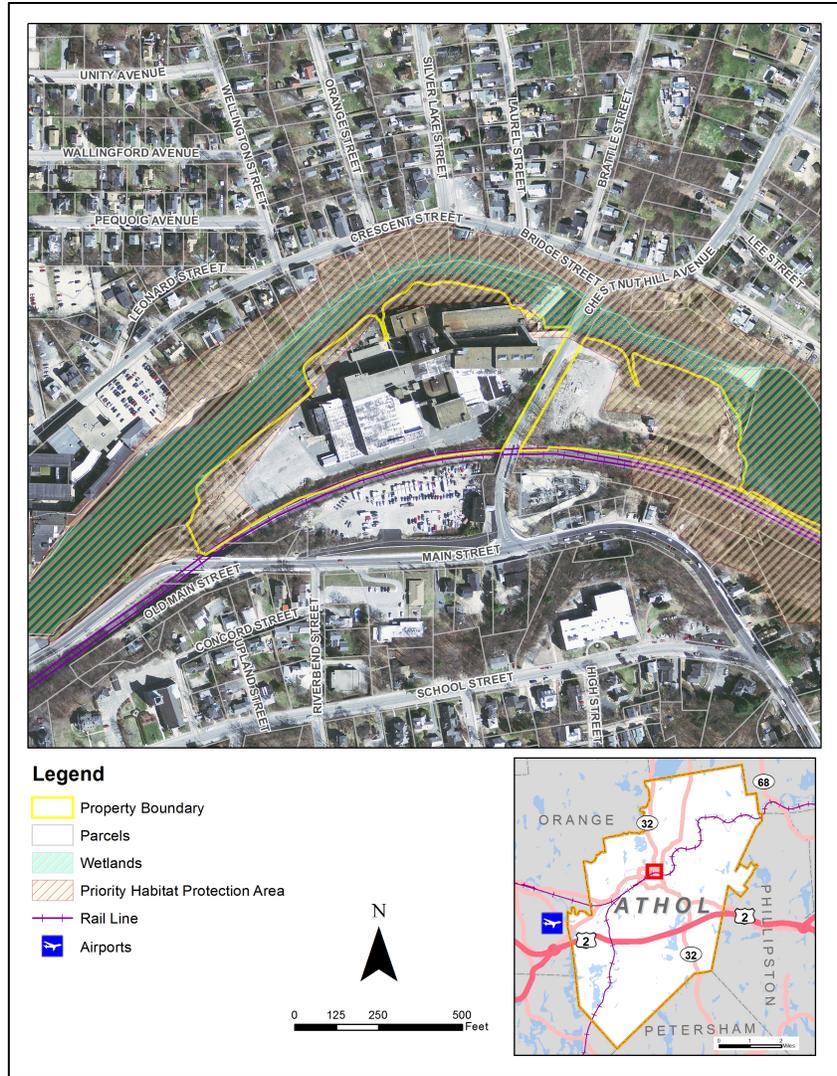
Overview: L.P. Athol Corporation Property

Location

Figure 4: L.P. Athol Corporation Site Map

The L.P. Athol Corporation property is located on Chestnut Hill Avenue along the southern bank of the Millers River. The property consists of five individual parcels and three distinct structures (Figure 4) that cover 13.5 acres. The site is approximately 1/2 of a mile from the Athol town offices, and the heart of downtown Main Street. This location also serves as a buffer between downtown commercial uses and dense residential neighborhoods, located to the north, south, and east.

The Millers River bounds the L.P. Athol Corporation property on three sides (north, east, and west) and the former Fitchburg Railroad Line (now Pan Am Railways) to the south. The property is also bisected by Chestnut Hill Avenue, and a power canal that provides hydroelectric power to the facility is diverted onto the property just west of the Chestnut Hill Avenue Bridge.



Current Condition

The oldest portion of the L.P. Athol Corporation complex was constructed in 1899 with later additions from the 1920's through the 1950's. The facility was the home of the Union Twist Drill Company, a tool and drill manufacturer, until the mid-1980's. Now owned by the L.P. Athol Corporation, the facility provides storage space for a variety of tenants (some seasonal) and produces hydroelectric power for the facility itself and National Grid. The facility remains largely vacant, and struggles to attract large-scale and long-term tenants that are critical for local job creation.

L.P. Athol Corporation buildings are mostly constructed with brick exterior walls and both 12” reinforced concrete and 6” tongue and grooved wood floors. The main structures are in relatively solid condition aside from minimal façade damage, particularly to the 1950’s additions. A smaller rear building on the southern bank of the Millers River presents the most physical deterioration with heavy roof damage, but still maintains structural integrity. There are several freight and passenger elevators throughout the facility that are in need of repair and safety approval if they are to return to frequent usage. Currently, only one freight elevator remains in use and up to code.

There are five existing loading docks on the western portion of the facility, and an open parking lot provides approximately 200 parking spaces. The property maintains only one access point located on Chestnut Hill Avenue. This access point includes a steep slope and sharp angle that is potentially difficult for large trucks and emergency vehicles to navigate.

An original freight rail siding was once located on the eastern-most portion of the property, but is no longer operational. This location may not adequately serve future facility needs as it is located across Chestnut Hill Avenue and does not reach existing facility loading docks. However, a new rail spur that traverses the property may be feasible due to the property layout and rail line proximity.

Dam and Hydroelectric Power

The Millers River runs along 52 miles of north central Massachusetts, originating in Ashburnham and joining the Connecticut River near Montague, MA. The Birch Hill Dam in south Royalston was completed in 1941 and is still utilized for flood control for the area (*U.S. Army Corps of Engineers, 2007*). An embankment dam with a downriver spillway is currently controlled by the L.P. Athol Corporation in order to generate hydroelectric power for the facility, with surplus energy sold back to the National Grid system. This hydroelectric production operates under a lifetime Federal Energy Regulatory Commission (FERC) exemption, meaning that the facility is subject to bi-annual review in order to assess environmental impacts but there is no recertification process to produce Massachusetts Class II renewable energy (*Low Impact Hydropower Institute, 2012*).

The Low Impact Hydro Institute (LIHI) certified two operational hydroelectric plants on site in 2012 (*Figure 5*), while the Massachusetts

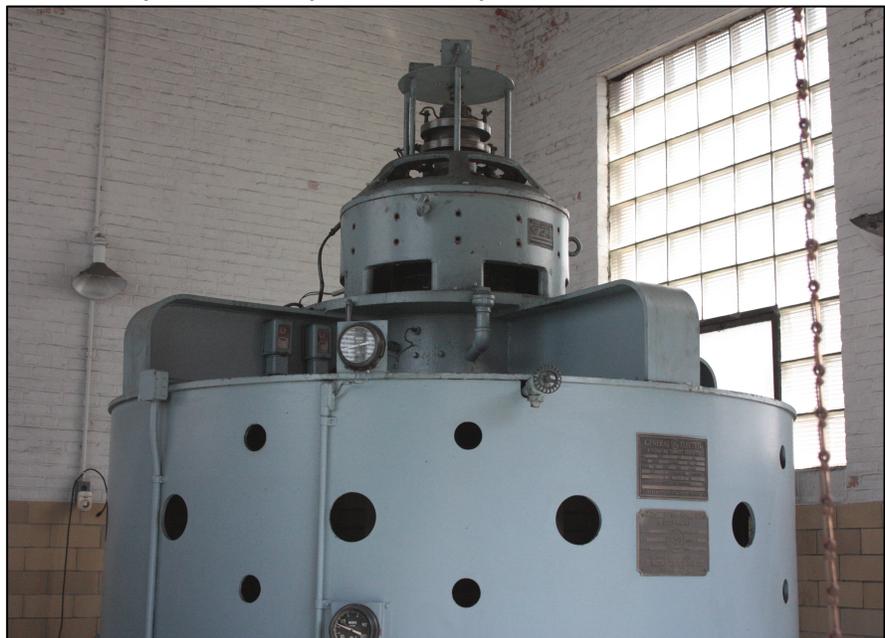


Figure 5: L.P. Athol Hydroelectric Generator

Source: J. Rosa

Clean Energy Center (MA CEC) and the United States Department of Agriculture (USDA) both provided grants totaling \$350,000 to perform hydro-plant efficiency upgrades in 2012. On average, these hydropower turbines produce 1 million kilowatt-hours annually, that can be sold for approximately 4 to 6 cents per kilowatt.

Millers River public recreation is common in Athol and amongst surrounding communities. Nature trails and portage sites are located along the entirety of the river, and the Millers River Environmental Center is located in close proximity to L.P. Athol. Additionally, a large annual river race is held every April for canoe enthusiasts who wish to race from downtown Athol to downtown Orange (6 miles).

Square Footage and Assessed Value

The L.P. Athol Corporation facility has a total building footprint of approximately 150,000 square feet. Ranging from 1 to 4 floors, the entire facility provides a total of 365,000 square feet available for lease or potential sale. The five contributing parcels have a total assessed value of \$731,400 according to FY2014 Athol Town Assessors reports (*Athol Assessors Department, 2013*). Currently, L.P. Athol Corporation ownership charges approximately \$3 per square foot for rental space, and suggests a minimum of 10,000 square feet for all leasing agreements. Existing tenants include a restaurant filter cleaning company, a foam insulation company, seasonal storage for a local paper company, a clothing donation company, and offices for a local car dealer. These tenants primarily use the facility for storage and office space with limited daily activity. Additional temporary warehousing has also served as a source of rental revenue for ownership.

Services and Codes

The L.P. Athol Corporation facility receives direct electric power from two hydroelectric plants located on site. National Grid provides utilities for the entirety of the town (including L.P. Athol), but L.P. Athol remains largely self-sustaining in terms of energy utilities in its current state. There is no natural gas service in the town, and the municipality maintains water/sewer services. The Athol Master Plan encourages limited expansion of water and sewer infrastructure, but these utilities are adequate in terms of handling increased usage that may result from a more active L.P. Athol Corporation facility.

A variety of service providers offer telephone, internet, and cable services within the town, including Verizon Communications, Time Warner Cable, and AT&T. High-speed internet is available to the entirety of the facility, however fibre optic service is currently inactive (*C. Hartwell, personal communication, Nov. 15, 2013*).

Brownfields and Environmental Status

A Brownfields assessment of the L.P. Athol Corporation property was conducted in the 1980's upon the transfer of ownership. This assessment indicated that there was minimal environmental

Figure 6: L.P. Athol – Sample Interior Condition

Source: C. Hartwell



contamination throughout the exterior portions of the property. Since this environmental assessment was conducted prior to the transfer of ownership that occurred at that time, L.P. Athol operations have not resulted in any further negative environmental impact. Interior portions of the property present common health and safety issues that are associated with rehabilitation work on buildings built prior to modern regulations (Figure 6). Lead paint remediation and asbestos

removal must be conducted if more significant usage of the property is to occur. It is expected that the majority of these potentially hazardous materials will be found in common mill building elements such as steam pipe wrapping, boiler jackets, and peeling paint.

Due to the sheer size of the facility, it is challenging to determine the full extent of required remediation work, and the anticipated cost associated with that work, prior to a thorough assessment by the Massachusetts Department of Environmental Protection.

The Massachusetts Department of Energy and Environmental Affairs has also designated portions of parcel 031-119 (Appendix A) as a protected habitat for wood turtles and dragonflies, however current day-to-day site operations do not currently conflict with these habitat regulations.

Under the Massachusetts Environmental Protection Act of 1977 (MEPA), an environmental assessment report must be conducted prior to any site rehabilitation work if state and federal funds are to assist with preparation activities and construction costs. This report is intended to document the probable environmental impact of proposed work, and discuss potential alternatives and methods to minimize these impacts. Specifically for the L.P. Athol property, MEPA reporting is required if any alteration of the existing wildlife habitat is proposed, and may be required at the request of the Massachusetts Secretary of Energy and Environmental Affairs if proposed work will result in the alteration of 500+ linear feet along the Millers River (Mass EEA, 2014).

Ownership Vision

L.P. Athol Corporation ownership has a clear vision for future adaptive reuse of the facility (Figure 7). This vision aims to capitalize on potential and existing assets to create “a mixed-use facility and a catalyst for economic growth for Athol (C. Hartwell, 2012).” Proposed activity includes residential opportunities for seniors and artists, light manufacturing industries, community space, commercial

and restaurant options, and a local craft brewery. Solar technology may also be used to augment existing hydropower to create a highly energy efficient facility. Both rail and river access provides opportunities to enhance private and public use of the property.

Ideally, the first step of the redevelopment process could include market-rate and affordable residential development for buildings 3 and 4, and shell rehab work to support increased light manufacturing activity in Building 1 and the Brewery (Figure 7). This first phase of redevelopment is intended to support more immediate community needs for affordable housing and job creation. If the entire facility is to remain under single ownership, revenue generated from increased tenant activity will be used to supplement future site rehabilitation costs associated with improved commercial space in Building 2 and the proposed restaurant space. Partial demolition is most likely required in order to remove structurally unstable portions of the facility and create room for additional parking that must accompany increased use of the property.

A secondary point of access for automobiles is recommended for the site, while new freight siding and improved pedestrian access via a riverwalk remain as discussion points during pre-development planning efforts.

At full capacity, the L.P. Athol Corporation facility can house 90,000 square feet of residential units, 146,000 square feet of light manufacturing and brewery activity, and 71,000 square feet of business office and commercial space. (Figure 8).

Figure 7: L.P. Athol Redevelopment Concept Drawing

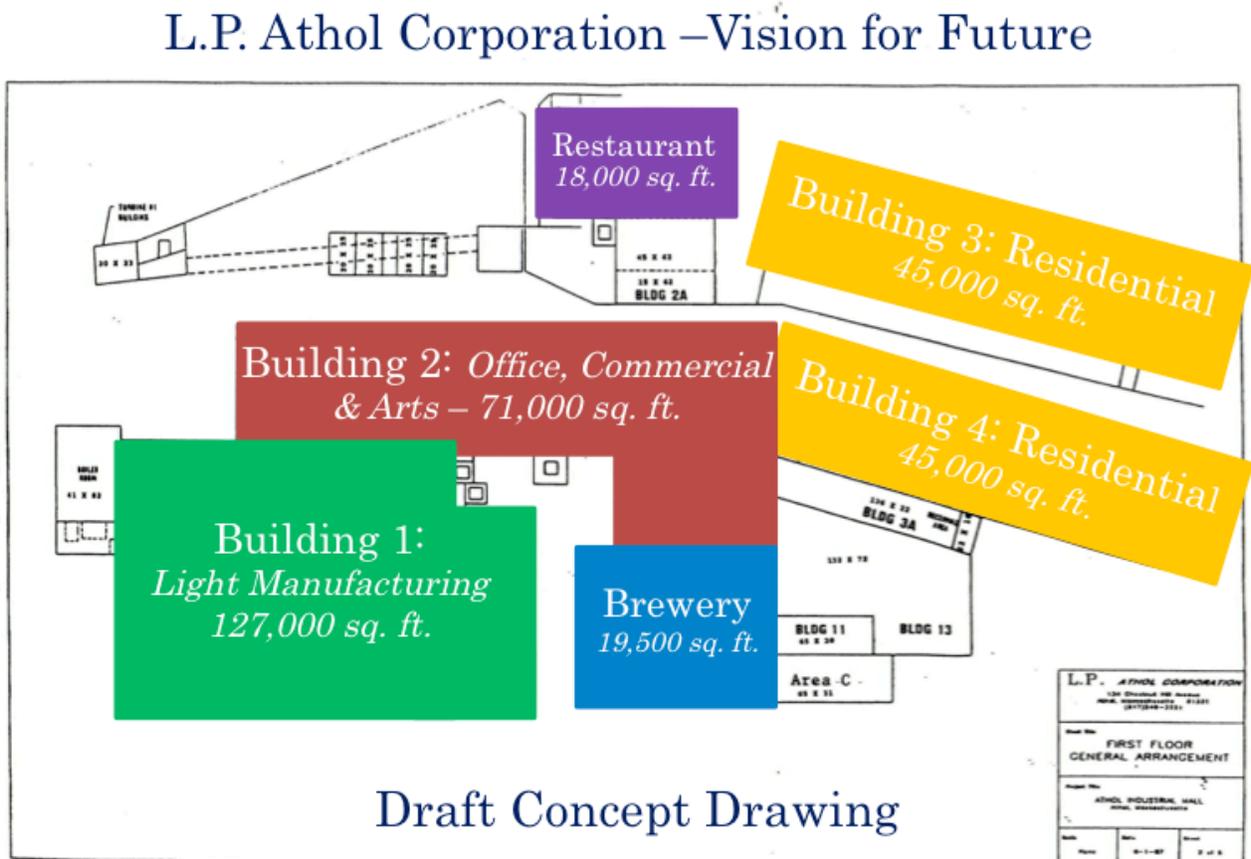


Figure 8: Sketch of Proposed L.P. Athol Residential Buildings

Source: B. Perrett



Stakeholder Participation

This vision is ambitious, but a variety of collaborative efforts have directly and indirectly contributed to incremental progress toward this end goal. As discussed earlier, the Athol Town Manager, Planning and Development Department, and Historical Commission have all worked to prepare community space that surrounds the L.P. Athol Corporation property in order to incentivize and streamline area revitalization efforts.

The Montachusett Regional Planning Commission has also identified downtown Athol in its Comprehensive Economic Development Strategy (CEDS) report that is updated every five years. This document serves as an effective channel to attract regional, state, and federal support toward particularly critical local opportunities for economic development (MRPC, 2013).

State Representative Denise Andrews of the Second Franklin District, Congressman James McGovern of the Massachusetts Second Congressional District, State Senators Stephen Brewer and Stanley Rosenberg, and a host of state agencies and organizations have expressed support for this vision. These influential stakeholders may not be able to overcome all economic challenges, but it is certainly beneficial to attract support that can potentially alleviate added bureaucratic obstacles.

In 2002, the town of Athol conducted a public Urban Rivers Charrette with the assistance of the Massachusetts Executive Office of Environmental Affairs. L.P. Athol management participated in

this community visioning process which focused primarily on connectivity, river use, and economic development in downtown Athol. Community recommendations relating specifically to L.P. Athol included a public riverwalk that extends from downtown to the L.P. Athol property and adaptive reuse in order to provide more benefit to the community at large. Reuse proposals ranged from a community college or local art center to affordable residential units and a small business incubator (*MA Executive Office of Environmental Affairs, 2002*).

Although these various stakeholder groups provide slightly different perspectives, it is positive to see common themes rise to the surface. Clear collaboration and purpose is a prerequisite for almost all public grant applications, and private developers are attracted to sites that offer limited resistance. Similar collaborative efforts have been associated with successful mill rehabilitation projects in other communities like Easthampton, Ludlow, North Adams, and Lawrence that have incorporated active mill use as a fundamental catalyst for expanded downtown revitalization.

III. ASSESSMENT

After conducting this initial inventory of regional, local, and site-specific conditions, six issues arise as significant roadblocks that impact the redevelopment potential of the L.P. Athol property. These issues include the overall financial feasibility of a project of this scope, state fire safety regulations that deter incremental rehabilitation, limited market demand and incentive for businesses to locate to the L.P. Athol facility, local zoning and parking requirements, insufficient site access, and the historic status of the facility itself.

Financial Feasibility

Large-scale mill redevelopment projects in Massachusetts provide a wide range of total project costs that are highly dependent on proposed use, access to financing, tax incentives, and project complexity. Prior to any mill redevelopment project, an estimated cost and projected revenue must be prepared in order to assess the feasibility of a project, as well as its ability to generate profit for both the property owners and the municipality as a whole. The daunting nature of these redevelopment projects can be more clearly understood if accompanied by a well-informed pro-forma and municipal fiscal impact analysis. Clearly these financial feasibility assessments remain as general estimates, but these findings result in a baseline awareness of the public and private investment that is required to transform a community vision into an operational community asset.

The state of Massachusetts has established a variety of resources to encourage and incentivize mill redevelopment. Commonly utilized state support includes MassWorks Infrastructure Grants, Low-Income Housing Tax Credits, the New Markets Tax Credit Program, Community Development Block Grants, the Brownfields Support Team Initiative, and Historic Investment Tax Credits. Local property tax relief in the form of Tax Increment Financing (TIFs) and zoning overlay districts are often also utilized to create an environment that is more conducive to investment and long-term return on that investment. A combination of these established resources almost always accompany successful mill redevelopment projects Massachusetts (*Appendix C*).

Property ownership structure is perhaps the most immediate distinction between those mill redevelopment projects that have access to critical grants and financial incentives and those that do not. This is an interesting situation because municipal and non-profit owners, who contribute significantly less to local and state tax revenue, are provide with the most access to these various resources. In a sense, tax-exempt ownership is the most feasible model for mill redevelopment even though this ownership structure serves to generate less economic support for the surrounding community over the long-term. L.P. Athol's private ownership structure decreases the projects access to financial support and indirectly encourages a lack of investment, or a transfer of ownership to a tax-exempt entity. This dynamic is exemplified across the state by private property owners who inherit large mill facilities and allow them to deteriorate, or are entirely dependent on outside investment or municipal leadership to attract financial support that is necessary for redevelopment.

This condition is further enhanced in more rural Massachusetts communities that draw lower rental rates upon project completion. Rural communities like Athol were completely structured around thriving industrial facilities that now sit underutilized within the heart of the community. Facilities like L.P. Athol represent a prime opportunity to solidify a struggling North Quabbin economy through truly innovative measures, but cannot gain traction until the gap between estimated project cost and operating income can be reduced enough to generate reliable private investment.

Massachusetts Automatic Sprinkler System Requirements

It is common for states to adopt building and fire codes that are created by the International Code Council (ICC). Typically this framework established by the ICC is duplicated by specific state regulators and amended to align with particular local needs. In 2010 the Massachusetts Department of Public Safety adopted a substantial amendment to the Fire Protection Systems section of the 2009 International Building Codes. This amendment requires that any “significant” rehabilitation work on an existing building that is over 7,500 square feet requires fire safety upgrades for the entire structure regardless of use, and fire resistant separation between those uses. In the case of L.P. Athol, critical facility improvements that may prepare a portion of the structure for a potential revenue generating tenant would require an automatic sprinkler system retrofit for the entire complex.

The National Fire Protection Agency (NFPA) estimates that retrofitting an automatic sprinkler system can cost up to \$4 per square foot. This is a one-time only expense for vacant mill facility owners, which severely deters the initiation of any property improvement because of the large cost associated with bringing an entire facility up to current fire code. One new tenant is remarkably impactful for a small business like the L.P. Athol Corporation, but this tenant may not even be able to utilize this affordable space until upwards of \$1.2 million dollars is invested for an automatic sprinkler system. This all or nothing approach to mill fire safety often results in an environment that maintains vacant, high fire risk, properties as opposed to encouraging and incentivizing improvements.

Attracting Tenants and Developers

Highest and best use analysis for historic industrial facilities in rural and western Massachusetts frequently suggests that warehousing and regional distribution centers are the most feasible use for these structures. This type of mill reuse results in limited daily activity and minimal job creation. These low-impact uses do not often meet the needs or desires of property owners and the local community as a whole. Unfortunately, tenants and potential developers rely heavily on market analysis when assessing where to locate and invest. This situation presents a challenging obstacle for property owners who are dependent on local market demand that, in turn, is dependent on catalytic economic development projects such as a mill redevelopment. Previously mentioned financial support mechanisms are critical to alleviate the risk associated with investment in mill redevelopment, but market demand ultimately remains as the primary factor in attracting critical investment to a project like L.P. Athol.

The Massachusetts Economic Development Incentive Program (EDIP) was established to address this gap in market support and stated local needs by providing tax incentives for companies that create and retain jobs within designated Economic Target Areas (ETA). The Manufacturing Retention Program currently provides the most substantial tax credit provided by the EDIP. This program awards income tax credits of up to 40% for any company that creates more than 25 new full-time manufacturing jobs, or retains more than 50 existing jobs. These manufacturing jobs must also result in substantial sales outside of Massachusetts in order to bring new money into the commonwealth.

Although this particular program within the EDIP is the most relevant to the future vision for L.P. Athol, and other mill revitalization projects in western Massachusetts, this tax incentive is specifically limited to projects within designated Massachusetts Gateway Cities. The Gateway Cities program provides a variety of resources intended to alleviate poverty and improve education within medium sized cities across the commonwealth. Gateway City designation requires that cities must maintain a population between 35,000 and 250,000, and produce a median household income and a higher education attainment rate that are both below the state average. This program has been widely discussed as a success, but noticeably overlooks more rural communities like Athol simply because it does not meet a municipal population threshold yet, as previously discussed, Athol and Orange serve as the social and economic hub for a region that contains over 250,000 residents within a 20-mile radius.

Zoning and Parking Capacity

The L.P. Athol Corporation property is located within the General Commercial (G) zoning district. This district is perhaps the most flexible within the town’s zoning bylaw, and results in minimal conflict with the stated vision for L.P. Athol redevelopment. A special permit requirement for more than four (4) upper floor residential units, and dimensional requirements appear to be the primary issues of concern if the site is to be redeveloped. Current General Commercial (G) and Major Commercial Overlay District (MCO) dimensional requirements are as follows:

Minimum Lot Requirements	General (G)	MCO	Residential Existing*	Com/Ind. Existing*
Area, Total or First Dwelling Unit (sq. ft.)	10,000		86,124	61,662
Area, Each Additional Unit (sq. ft.)	2,000			
Width (feet)	60	60	508	417
Frontage (feet)	50	20+	425	425
Depth (feet)	50	50	500	580
Maximum Building Requirements				
Lot Coverage (%)	40	40	45.2	37.9
Height (feet)	45	80	75	75
Floor Area Ratio	0.5	2	1.35	1.13

** Existing site dimensions determined by GIS measurements, not official Athol Assessors records*

These requirements would apply to all major construction occurring on any of the five (5) L.P. Athol Corporation parcels. In the case of an MCOB designation, all five parcels would be assessed as a single parcel when calculating dimensions.

Current Athol parking requirements indicate that a full capacity L.P. Athol facility would necessitate an estimated 875 parking spaces, with business office use requiring almost 430 spaces alone. Over 230,000 square feet of surface area is required to accommodate this number of parking spaces. Even with proposed demolition to improve current parking capacity, the L.P. Athol property provides approximately 185,000 sq. ft. of available land for parking. A 2.2-acre parcel located south of the Pan Am freight rail line was sold by the L.P. Athol Corporation in 2002, but could provide much needed additional parking. The acquisition cost and distance associated with this additional parcel is not ideal but certainly remains as a viable solution if no other strategies are available to minimize parking requirements.

Massachusetts General Law Chapter 40R (Smart Growth Zoning Overlay District) and Mill Conversion Overlay Districts are frequently utilized by communities in order to provide relief from zoning and parking regulations that may complicate mill redevelopment projects. These overlay districts follow a similar procedural process for adoption but are generally used to address varying challenges. A Smart Growth Zoning Overlay District is used to reduce minimum lot size requirements in an effort to promote more dense development. Higher density development is generally thought to minimize environmental impact by reducing land use and encouraging pedestrian activity and public transit ridership. Communities that adopt a Smart Growth Zoning Overlay District are provided with direct finances that are dependent on the number of new residential units that are now permitted by right as a result of the newly adopted overlay. Additionally, each residential unit that is constructed within a Smart Growth Zoning Overlay District is accompanied by a state provided bonus payment of \$3,000 per unit directly to the municipality.

Mill Conversion Overlay Districts are typically utilized to allow mill buildings that do not conform to current zoning regulations to remain as non-conforming even as rehabilitation work and new construction occurs on the site. These zoning variances are particularly relevant for Athol's General Commercial (G) building size requirements and overall parking requirements. Shared on-site parking for mixed-use facilities, and more flexible off-site parking options are common practices that are included in Mill Conversion Overlay District regulations. Essentially, building uses that do not compete for parking, e.g. business office and residential, can share parking spaces because they are used during different times of the day. Rather than requiring 430 parking spaces for business office use and 170 parking spaces for residential use, 430 total spaces should suffice for both of these uses combined.

Although no direct financial incentive is associated with Mill Conversion Overlay Districts, the reduced cost related to less overall parking construction, or property acquisition to allow for more parking, directly benefits overall redevelopment costs. The need for costly zoning variances and/or extensive rehabilitation work to achieve zoning conformity may also be reduced through this overlay strategy. The current Athol Major Commercial Overlay District (MCOB) ostensibly fulfills a similar role to that of a Mill Conversion Overlay District but does clearly require commercial activity, which may not be fulfilled by all proposed uses for a redeveloped L.P. Athol.

Figure 9: Current L.P. Athol Property Entrance

Source: C. Hartwell

Site Access – Vehicular and Freight

The L.P. Athol Corporation property has one single point for vehicular ingress and egress located on Chestnut Hill Avenue (Figure 9). This access point maintains a steady slope of approximately 15 degrees. Automobiles that are traveling north on Chestnut Hill Avenue must also contend with a sharp left turn to access current parking upon entering the property.



Truck and emergency vehicle access is particularly reduced as a result of the current entrance design. This level of vehicular access is sufficient for current property use, but requires improvement and expansion if more extensive daily use of the property is to occur.

Both Crescent Street and Chestnut Hill Avenue primarily serve as access roads to surrounding dense residential neighborhoods. These routes undoubtedly present the most potential difficulty in absorbing increased automobile activity, and are not feasible options for constructing a secondary access point for the L.P. Athol property. This leaves Main Street (Route 2A) as the only possible option to support a secondary automobile access point. Main Street runs along a portion of the southern L.P. Athol property line and has the potential to provide access to the southwestern most portion of the property. Proximity and existing automobile capacity make this location the most ideal for a secondary access point, but navigating the Pan Am freight rail line and Millers River buffer areas present significant challenges that may reduce the feasibility of this location as well. Acquisition of the adjacent 2.2-acre parcel that was sold by the L.P. Athol Corporation in 2002 again arises as an option to reduce current site limitations. This parcel provides two existing access points to Main Street and Chestnut Hill Avenue as well as a pedestrian tunnel under the Pan Am freight rail line, but ultimately does not provide an additional means for vehicular access to the main complex.

L.P. Athol is ideally situated along the Patriot Corridor, one of two east-west rail corridors in Massachusetts. This mainline, owned through a joint venture between Norfolk Southern and Pan Am Railways, is operated by Pan Am Southern, which is also responsible for infrastructure maintenance and upgrades along the line. Accommodating freight that originates or is destined for New England, Pan Am Southern has embarked on a major rehabilitation of the once fledgling line with the intent of competing with the east-west CSX line that runs parallel to the Massachusetts Turnpike. This new option has revealed both industrial benefits, with competitive shipping rates and expanded capacity, as well as ongoing local infrastructure improvements. Currently, L.P. Athol does not have an active rail siding, but there once was a an active spur located on the parcel across Chestnut Hill Avenue (Parcel 119 – Appendix A). A full rail assessment, including cost figures and funding sources, is encouraged as a complement the ongoing structural and regulatory

evaluation of the redevelopment potential of this site. Moreover, data pertaining to industries with an increasing dependency on freight rail must be carefully analyzed as it provides additional guidance when targeting ideal tenants for the property.

With the objective of determining viable light manufacturing tenants for the L.P. Athol facility, connectivity to national freight rail benefits certain manufacturing and industrial uses when compared to others. Recommending suitable uses that will economically prosper is contingent upon transportation accessibility for people and industry alike. The following information details the broad industries that capitalize on freight rail access that can assist in guiding the L.P. Athol planning process.

Outbound Commodities for Massachusetts in 2010 (Thousands of Tons)

Commodity	Total Rail Tons	% Share
Misc. Mixed Shipments	802.5	31.10%
Waste or Scrap Materials	737.9	28.60%
Chemicals or Allied Products	241.5	9.40%
Shipping Containers	184.6	7.20%
Pulp, Paper or Allied Products	165.2	6.40%
Food or Kindred Products	104.2	4.00%
Farm Products	91.6	3.60%
Clay, Concrete, Glass or Stone	53.4	2.10%
Misc. Freight Shipments	52.7	2.00%
Waste Hazardous Materials	28.9	1.10%
TOTAL TONS:	2462.5	

Inbound Commodities for Massachusetts in 2010 (Thousands of Tons)

Commodity	Total Rail Tons	% Share
Misc. Mixed Shipments	1.3	15.70%
Food or Kindred Products	1.2	14.30%
Chemicals or Allied Products	1.1	13.10%
Pulp, Paper or Allied Products	1	12.20%
Farm Products	0.8	9.10%
Transportation Equipment	0.7	7.80%
Nonmetallic Minerals	0.6	7.40%
Lumber or Wood Products	0.5	6.20%
Clay, Concrete, Glass or Stone	0.5	6.20%
Coal	0.3	3.40%
TOTAL TONS:	8.1	

Massachusetts Freight Rail Commodity Tonnage and Growth (In Millions)

Combined Commodity	2007	2020	2035	Growth
Farm Prods/food/beverages	36	45	54	50%
Stone and Sand	27	32	37	36%
Minerals and Ores	35	44	55	56%
Coal	2	3	3	21%
Gasoline, Fuel	44	58	70	57%
Chemicals/Pharmaceuticals/Fertilizer	29	37	41	40%
Plastics/Rubber	4	5	8	97%
Wood/Furniture	9	11	14	57%
Paper	17	19	25	44%
Textiles/Leather	2	2	1	-35%
Base Metals	15	19	23	54%
Electronics/Machinery	5	8	17	222%
Transportation Equipment	4	6	8	100%
Precision Instruments	1	1	3	239%
Miscellaneous Mfg. Products	1	1	2	176%
Waste/Scrap	4	5	9	103%
Mixed Freight/Unknown	41	58	102	148%
TOTAL:	278	355	471	70%

The adjacent freight rail line remains as an underutilized asset of the L.P. Athol property that can serve as a catalyst for local business growth. Numerous industries that are forecasted to expand freight use over the next twenty years overlap with existing North Quabbin area industries. Farm and food products, plastics, paper, precision instruments, and wood products are all viable light manufacturing tenants that serve to benefit from freight rail access and generate local jobs at L.P. Athol.

According to Reed Construction Data, the average cost of a rail siding falls between \$94-\$108 per linear foot, excluding engineering and planning costs. Funding for this work is available through federal and state grants, such as the Industrial Rail Access Program. This new program, established under the 2012 Transportation Bond Bill, allocates grant money to railroads, municipalities, and industrial property owners for the financing of rail improvements.

Historic Status

The L.P. Athol Corporation facility is not currently designated as a state or national historic site. Listing on the National Register of Historic Places opens up the opportunity to apply for both state and federal Historic Investment Tax Credits (HITC) that are available to certified rehabilitation projects of privately owned, income producing properties. The Massachusetts Historic Tax Credit Program awards developers with a credit up to 20% on certified rehabilitation costs, and the Federal Historic Tax Credit program awards developers with a uniform 20% credit on certified rehabilitation costs.

Application for Massachusetts and Federal tax credits will subject all project work to the Secretary of the Interior's guidelines for rehabilitation. These guidelines include such requirements as the preservation of "distinctive features, finishes, and construction". The guidelines are general and, when applied on a case by case basis, will result in different restrictions for different projects. As such, the implications of these guidelines should be weighed in the decision of whether or not to accept historic rehabilitation tax credits.

Once awarded, state and federal tax credits cannot be claimed until rehabilitation work is finished, has undergone final review by the overseeing entity, and the structure has been put into use as an income-generating property. Projects can be completed in phases to allow the developer to put portions of the property into active use before all proposed work is completed. This incremental approach allows the developer to apply awarded tax credits to each completed phase based on the specific cost required to complete that particular work. If done in phases, each phase of rehabilitation must undergo separate review in order to determine eligibility of work and compliance with approved proposals.

It does not make a significant difference if the property is listed on the National Register individually or as part of an historic district, both types of listing are eligible for the same benefits. If listed within a district, the property must still be certified by the Massachusetts Historic Commission as contributing to the significance of the historic district that it is located within.

Rehabilitation costs that are eligible for historic tax credits include exterior improvements, interior upgrades, and soft costs associated with engineering and architectural assessments.

Costs related to property acquisition, parking, demolition, and landscaping do not qualify for historic tax credits. Organization like Boston Community Capital and MassHousing frequently provide bridge loan financing for historic rehabilitation projects that require significant up front construction costs in exchange for income tax credits that are allocated after the structure is put into use as an income generating property.

Of 15 mill rehabilitation case studies conducted, state and federal Historic Investment Tax Credits were the most commonly utilized resources to improve project financial feasibility (*Appendix: C*).

IV. Implementation

Assessment of the key roadblocks facing L.P. Athol redevelopment reaffirms the fact that cohesive action plans must be adopted by several stakeholder groups and regulating entities in order to effectively alleviate obstacles that frequently prevent the reemergence of historic mill facilities as dynamic contributors to local economic development. Unique challenges arise when evaluating the redevelopment potential of any underutilized mill facility, but consistent financial and regulatory shortcomings provide the opportunity to recommend wider best practices that can greatly improve the feasibility of these complex projects. Even minimal improvements to local, regional, and state level regulations should serve to increase the number of successful mill redevelopment projects undertaken across the state, particularly in rural and western Massachusetts.

In the case of the L.P. Athol Corporation property, these regulatory improvements must be preceded by more immediate site-specific feasibility analysis to determine if long-term owner and community benefit is indeed worth the financial investment required to transform L.P. Athol into an energy efficient mixed-use facility that will provide jobs, homes, services, and entertainment for North Quabbin residents.

Financial Estimates

Renovation Costs and Cash Flow Analysis

Preparing an estimated budget for a redevelopment project of this scale is largely dependent on categorized square foot construction costs that are determined by recent and similar project budgets. This is not the most accurate method to gauge potential project costs but does provide a baseline estimate before engaging in more thorough engineering and architectural assessments. Recent adaptive reuse projects in Greenfield, Springfield, Hardwick, and Ludlow, as well as 2013 Reed Construction data, served as models for the following summary renovation cost table. This estimated total renovation cost is then filtered through anticipated revenue and operating expenses over time in an effort to gauge how and when the project is anticipated to generate a positive return on initial construction cost investments.

An estimated \$35.2 million is required to complete the scale of work that is necessary to achieve the stated ownership vision for L.P. Athol. Phase I rehabilitation (residential and light manufacturing) is anticipated to cost over \$25 million, and Phase II (office and commercial) requires over \$10.2 million. Project financing is entirely dependent on tax credit programs, grants, bridge loan financing, and low interest construction loans that are detailed following the summary renovation cost analysis. A tax increment financing (TIF) agreement as well as revenue generated from tenant rent and hydroelectric energy sales are keys to improving the financial feasibility of proposed work. Commonly utilized New Market Tax Credits are also available for L.P. Athol rehabilitation work as the site is designated as a Massachusetts Economic Target Area (ETA).

Summary Renovation Costs		Square Feet	365,000		
Section	Unit	Cost/Unit	# of Units	Item Cost	Section Totals
L.P. Athol Site Conditions					
Surveys					
Topographic Surveys	acre	\$1,000.00	12.6	\$12,600.00	
Boundary and Survey Marker	acre	\$1,055.00	12.6	\$13,293.00	
Geo Technical Investigations	ls		1		
Demolition					
Buildings	cf	\$8.00	55,000	\$440,000.00	
Pavement	ton	\$9.50			
Underground Storage Tank (removal)	ls	\$15,000.00	1	\$15,000.00	
EarthWork					
Excavation and Fill	ls	\$40,000.00			
Erosion and Sediment Control	ls	\$1,200.00			
Section Subtotal					\$480,893.00
Exterior Improvements					
Driveway Installation	sf	\$3.87			
Parking Lots	space	\$1,400.00	600	\$840,000.00	
Guard Rails	lf	\$26.00			
Landscaping	acre	\$6,494.00	12.6	\$81,824.40	
Section Subtotal					\$921,824.40
Concrete					
Concrete Catch Basins	unit	\$1,800.00	10	\$18,000.00	
Concrete Sewer Manholes	ls				
Concrete Sidewalk Assembly	sf	\$6.61			
Brick Sidewalk Assembly	sf	\$13.67			
Section Subtotal					\$18,000.00
Utilities					
Utility Service Connection Fees	ls				
Sewer Pumping Station Upgrade	ls	\$500,000.00	1.0	\$500,000.00	\$500,000.00
Total General Renovation Costs					\$1,920,717.40
Renovation Costs by Use					
Light Manufacturing					
Shell Construction					\$1,559,365.00
Tenant Fit-Out	sf	\$75.00	127,000	\$9,525,000.00	\$9,525,000.00
Business Office					
Shell Construction					\$1,167,456.00
Tenant Fit-Out	sf	\$99.00	53,000	\$5,247,000.00	\$5,247,000.00
Restaurant					
Shell Construction					\$325,866.00
Tenant Fit-Out	sf	\$86.00	18,000	\$1,548,000.00	\$1,548,000.00
Brewery					
Shell Construction					\$260,948.00
Tenant Fit-Out	sf	\$86.00	19,500	\$1,677,000.00	\$1,677,000.00
Residential					
Shell Construction					\$2,487,510.00
Tenant Fit-Out	sf	\$106.00	90,000	\$9,540,000.00	\$9,540,000.00
Total Estimated Renovation Cost					\$35,258,862.40

L.P. Athol Sample Proforma Cash Flow from Development Activity	Pre-Renovation	Dev. Phase 1	Lease Up - Phase 1		Dev. Phase 2	Lease Up - Phase 2		Stabilized Development			
Source of Funds	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Cash Flow From Prior Year		\$56,470.00	\$(1,219,925.30)	\$252,429.00	\$410,422.36	\$(12,464.29)	\$298,806.11	\$134,940.17	\$28,586.44	\$8,062.96	\$15,675.12
Cash From Investment											
Loans	\$170,000.00	\$27,000,000.00			\$3,005,000.00						
Grants					\$200,000.00						
Tax Credits (LIHTC/Historic)			\$2,648,463.60	\$2,885,851.50	\$2,886,354.05	\$1,103,584.85					
Total Annual Cash for Development	\$170,000.00	\$27,000,000.00	\$2,648,463.60	\$2,885,851.50	\$6,091,354.05	\$1,103,584.85					
Cumulative Cash for Development	\$170,000.00	\$27,056,470.00	\$1,428,538.30	\$3,138,280.50	\$6,501,776.41	\$1,091,020.56	\$298,806.11	\$134,940.17	\$28,586.44	\$8,062.96	\$15,675.12
Site Preparation Activity											
Legal Expenses	\$20,000.00				\$15,000.00						
Deposits or Option Payments	\$30,000.00										
Property Survey	\$8,000.00										
Engineering											
Civil Engineering	\$25,000.00				\$10,000.00						
Structural Engineering	\$8,000.00				\$4,000.00						
Environmental Engineering	\$15,500.00				\$7,000.00						
Permitting											
MEPA	\$30,000.00				\$20,000.00						
Wetlands and Riverfront	\$10,000.00										
Zoning and Plan Approval	\$12,000.00				\$10,000.00						
Total Site Preparation Expenses	\$158,500.00				\$66,000.00						
Acquisition Costs											
Construction Expenses											
Environmental Remediation											
Site Remediation											
Asbestos Abatement											
Off-Site Roadway Improvements											
General Renovation		\$1,920,717.40									
Shell Construction		\$4,307,823.00			\$1,493,322.00						
Tenant Fit-Up		\$20,742,000.00			\$6,795,000.00						
Total Construction Costs		\$26,970,540.40			\$8,288,322.00						
Total Development Expenses	\$158,500.00	\$26,970,540.40			\$8,354,322.00						
Development Loan Interest*	8,500.00	\$1,358,500.00	\$1,358,500.00	\$1,283,500.00	\$1,208,750.00	\$1,208,750.00	\$1,058,750.00	\$908,750.00	\$756,250.00	\$601,250.00	\$442,750.00
Development Loan Principal Payment			\$1,500,000.00	\$4,500,000.00		\$3,000,000.00	\$3,000,000.00	\$3,050,000.00	\$3,100,000.00	\$3,170,000.00	\$3,300,000.00
Net Annual Cash Flow from Development	\$3,000.00	\$(1,272,570.40)	\$(1,429,961.70)	\$(2,645,219.50)	\$(3,061,295.59)	\$(3,117,729.44)	\$(3,759,943.89)	\$(3,823,809.83)	\$(3,827,663.56)	\$(3,763,187.04)	\$(3,727,074.88)
Net Operating Income	\$53,470.00	\$52,645.10	\$1,682,390.70	\$3,055,641.85	\$3,048,731.30	\$3,416,535.55	\$3,894,884.07	\$3,852,396.27	\$3,835,726.53	\$3,778,862.16	\$3,757,318.45
Annual Project Cash Flow	\$56,470.00	\$(1,219,925.30)	\$252,429.00	\$410,422.36	\$(12,564.29)	\$298,806.11	\$134,940.17	\$28,586.44	\$8,062.96	\$15,675.12	\$30,243.57
Cumulative Project Cash Flow	\$56,470.00	\$(1,163,455.30)	\$(911,026.30)	\$(500,603.94)	\$(513,168.23)	\$(214,362.13)	\$(79,421.96)	\$(50,835.52)	\$(42,772.56)	\$(27,097.43)	\$3,146.14

* 5% Interest Rate for Bridge Construction Loans

L.P. Athol Financing Opportunities							
Grant Source	Description	2014	2015	2016	2017	2018	2019
Environmental Protection Agency (EPA)	Asbestos Removal				\$200,000.00		
Grant Total					\$200,000.00		
Tax Credit Source	Description						
Historic Investment Tax Credit (HITC)	Approved Rehab Costs			\$1,648,463.60	\$2,885,851.50	\$2,886,354.05	\$1,103,584.85
Low Income Housing Tax Credit (LIHTC)	Affordable Housing Units			\$1,000,000.00			
Tax Credit Total				\$2,648,463.60	\$2,885,851.50	\$2,886,354.05	\$1,103,584.85
Construction Loan Source							
Bridge Loan (Boston Comm. Capital)	Low Interest Loan	\$170,000.00				\$3,005,000.00	
New Market Tax Credits (MHIC)	Low Interest Loan		\$27,000,000.00				
Loan Total		\$170,000.00	\$27,000,000.00			\$3,005,000.00	

Available Grant Details

- 1. Environmental Protection Agency (EPA), Brownfields and Land Revitalization Cleanup Grants:** Provides grants up to \$200,000 to assist recipients in carrying out cleanup activities at Brownfield sites. These funds are intended to remove hazardous materials including underground storage tanks and asbestos. Grant recipients must own the property that is targeted for cleanup and produce a 20% cost share in the form of money, labor, material or services. Waivers of this required cost share may be requested based on hardship, and grant funds must be used within 3 years of distribution (*U.S. EPA, 2014*).
- 2. MassWorks Infrastructure Program:** Consolidated grant programs administered by the Massachusetts Executive Office of Housing and Economic Development. These grants are available to municipalities and eligible public entities, and are intended to support economic and housing development, complement ongoing redevelopment projects, promote mixed-use development, support regional land use strategies, and improve area transportation, particularly in rural portions of the Commonwealth. MassWorks grant applications are accepted annually (typically in mid-August) and are evaluated by state and regional officials, and preference is often provided to projects that are “shovel ready” upon the distribution of funds. The number of available grants varies greatly based on funding, but has ranged from 25-40 over the last 3 years (2011-2013) (*MA DHCD, 2014*).

Available Tax Incentive Details

- 1. Historic Investment Tax Credit (HITC):** Uniform 20% federal income tax credit and up to 20% state income tax credit based on the cost of qualified rehabilitation work conducted on a structure that is listed on the National Register of Historic Places. The U.S. Department of the Interior manages federal credits, while the Massachusetts Historical Commission manages state

credits. These credits are applied to annual income taxes unless leveraged to receive up-front bridge construction loan financing (*Massachusetts Historical Commission, 2007*).

- 2. Low Income Housing Tax Credit (LIHTC):** A federal subsidy managed by the U.S. Department of Housing and Urban Development (HUD) used to finance the development of affordable rental housing for low-income households. The Massachusetts Department of Housing and Community Development (DHCD) distributes these funds to qualified projects within the Commonwealth. Qualified projects must reserve 20% of all residential units for households earning no more than 50% of the area median household income (\$24,207) or 40% of all units for households earning no more than 60% of area median household income (\$29,048). Additionally, 10% of all project units must be reserved for persons or families earning less than 30% of area median household income (\$14,524). Typically DHCD caps awarded credits at \$1 million, but may award up to \$1.3 million if large-scale neighborhood impact is anticipated as a result of the project. LIHTC are awarded on a competitive basis and are applied for through the DHCD One Stop Application (*MA DHCD, 2014*).
- 3. Energy-Efficient Commercial Building Tax Deduction:** Federal Income tax deduction associated with the installation of energy efficiency technology including insulation, water heaters, lighting, central air conditioning, windows, roofs, furnaces, etc. The deduction amount typically ranges from \$.30 to \$1.80 per square foot of improved commercial space based on the extent to which installed technology is anticipated to decrease overall facility energy use. These tax deductions are entirely dependent on federal support and were last approved through 2014 (*U.S. Department of Energy, 2013*). Similar Massachusetts programs exist through the Department of Energy and Environmental Affairs' Green Communities program, but frequently expire after single or multi-year time frames.

Available Low-Interest Construction Loan Details

- 1. Bridge Construction Loans:** Low-interest loans provided by a variety of Massachusetts community development entities in order to encourage positive development in communities/projects that may otherwise struggle to attract more traditional financing for construction work. These loans serve to bundle projected long-term project tax credits to provide much needed finances for up front project costs (design & construction). These loans are then repaid as federal and state income tax credits are distributed after the completed project becomes an active revenue generating property (*Boston Community Capital, 2014*).
- 2. New Markets Tax Credit Program:** Similar to Bridge Construction Loans, New Markets Tax Credits (NMTC) are distributed to local area Community Development Entities (CDEs) through the Federal Department of the Treasury. Designated CDEs are then able to sell these credits to third party private investors in order to generate loan funds for qualified community development projects. New Markets Tax Credit eligible projects must be located within a designated Massachusetts Economic Target Area (ETA). Individual project tax credits can be consolidated in the form of an investment fund, and then leveraged to attract the largest low-interest loan amount rather than relying upon piecemeal financing, however NMTC often cannot be combined with LIHTC. Various Massachusetts CDEs provide slightly different loan

agreements and priority areas, but typically, loans are distributed with a 0% - 5% interest rate (Massachusetts Housing Investment Corporation, 2014).

Although this development cash flow analysis does estimate an ability to repay all construction loans and generate annual profits around 2027, the significant amount of construction loans utilized to make this project financially feasible presents a substantial level of risk for the developer. Similarly, the already narrow window to generate profit during this time period is even further diminished if vacancy rate issues or unexpected costs do arise.

These projections again highlight the critical need for grants and tax credits that are often only made available to community development entities in order to offset significant construction costs. Phased rehabilitation work undoubtedly improves the feasibility of L.P. Athol redevelopment purely based on the fact that ownership is able to recuperate investment prior to, and during Phase II renovation. This conservative project cost estimate also underscores the considerable prerequisite costs for state and federal permitting. The importance of these environmental and safety related permits is not debated but additional, and sometimes redundant, permitting costs created another layer of obstruction that can halt mill redevelopment projects before they even get off of the ground.

It should also be stated that this cost and cash flow analysis represents a conservative estimate and best-case scenarios in terms of rental rates and overall vacancy.

Municipal Fiscal Impact Analysis

The goal of conducting a fiscal impact analysis of L.P. Athol occupancy scenarios is to estimate municipal costs and revenue resulting from new residents and businesses locating within the town of Athol. Municipal revenue estimates are comprised of property taxes, local receipts, and expected state aid for education, while cost estimates are a product of school budget increases and additional service costs such as road maintenance, police and fire protection, and government expenses. This particular fiscal impact analysis also includes financial benefits associated with implementing a Smart Growth Zoning Overlay District (40R) and a tax increment financing (TIF) agreement between the town and the L.P. Athol Corporation. Fiscal data used in this analysis are provided by FY2012 Commonwealth of Massachusetts Department of Revenue (DOR) reports and Town of Athol revenue and expenditure reports.

Two hypothetical occupancy scenarios have been calculated based on the ownership vision for L.P. Athol redevelopment. Scenario I (half occupancy) includes 42 residential units and 135,000 sq. ft. of commercial occupancy and Scenario II (full occupancy) includes 84 residential units and 270,000 sq. ft. of commercial occupancy. Without Smart Growth Zoning Overlay reimbursements, these scenarios are estimated to yield fiscal benefits to the town of \$1,351 and \$2,702 respectively.

Chapters 40R and 40S of the Massachusetts General Laws encourage municipalities to establish new Smart Growth Zoning Overlay Districts that promote mixed-use development, walkability, and public transit use. MGL 40R provides financial rewards for communities that adopt overlay

zoning districts that allow as-of-right higher density residential development near transit stations or in areas containing underutilized properties. Smart Growth financial incentives include:

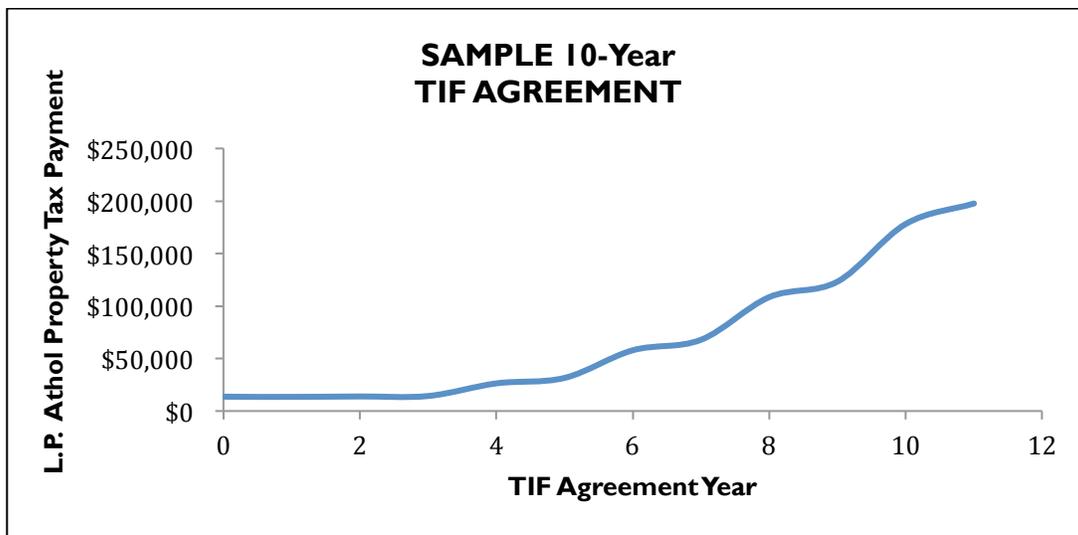
1. **Zoning Incentive Payments:** Municipalities can receive zoning incentive payments from the state upon approval of a smart growth overlay district. The payment amount is determined by the potential number of new housing units that can be constructed in the district minus the total number of housing units allowed under the previous zoning regulations. If 21-100 additional residential units are feasible under smart growth regulations, the town of Athol would receive a zoning incentive payment of \$75,000.
2. **Bonus Payments:** Once residential building permits have been issued in an overlay district, a community will receive a bonus payment of \$3,000 for each new housing unit in addition to the zoning incentive payment.
3. **Education Costs (Chapter 40S):** Communities that adopt smart growth zoning will be reimbursed for any net costs associated with educating new students who live within residential units that are constructed as a direct result of increased density availability associated with smart growth zoning.
4. **Funding Preference:** When awarding discretionary funds, DHCD and the Executive Office of Environmental Affairs, Transportation, and Administration and Finance must give preference to municipalities with an approved smart growth zoning district.

If Athol were to adopt a Smart Growth Zoning Overlay District that covers the L.P. Athol property, the full occupancy scenario is estimated to yield a total fiscal benefit of \$330,286. This amount is primarily in the form of a one-time Zoning Incentive Payment while subsequent annual benefits will remain consistent with the non-smart growth estimate of \$2,702. However, these financial benefits associated with the adoption of smart growth zoning would extend to other residential development projects located within the town designated Smart Growth Zoning Overlay District.

Athol Municipal Revenue – Sample Year I

	Scenario #1		
	Residential	Commercial	Combined
Total Revenue	\$169,132	\$14,293	\$183,424
Service Costs	\$131,848	\$11,653	\$143,501
School Costs	\$38,572	\$0	\$38,572
Net Fiscal Impact per Year	\$(1,289)	\$2,640	\$1,351
w/ Smart Growth Benefits	\$200,003	\$2,640	\$202,643
	Scenario #2		
	Residential	Commercial	Combined
Total Revenue	\$338,263	\$28,585	\$366,849
Service Costs	\$263,696	\$23,305	\$287,002
School Costs	\$77,145	\$0	\$77,145
Net Fiscal Impact per Year	\$(2,578)	\$5,280	\$2,702
w/ Smart Growth Benefits	\$325,006	\$5,280	\$330,286

Tax increment financing (TIF) is another economic development incentive tool that is frequently used to support mill redevelopment projects throughout the Commonwealth. Athol itself has demonstrated a willingness to utilize this tool by constructing TIF agreements for past town projects and actively promoting this tool to prospective developers. A TIF agreement for L.P. Athol would essentially require that only a percentage of increasing annual property taxes be paid to the municipality for an agreed upon time period between 5 and 20 years. Increased L.P. Athol property value resulting from rehabilitation work would not require a similar increase in property tax payments. This short-term property tax abatement allows for a larger percentage of L.P. Athol Corporation income to be funneled toward construction loan payments and operating expenses as opposed to local property taxes. A TIF agreement assumes that the long-term benefit of new jobs and increasing area property values is worth a temporary reduction in overall town property tax revenue.



This sample visually represents a typical 10-year TIF agreement between the Town of Athol and the L.P. Athol Corporation. An exemption on only value added to the property through investment allows the town to collect all property tax revenue based on the assessed value prior to year 0 investment. The town also receives additional revenue based on a pre-determined baseline growth factor. This tax increment exemption can range from 5% to 100% and can vary for each year of the agreement. When the TIF agreement expires (Year 11), the town of Athol again collects taxes based on the full-assessed value of the L.P. Athol property. The following table depicts this sample TIF agreement in greater detail.

Sample 10 – Year TIF Agreement

Year	Assessed Value	Real Assessed Value	Increment	Abatement	Inflation	Taxable Value
0	\$ 731,400	\$ 731,400	\$	100%	1.00	\$ 731,400
1	\$ 1,315,765	\$ 753,342	\$ 562,423	100%	1.03	\$ 753,342
2	\$ 2,631,531	\$ 775,942	\$ 1,855,588	100%	1.03	\$ 775,942
3	\$ 3,947,296	\$ 799,221	\$ 3,148,075	80%	1.03	\$ 1,428,836
4	\$ 5,263,061	\$ 823,197	\$ 4,439,864	80%	1.03	\$ 1,711,170
5	\$ 6,578,826	\$ 847,893	\$ 5,730,933	60%	1.03	\$ 3,140,266
6	\$ 7,894,592	\$ 873,330	\$ 7,021,262	60%	1.03	\$ 3,681,835
7	\$ 9,210,357	\$ 899,530	\$ 8,310,827	40%	1.03	\$ 5,886,026
8	\$ 10,526,122	\$ 926,516	\$ 9,599,606	40%	1.03	\$ 6,686,280
9	\$ 11,841,887	\$ 954,311	\$ 10,887,576	20%	1.03	\$ 9,664,372
10	\$ 13,157,653	\$ 982,940	\$ 12,174,712	20%	1.03	\$ 10,722,710

Recommended Action Steps

L.P. Athol Property Owners

I. Target viable tenants

North Quabbin area industry trends and Massachusetts freight rail usage estimates indicate that farm and food products, plastics, paper, precision instruments, and wood products are all viable light manufacturing tenants that should be targeted by L.P. Athol’s Director of New Business Development. Although cold storage and distribution operations do not generate the widespread daily activity that is ultimately envisioned for L.P. Athol, they do represent the best opportunity to establish anchor tenants for the facility. These types of tenants also require limited interior rehabilitation costs in order to utilize the existing facility, and stand to benefit greatly from both affordable freight access and hydroelectric energy costs.

Local agriculture and food production organization like Community Involved in Sustaining Agriculture (CISA), the Western Massachusetts Food Processing Center, the UMass Amherst Center for Agriculture Research & Extension, and MassGrown all serve as resources to connect L.P. Athol ownership with potential partners and tenants. L.P. Athol discussions with local micro-breweries should also continue as these businesses are commonly located within redeveloped mill properties and often attract tourist activity that may not accompany other food based tenants.

The plastics industry in western Massachusetts is predominantly focused in Berkshire County, but thriving plastic related businesses represent some of the largest employers in Both Franklin County and northern Worcester County. Innovative bio-plastics have also emerged in northeastern Massachusetts. In 2006, Cambridge based Metobolix established a biodegradable plastic research facility in a redeveloped mill located in Lowell’s Hamilton Canal District (*UMass Lowell, 2012*). The North Quabbin region does not currently present a substantial plastics industry, but the area does serve as a geographic middle ground between established plastic production and distribution in Berkshire County and plastic technology improvement in Worcester County.

The Massachusetts Clean Energy Center (MassCEC) works to accelerate clean energy technology companies and products in Massachusetts. In 2013, MassCEC distributed \$300,000 to establish 4 clean energy centers through the IncubateMass program (*MassCEC, 2013*). These facilities are intended to provide affordable manufacturing and office space for small companies that promote the commercialization of new clean energy technology. North Quabbin clean energy initiatives, along with L.P. Athol's hydroelectric capacity could serve to attract MassCEC support and subsequent clean energy related jobs.

Current and future local small businesses also stand to benefit from affordable L.P. Athol commercial and office space. Successful mill revitalization projects like Open Square in Holyoke, MA and Eastworks in Easthampton, MA have embraced the small business incubator model to support local entrepreneurs and generate reliable tenant revenue. This established tenant model aligns with Phase II of proposed L.P. Athol renovation, so it is critical to first establish primary light manufacturing tenants as a catalyst to spur ongoing site rehabilitation and more commercial/office related tenant activity.

2. Seek flexibility for incremental rehabilitation work through the Commonwealth of Massachusetts Fire Safety Commissioner's Automatic Sprinkler Appeals Board

The Massachusetts Fire Safety Commissioner's Automatic Sprinkler Appeals Board was established in 2010 to handle appeals specifically related to provisions applied to Massachusetts General Law c. 148, s. 26G that uniformly require full automatic sprinkler upgrades if major alterations are made to an existing building that is larger than 7,500 gross square feet in floor area (*MA Fire Safety Commission, 2010*). It is expected that this provision would apply to even minimal L.P. Athol facility improvements, rendering incremental fit out for small-scale tenants cost prohibitive. Under this state regulation, portions of the facility that are unrelated to revenue generating tenant activity must be fitted with automatic sprinkler systems, regardless of fire resistant separation, if a permit is to be issued for proposed work.

Automatic Sprinkler Appeals Board documents indicate that "major alterations and modifications" are defined as work that affects over thirty-three (33%) or more of the total gross square footage of the building or if the total cost of the work is equal to or greater than thirty-three (33%) of the overall assessed value of the building. Additionally, residential units are exempt from these regulations. The construction of 84 residential units in buildings 3 and 4 would require automatic sprinklers for those specific buildings, but would not require sprinkler systems for the entirety of the L.P. Athol complex. With these guidelines in mind, L.P. Athol is granted some flexibility in terms of engaging in minor tenant fit-out activities without being required to spend an estimated \$1.3 million to install automatic sprinklers over 365,000 square feet of floor area.

This information should be used to inform L.P. Athol redevelopment plans, specifically as they relate to phasing and the scope of work performed. In general, public safety regulations are in place for the benefit of all parties involved but additional regulatory flexibility is a welcome asset when addressing roadblocks to mill redevelopment.

3. Initiate conversation with the Massachusetts Department of Transportation (MassDOT) regarding freight rail access funding through the Industrial Rail Access Program (IRAP)

The Massachusetts State Rail Plan is specifically focused on increasing access to freight rail service in an effort to support regional economic growth (*MassDOT, 2010*). This stated objective, in addition to ongoing investment in the Patriot Rail Corridor by Pan Am Southern, places L.P. Athol in an advantageous position to capitalize on this renewed focus on freight service and infrastructure. The relative affordability of constructing new rail siding infrastructure on the property also makes this proposal an ideal candidate for Industrial Rail Access Program (IRAP) funding.

Timing for this improvement to site freight access is the large challenge that must be addressed by L.P. Athol ownership. New freight siding certainly increases the site's attractiveness for potential manufacturing tenants but, similar to overall property rehabilitation, it can be risky to invest in site upgrades prior to substantial interest from future tenants.

Freight rail access is a property asset that has the ability to generate revenue for the L.P. Athol Corporation regardless of the facility's occupancy. Similar to revenue generated from hydroelectric energy sales, tenants are the ideal beneficiaries of a freight rail siding but the asset itself has the ability to generate income as a stand-alone resource. For this reason, it is highly encouraged that L.P. Athol ownership engage in conversations with both MassDOT and Pan Am Southern. The town of Athol should also be included in these conversations at an early stage because municipal endorsement is required for all IRAP funding applications that are intended to subsidize local freight rail infrastructure improvement.

4. Determine the most appropriate process to maximize the impact of New Markets Tax Credit Program financing.

New Markets Tax Credits provide perhaps the most realistic method to attract critical up-front financing to initiate and complete desired redevelopment of the L.P. Athol facility. It is not feasibly to expect that this resource will cover all construction costs, but the low interest and debt forgiveness potential of NMTC makes it a much more attractive financing tool than traditional private loans. The NMTC application process is often complex and requires a level of creativity in order to maximize the amount of guaranteed project resources that then may be leveraged to attract necessary construction loans. Due to this complexity, it is highly recommended that L.P. Athol Corporation ownership continue exploratory conversation with certified Massachusetts Community Development Entities like the Massachusetts Housing Investment Corporation (MHIC), MassDevelopment, and Boston Community Capital (BCC). Representatives from these organization should provide much needed technical assistance in walking Athol stakeholders through the NMTC process.

As mentioned previously, NMTC often cannot be combined with Low-Income Housing Tax Credits (LIHTC). This dynamic further promotes the idea of phased redevelopment in which residential development in buildings 3 and 4 should stand alone and remain outside of strategic planning around NMTC. L.P. Athol ownership can achieve this separation by transferring ownership of these two structures to quasi-public, nonprofit, or private developers that are highly

experienced with utilizing LIHTC to complete residential projects of this size and scope. Affordable housing development leaders in Massachusetts include Winn Development, Westmass Area Development Corporation, MassInnovation, HallKeen, and a variety of local Community Development Corporations (CDCs).

An agreement to transfer ownership of residential portions of the facility would allow for the consolidation of State and Federal Historic Investment Tax Credits (HITC) and potential energy and economic development related tax credits into an investment fund as a means to leverage a higher loan amount through a certified CED. This strategy requires a clear timeline in which tax credits must first be awarded to the project, followed by multiple NMTC application rounds in order to receive the required amount of NMTC program low-interest construction loans.

Collaboration with the Athol Economic Development and Industrial Corporation (EDIC) is an effective means to draw additional public grants that are typically not available to privately owned properties toward this project. The EDIC was established in 2007 and essentially serves as an urban renewal corporation. Under this designation, the EDIC has the authority to operate in a project manager role for privately owned economic development projects within the town, or to acquire property on behalf of the town for the purposes of establishing industrial and manufacturing uses (*M.G.L. Chapter 121A, 2010*). A partnership with the Athol EDIC is a realistic method to reduce the need for costly private investment by incorporating public grants to decrease the gap between potential low-interest loan financing and the overall projected cost for project completion.

L.P. Athol ownership clearly has options in terms of initiating partnerships, packaging loans, and staggering development phases. There is no clear strategy that guarantees project success, but rather a weighing of benefits and incentives that most significantly improve the feasibility of project completion. Regardless of how L.P. Athol ownership intends to move forward, it is clear that transparent conversation with a Massachusetts CED, potential experienced developers, and the Athol EDIC is critical throughout planning activities moving forward.

Town of Athol

I. Examine the benefits of a Smart Growth Zoning Overlay District for downtown Athol

Athol's base General Commercial (G) zoning currently provides development regulations that align with the mixed-use facility proposed for the L.P. Athol property. Minor conflicts do arise in terms of maximum building requirements, parking requirements, and upper floor residential units. These conflicts may not block rehabilitation work, but municipal zoning amendments, particularly in the form of an overlay zoning district, should serve to streamline future permitting and minimize overall environmental impact associated with the project.

The adoption of a Smart Growth Zoning Overlay District to compliment the existing Major Commercial Overlay District (MCO) has the potential to provide critical benefits that may improve overall project feasibility and benefit to the community at large. These overlay districts present slightly different strategies that the town should explore in order to determine if the

incorporation of a Smart Growth Overlay District or a stand alone MCOB best addresses short-term L.P. Athol site challenges and long-term economic development plans for downtown Athol.

Generally, the Major Commercial Overlay District strategy limits zoning benefits to the L.P. Athol site itself, and perhaps the neighboring L.S. Starrett property in the future. This strategy is intended to allow for continued use of the property that does not conform to current base zoning regulations, even if rehabilitation work or new construction does occur. This encourages design consistency and the preservation of non-conforming historic structures. This exemption from base layer zoning often reduces overall rehabilitation costs, but increases the need for time consuming special permit applications and MCOB board hearings.

This relaxation of local design and use control essentially places primacy on the greater community benefit of successful mill redevelopment rather than strict adherence to municipal regulations. Flexibility is granted to the developer, while the municipality indirectly benefits by increased economic activity in the future. A Smart Growth Zoning Overlay, however, provides up-front financial benefit to the municipality in addition to these relaxed zoning regulations. Direct financial payments are made to the municipality upon adoption of the Smart Growth Zoning Overlay based on the number of additional residential units that can be constructed by-right within the overlay as a result of increased density allowance. Financial payments are also made following the issuance of any residential development permit for a project located within the overlay district itself (*MA Smart Growth Toolkit, 2010*).

The Smart Growth Zoning Overlay strategy appears to supply the most value to both the town and the L.P. Athol redevelopment proposal, but this strategy forces the municipality to forfeit the authority to require design review or special permits in favor of higher density by-right residential development in town areas that are covered by the overlay.

The town of Athol encourages denser residential infill as a planning priority in its 2002 Master Plan. This stated goal is further encouraged, and financially beneficial to the community, if the Smart Growth Zoning Overlay zoning strategy is adopted by the town. Additionally, the redevelopment potential of the L.P. Athol property, along with other underutilized downtown properties, stands to improve greatly if new construction is not required to conform to current height, parking capacity, and lot coverage regulations.

2. Establish a Downtown Athol Historic District through the Massachusetts Historical Commission (MHC)

The application process to establish a local historic district requires ongoing collaboration between the Athol Board of Selectmen and the appointed nominating organization (MHC in Massachusetts). A local historic district study committee, which is often comprised of the local historic commission if one already exists, must first be appointed to prepare a preliminary study report that includes property surveys, area significance, justification of boundaries, and a map of the proposed district. The preliminary study report is then submitted to MHC for review and recommendations. A public hearing is also required following the submission of the preliminary study report to MHC. Upon MHC endorsement of the town's historic district proposal, a final

report is prepared for town meeting and must be approved by a 2/3 majority vote (*MA Historical Commission, 2007*).

All town endorsed historic district final reports must be reviewed by the Massachusetts Attorney General before the official bylaw can be filed with the Athol Town Clerk and recorded at the registry of deeds. Structures located within the town adopted historic district are still required to submit individual applications that demonstrate contribution to historic values if they are to receive Historic Investment Tax Credits (HITC) for repair and rehabilitation work.

Technical assistance and funding to complete preliminary study reports are typically provided by regional planning agencies in an effort to improve report compliance with MHC guidelines. A downtown Athol historic district certainly improves the financial feasibility of L.P. Athol redevelopment and provides additional incentive for the adaptive reuse of historic structures in and around downtown Athol. Particular consideration should be given to district boundaries, as the town must balance the benefit of historic tax credit supported rehabilitation work and the ability to support potential new construction projects in proximity to the Main Street corridor.

Montachusett Regional Planning Commission

1. Include a secondary access road for L.P. Athol on the Regional Transportation Improvement Program (TIP) project list

The Montachusett Regional Transportation Improvement Program (TIP) is an annual report that establishes a 5-year priority list for transit infrastructure improvements for the region. MassDOT and municipal recommendations are combined with public participation hearings in order to select and prioritize area projects that require funding. Proposed projects are scored based on Transportation Evaluation Criteria (TEC), which includes transportation and economic impact, community effects, and land use and environmental impact (*MRPC, 2012*).

Projects included in the 5-year TIP pipeline are highly dependent on available funding, but remain in the queue to receive state and federal support to complete project requirements. Athol has had success in promoting the regional importance of local transportation infrastructure projects including scenic byway (Mohawk Trail) access improvements.

Direct engagement with the MRPC regarding existing transit capacity and future economic impact of proposed L.P. Athol redevelopment should establish this work as a key transit priority for the region. A secondary L.P. Athol access point listing on the regional TIP significantly accelerates the timeline for critical infrastructure improvements surrounding the site and enhances regional support for a challenging redevelopment project.

2. Continue to highlight downtown Athol initiatives in the region's Comprehensive Economic Development Strategy (CEDS) report in order to attract financial support and technical assistance to the area

Comprehensive Economic Development Strategies (CEDS) are produced by regional planning agencies every 5 years, and updated annually. These strategies are intended to target technical

assistance and relevant grants toward regional projects that correspond with established long-range economic development planning efforts (MRCEDS, 2013).

The inclusion of L.P. Athol redevelopment, and greater mill revitalization along the route 2 corridor from Athol to Erving, in the region's economic development strategy distributes much needed assistance to local planning departments. This technical assistance can be utilized to effectively complete previously recommended action steps including amended overlay zoning districts, historic district application reports, MassWorks infrastructure grant applications, and local housing development strategies.

A more significant North Quabbin area focus within the region's economic development strategy shifts resources to an often underserved portion of the commonwealth, and encourages more collaboration with the neighboring Franklin Regional Council of Governments. Partnership between Massachusetts regional planning agencies is not a common occurrence and North Quabbin economic development strategies should serve as a model for collaboration in other portions of the state that struggle with economic development challenges and jurisdictional boundaries.

Commonwealth of Massachusetts

I. Establish incentives to support fire safety upgrades for vacant and underutilized industrial properties in Massachusetts

The 2010 automatic sprinkler system upgrade amendment was adopted following a 2000 commercial building fire in Newton, MA. This legislative response to an isolated tragedy resulted in widespread regulations that further impede the redevelopment of underutilized industrial and commercial property in Massachusetts. The public safety intent of this building code amendment is understandable, but unintended consequences of this amendment continue to impact adaptive reuse projects that are critical to local economic development, particularly in former manufacturing hubs scattered across the state.

The tremendous cost associated with retrofitting automatic sprinkler systems in large historic structures that are prime for adaptive reuse often hinders investment amongst prospective developers that do not pose extensive portfolios and investment capital. The public safety intent of this amendment should not be relaxed but the state must provide financial incentives to support fire safety upgrades so that underutilized properties are less likely to remain as deteriorating structures that pose significant fire threat.

Potential financial incentives include a low-interest loan pool managed by a state department that provides funds to certified fire safety upgrade projects. This loan pool may be limited to structures that are on the state Historic Register and/or over 80 years old. State income tax credits are another potential incentive that can be used to reduce the overall cost of upgrading automatic sprinkler systems for an entire structure during the redevelopment process.

2. Expand the Economic Development Incentive Program’s (EDIP) Manufacturing Retention tax credit to non-Gateway City communities or certified industrial facilities

The challenge in attracting viable light manufacturing tenants to Athol, and the greater North Quabbin Region, is exacerbated by the fact that innovative manufacturing companies that have the ability to locate in redeveloped mill complexes are almost entirely funneled toward Gateway Cities through the commonwealth’s Manufacturing Retention Tax Credit program. This program provides a 40% state income tax credit for companies that either retain 50 manufacturing jobs or create 25 new full time jobs that generate out of state sales. Specific Gateway City programs have displayed noticeable success over the last 10 years, particularly in generating much needed manufacturing jobs for cities like Lawrence and Lowell (DHCD, 2012).

Gateway Cities function as important regional centers for job creation and economic growth, but the North Quabbin Region again remains as one of the most underserved areas within the Commonwealth as evident by the fact that no area communities qualify for innovative Gateway City funding streams and incentives (Figure 10). Almost all North Quabbin communities present median household income and education attainment levels that are below the Massachusetts average, but the lack of a large urban population center restricts access to these effective resources purely based on an arbitrary population threshold.

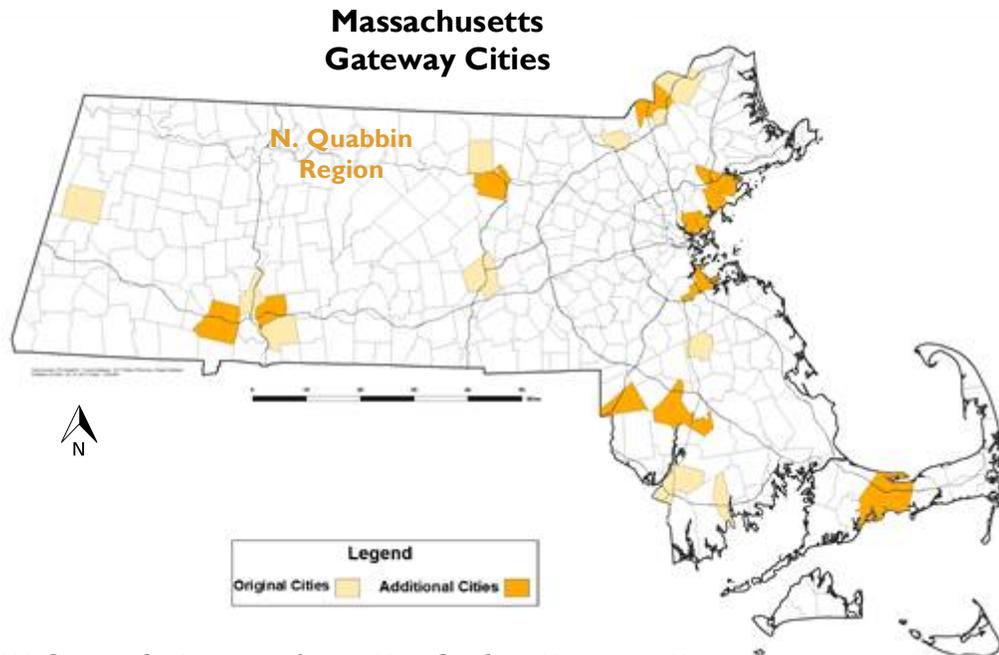


Figure 10: MA Gateway City Locations Source: Mass.Gov Capital Investment Plan

North Quabbin entrepreneurs are effectively incentivized to locate in surrounding Gateway Cities like Holyoke or Fitchburg as opposed to investing in local communities that are in desperate need of more job opportunities for area workers. The potential to expand the Gateway City program to less densely populated areas like the North Quabbin Region presents an opportunity to facilitate both economic and academic improvement in targeted areas that slip through Gateway City qualification but still face the same conditions as their more heavily populated counterparts.

A state maintained list of non-Gateway City industrial facilities that are qualified for the Manufacturing Retention Tax Credit program is another viable option to expand this resource if significant alteration to Gateway City qualifications is not a desired state action. State recognized mill redevelopment projects could be achieved through an application process similar to that of the historic district designation application. Qualified mill redevelopment projects would be added to a state database that provides project access to tax credits, funding, and technical assistance that may otherwise remain beyond the reach of important rehabilitation projects similar to L.P. Athol.

4. Adopt a Mill Revitalization Act similar to Rhode Island's 1996 Mill Building and Economic Revitalization Act in order to alleviate soft costs and provide technical assistance (Historic Preservation & New Markets Tax Credit Strategies) for Massachusetts mill revitalization projects

In 1996, the state of Rhode Island adopted a Mill Building and Economic Revitalization Act under the Rhode Island Enterprise Zone Program. This act was specifically intended to encourage the adaptive reuse of historic mill structures in an effort to spur economic development in low-income neighborhoods throughout the state. This act provided building certification guidelines that qualified public and privately owned mill properties for program benefits. Certification guidelines included mill building size and age, surrounding neighborhood demographics, proposed future uses, and the current vacancy rate.

Benefits of the program included local property tax relief, permit fee waivers, and Historic Commission assistance with historic designation applications. Additional tax credits also included a 10% income tax credit on certified rehabilitation costs and a 100% credit for interest accrued on construction loans provided by a lender. This program was revamped in 2012 and was essential in enabling mill redevelopment projects to occur in struggling cities like Woonsocket, Providence, and Pawtucket (*RI Enterprise Zone Program, 2001*).

Massachusetts currently provides a variety of resources that mill redevelopment project stakeholders can utilize, but a more deliberate toolkit for redevelopment is required if the Commonwealth is to experience wider economic impact through mill building reuse. Gateway City and special interest mill redevelopment projects highlight the impact that these investments have on local economic development. However, many rural Massachusetts towns and private mill owners, that lack the capacity to adequately navigate the complex revitalization process, stand to benefit greatly if Massachusetts adopts a formal strategy to better address the needs of rural mill owners who seek to rehabilitate their property and facilitate job creation.

Appendix A: L.P. Athol Select Photos and Site Maps

Western Face of Complex



Interior Light Manufacturing Space – Building I



Riverside Restaurant & Commercial/Office Space (Building 2)



Power Canal Between Residential Structures (Buildings 3 & 4)



Site Topography



Legend

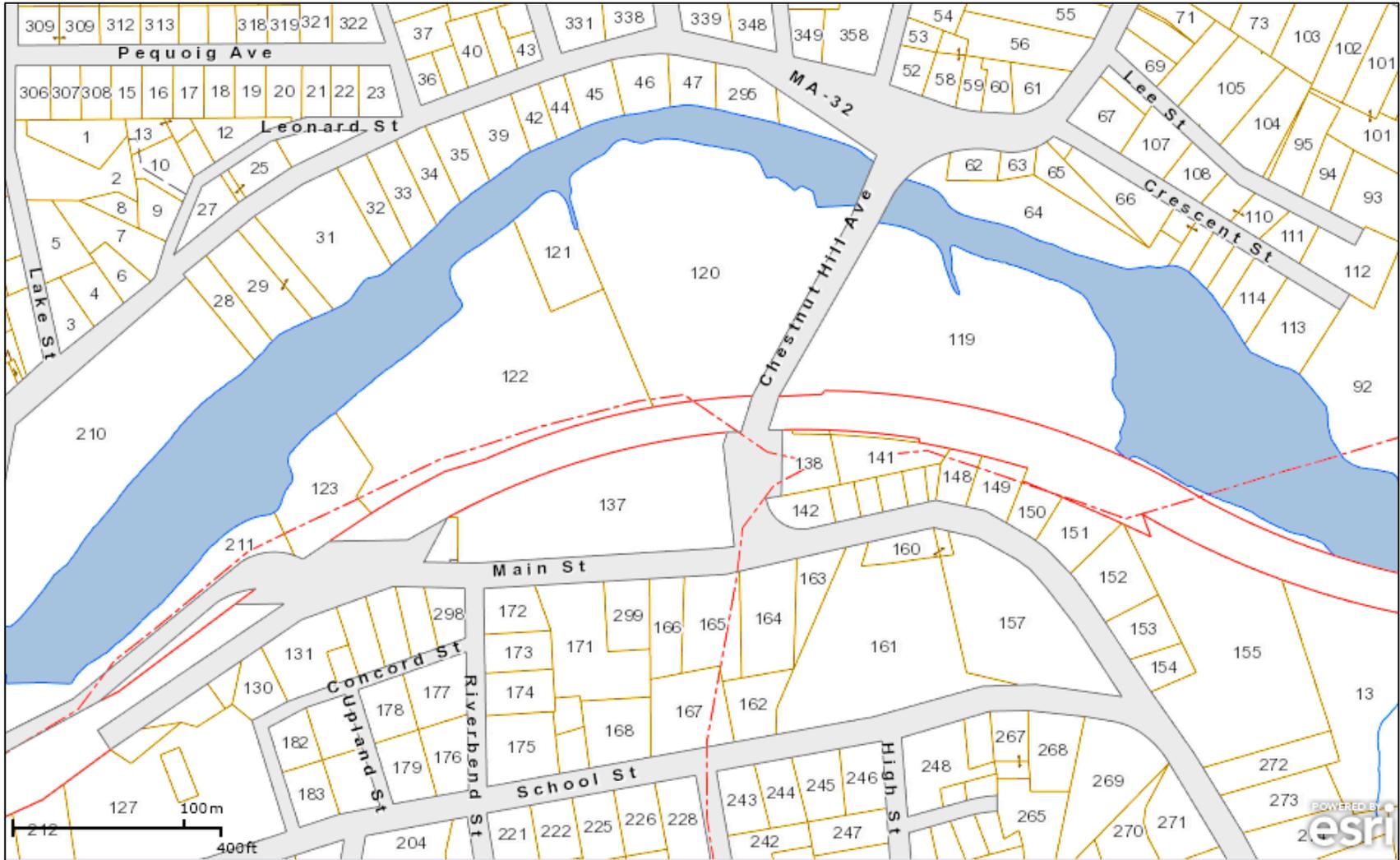
— Contours

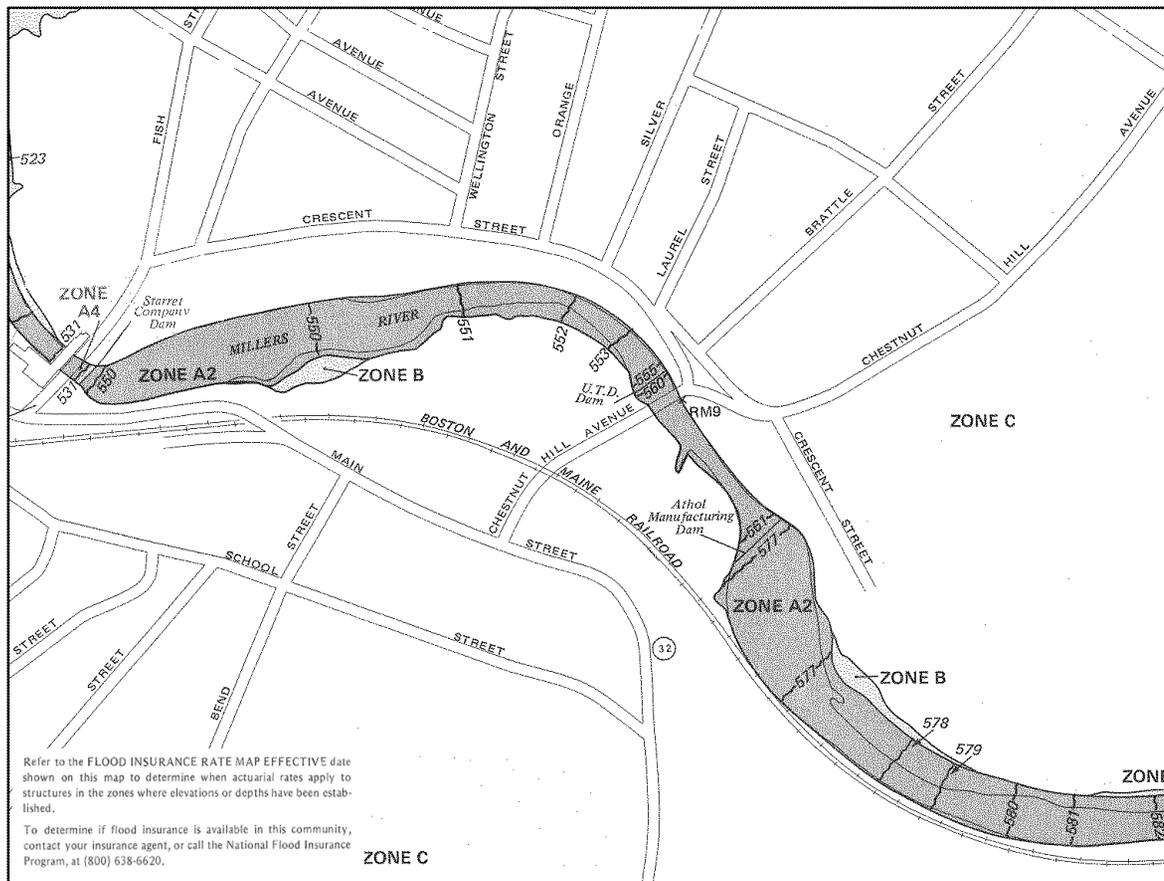


0 150 300 600 Feet

Source: Massachusetts GIS Data. Accessed December 2013

L.P. Athol Parcel Map





Refer to the FLOOD INSURANCE RATE MAP EFFECTIVE date shown on this map to determine when actuarial rates apply to structures in the zones where elevations or depths have been established.

To determine if flood insurance is available in this community, contact your insurance agent, or call the National Flood Insurance Program, at (800) 638-6620.



NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

TOWN OF
ATHOL,
MASSACHUSETTS
WORCESTER COUNTY

PANEL 4 OF 20
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
250291 0004 B

EFFECTIVE DATE:
JULY 19, 1982

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

KEY TO MAP

500-Year Flood Boundary	—————				
100-Year Flood Boundary	—————				
Zone Designations*	<table border="1"> <tr><td>ZONE B</td></tr> <tr><td>ZONE A1</td></tr> <tr><td>ZONE A5</td></tr> <tr><td>ZONE B</td></tr> </table>	ZONE B	ZONE A1	ZONE A5	ZONE B
ZONE B					
ZONE A1					
ZONE A5					
ZONE B					
100-Year Flood Boundary	—————				
500-Year Flood Boundary	—————				
Base Flood Elevation Line With Elevation In Feet**	~~~~~513~~~~~				
Base Flood Elevation in Feet Where Uniform Within Zone**	(EL 987)				
Elevation Reference Mark	RM7x				
Zone D Boundary	—————				
River Mile	•M1.5				

**Referenced to the National Geodetic Vertical Datum of 1929

***EXPLANATION OF ZONE DESIGNATIONS**

ZONE	EXPLANATION
A	Areas of 100-year flood; base flood elevations and flood hazard factors not determined.
A0	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths of inundation are shown, but no flood hazard factors are determined.
AH	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined.
A1-A30	Areas of 100-year flood; base flood elevations and flood hazard factors determined.
A99	Areas of 100-year flood to be protected by flood protection system under construction; base flood elevations and flood hazard factors not determined.
B	Areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than one (1) foot or where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood. (Medium shading)

- C** Areas of minimal flooding. (No shading)
- D** Areas of undetermined, but possible, flood hazards.
- V** Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined.
- V1-V30** Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors determined.

NOTES TO USER

Certain areas not in the special flood hazard areas (zones A and V) may be protected by flood control structures.

This map is for flood insurance purposes only; it does not necessarily show all areas subject to flooding in the community or all planimetric features outside special flood hazard areas.

For adjoining map panels, see separately printed Index To Map Panels.

INITIAL IDENTIFICATION:
MARCH 8, 1974

FLOOD HAZARD BOUNDARY MAP REVISIONS:
JULY 23, 1976

FLOOD INSURANCE RATE MAP EFFECTIVE:
JULY 19, 1982

FLOOD INSURANCE RATE MAP REVISIONS:

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Appendix C: Sample Case Studies

Ludlow Mills

Ludlow, MA

Ludlow, MA is located at the “Crossroads of New England” near two major transit routes (Massachusetts Turnpike and I-91 that runs from Connecticut to Vermont). The community has a population just over 21,000 (U.S. Census Bureau, 2012).

Ludlow Mills is a 640,000 square foot former jute facility that sits on 170 acres of land that is adjacent to the Chicopee River. Redevelopment plans call for a combination of historic preservation and new construction on the site. A proposed mixed-use facility will house local businesses, senior independent living units, a public river walk, and a Health South medical facility. The mill is located within walking distance of the town center and is included in the Ludlow Village Historic District (designated in 1993).

The Ludlow Mills site is regulated by the town’s Industrial A zoning which prohibits all residential uses. The town, along with Westmass Development, plan to create a 40R zoning district overlay that would permit high density residential use, along with retail, commercial, and office space (Ludlow Mills Mixed-Use District).

Key Financing	Primary Tenants
Federal Historic Tax Credits: \$3.8 million	WinnDevelopment Senior Independent Living
EPA Brownfields: \$500,000	HealthSouth Medical

In 2012 Luitenant Governor Timothy Murray added the Ludlow Mills project to the state’s Brownfield Support Team Initiative. This initiative is used to concentrate financial, legal, and technical support for challenging redevelopment projects throughout the state (Tuthill, 2012).

Westmass Development has also leveraged almost \$4 million in State and Federal Historic Tax credits to increase funding for the project. EPA funding has also been utilized for site remediation and asbestos removal.

Sources:

Town of Ludlow Planning Department. “Ludlow Mills Mixed-Use District.” January, 2010.

Tuthill, Paul. “Mill Redevelopment Designated Brownfields Priority Project” Northeast Public Radio. 10 Dec. 2012.

Monadnock Mills

Claremont, NH

A historic 19th century nucleus of commerce for the region, the Monadnock Mills make up a campus nestled in western New Hampshire near the Vermont border along the Connecticut and Sugar Rivers. Geographically isolated, the town is adjacent to Interstate 91 and rests south of Lebanon, NH.

Once a participant in the lucrative textile industry, the derelict complex was acquired and redeveloped by a team of partners comprised of Sugar River Mills LLC, the Common Man Inn and Restaurant, and Red River Computer Company. Diverse financing, from private, federal, state, and municipal projects facilitated the materialization of the project. Originally owned by the City of Claremont, the property attracted investment due to the city's offering of Tax Increment Financing to developers (NEREJ, 2012).

Tax Increment Financing, which offers a subsidy to developers in anticipation of forecasted tax revenue from the growth triggered by a project, was a majority component to the City of Claremont's \$1.5 million in financing towards the Monadnock Mills (NH Division of Economic Development, 2009). This financing stream assisted in realizing updated infrastructure, including water and sewer, lighting, and parking areas. Additionally, it acted as a catalyst in attracting a responsible developer who would assist in continuous growth throughout the city.

Key Financing	Primary Tenants
Private Financing: \$25 million	Red River Computer Co.
City of Claremont: \$1.5 million	The Common Man Inn & Restaurant
EPA Brownfields: \$200,000	The Lofts at Sugar River

The success of the Monadnock Mills has resonated regionally, attracting commercial and residential tenants searching for more affordable real estate options than are offered in the northern city of Lebanon, NH. Currently, new residential loft units within the mill are being released onto the market. Home to the Common Man Inn and Restaurant, Red River Computer Company, and the only class A office space in the area, the mills' success is leading the revitalization of the City of Claremont.

Sources:

"ReArch Co., Red River Computer Co., and the Common Man Inn and Restaurant Redeveloping Monadnock Mills." *New England Real Estate Journal*. <http://nerej.com/33229>.

"City of Claremont Receives Excellence in Economic Development Award." *New Hampshire Division of Economic Development*. <http://blog.nheconomy.com/?p=1345>

Union Crossing Lawrence, MA

Lawrence, MA is located approximately 25 miles northwest of Boston. The city maintains a population of over 77,000 residents and serves as a useful example of various methods to achieve mill revitalization. Many large-scale projects like the Riverwalk and Monarch Mills are financed through private sources while Union Crossing was led by Lawrence CommunityWorks, a local Community Development Corporation

The Patrick-Murray Administration awarded the City of Lawrence with a \$3.46 million MassWorks Infrastructure grant that was used to make new public roadway improvements including the installation of a new pedestrian and vehicle bridge, the creation of 100 new public parking spaces, and general roadwork and streetscape improvements. The infrastructure improvements will support the historic Union Crossings site along the Merrimack River.

Phase I of the redevelopment project was completed in 2012 and includes 60 affordable and energy efficient residential units, 30,000 square feet of commercial space, an on-site daycare center, and new green space. The commercial and office space has been targeted for businesses related to clean technology and education industry clusters.

Major Grants	Primary Tenants
MassWorks Infrastructure: \$3.46 million	60 Residential Units
HUD HOME Funds: \$1.3 million	Child Care Center
Low Income Housing Tax Credits: \$1.2 million	

Out of necessity, The Union Crossing project highlights the critical need for public and private partnership. Local community leaders, state agencies, local banks, academic programs, and regional nonprofit organizations contributed financing and resources to transform the project from a vision to a completed plan. Phase II of the project broke ground in 2012 and will revitalize the Historic Duck Mill into a similar mixed-use site.

Sources:

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<http://www.mass.gov/hed/economic/eohed/pro/infrastructure/massworks/what-is-it/>

Lawrence CommunityWorks. "Union Crossing Project Factsheet."
<http://www.nw.org/network/green/documents/UnionCrossingHandout.pdf>

US Census Bureau (2012). American Factfinder fact sheet: Lawrence, MA. October 24, 2013

Appendix D: Key Demographics & Economic Points

Key Data Points	Massachusetts	Worc. County	Frank. County	ATHOL	Orange	Phillipston
Total Population	6,547,629	798,552	71,372	11,584	7,839	1,682
Median Age	39.1	39.2	44.2	40.6	41.3	42.7
Non-White population (%)	19.6%	14.4%	5.8%	4.7%	4.8%	3.4%
Total Households	2,522,409	298,224	30,159	4,551	3,334	648
Family Households (%)	63.6%	66.6%	60.8%	63.7%	64.3%	80.1%
Avg. Household Size	2.49	2.6	2.32	2.5	2.33	2.9
Avg. Family Size	3.1	3.19	2.84	3.1	2.81	3.17
Median House Value	\$343,500	\$258,400	\$220,000	\$174,000	\$169,800	\$236,600
Education Attainment for Population 25 years and over	11.1% No HSch 26.2% HSch 62.5% HSch+	10.8% No HSch 28.4% HSch 60.8% HSch+	7.7% No HSch 28.2% HSch 64.1% HSch+	14.5% No HSch 40.8% HSch 44.7% HSch+	13.4% No HSch 39.1% HSch 47.6% HSch+	9.2% No HSch 36.2% HSch 54.7% HSch+
Population in Labor Force	67.8%	67.6%	68.4%	66.1%	62.4%	74.1%
Driving Alone to Work (%)	72.3%	82.0%	77.9%	82.9%	77.4%	88.1%
Mean Travel Time (minutes)	27.5	27.9	24.3	27.9	30.3	32.6
Mean Household Income	\$88,577	\$80,951	\$65,330	\$60,716	\$52,351	\$81,579
Mean Family Income	\$106,335	\$96,072	\$75,887	\$68,639	\$57,924	\$88,320

Key Data Points	Erving	New Salem	Petersham	Royalston	Warwick	Wendell
Total Population	1,800	990	1,234	1,258	780	848
Median Age	41.3	46.9	48.0	45.6	48.1	47.8
Non-White population (%)	2.8%	4.0%	1.7%	3.1%	2.9%	4.8%
Total Households	689	402	445	455	269	452
Family Households (%)	71.1%	60.7%	69.4%	69.0%	67.7%	56.6%
Avg. Household Size	2.55	2.37	2.53	2.33	2.23	2.21
Avg. Family Size	2.96	2.9	3.12	2.75	2.66	2.75
Median House Value	\$193,300	\$232,100	\$307,300	\$211,900	\$178,300	\$200,000
Education Attainment for Population 25 years and over	12.3% No HSch 39.9% HSch 47.8% HSch+	5.2% No HSch 21.8% HSch 72.9% HSch+	4.8% No HSch 25.3% HSch 69.9% HSch+	11.1% No HSch 34.9% HSch 54.1% HSch+	6% No HSch 32.8% HSch 61.2% HSch+	9.1% No HSch 29.8% HSch 61% HSch+
Population in Labor Force	72.3%	70.6%	62.3%	68.1%	71.0%	70.3%
Driving Alone to Work (%)	86.4%	82.1%	77.1%	89.1%	78.4%	64.4%
Mean Travel Time (minutes)	22.9	35.6	37.2	35.2	33.3	31.7
Mean Household Income	\$59,958	\$78,517	\$74,837	\$73,907	\$65,627	\$65,745
Mean Family Income	\$66,823	\$88,022	\$91,365	\$81,579	\$68,881	\$70,459

Sources: DP-1: Profile of General Population and Housing Characteristics. U.S. Census Bureau, 2010 Census
 DP02: Selected Social Characteristics in the United States. U.S. Census Bureau 2007-2011 American Community Survey
 DP03: Selected Economic Characteristics. U.S. Census Bureau. 2007-2011 American Community Survey
 DP04: Selected Housing Characteristics. U.S. Census Bureau, 2007-2011 American Community Survey

North Quabbin Region – Employment Shift Share Analysis, 2012

North Quabbin Study Area	# of Establish.	Total Wages	Ave. Employ.	Ave. Annual Salary	Share of Wages	Share of Employment	Shares of Emp Squared	LQ* (emp)
Total, All Industries	660	\$221,848,372	6,382	\$34,761.58				
Goods-Producing Domain	69	\$72,482,985	1,623	\$44,659.88	0.326723087	0.254308994	0.064673064	2.133409175
Service-Providing Domain	577	\$141,611,475	4,583	\$30,899.30	0.638325509	0.718113444	0.515686919	0.815299698
Natural Resources and Mining							0	
Construction	41	\$5,892,897	143	\$41,209.07	0.026562724	0.022406769	0.000502063	0.574181445
Manufacturing	29	\$66,686,014	1,473	\$45,272.24	0.300592758	0.23080539	0.053271128	2.970624003
Trade, Transportation and Utilities	111	\$33,511,375	1,042	\$32,160.63	0.151055312	0.163271702	0.026657649	0.914697376
Information	8	\$2,187,028	82	\$26,671.07	0.009858211	0.012848637	0.000165087	0.451110011
Financial Activities	24	\$6,629,020	142	\$46,683.24	0.029880859	0.022250078	0.000495066	0.347938128
Professional and Business Services	45	\$8,377,454	230	\$36,423.71	0.037762071	0.036038859	0.001298799	0.23464677
Education and Health Services	47	\$56,725,096	1,517	\$37,392.94	0.255693091	0.237699781	0.056501186	0.883684852
Leisure and Hospitality (Arts & Ent)	46	\$4,421,903	366	\$12,081.70	0.019932096	0.057348793	0.003288884	0.56119221
Other Services	232	\$7,042,917	460	\$15,310.69	0.031746535	0.072077719	0.005195198	1.649698308
Public Administration	12	\$10,265,735	170	\$60,386.68	0.046273655	0.026637418	0.000709552	0.64324998
Herf							0.148084612	
I-Herf*							0.851915388	

Source: MA Executive Office of Labor and Workforce Development

***Herfendal (I-Herf):** Herfendal Index is used to measure the industrial diversity of a given geographic area. Measurement scale is between 0 – 1. The closer to 1, the more diverse employment opportunity is within the examined area. Comparative analysis (Springfield MSA: 0.91; MA: 0.92)

***Location Quotient (LQ):** Location Quotient is used to compare the concentration of specific industry employment within a given geographic area to a larger reference area (MA in this Case). A result of 1 indicates the same concentration of industry types when comparing the N. Quabbin Region and Massachusetts. Noticeably high concentration outliers within the N. Quabbin Region include Manufacturing & Goods Production. Noticeably low concentration outlier within the N. Quabbin Region include Information, Financial Activities & Professional and Business Services.



Retail MarketPlace Profile

134 Chestnut Hill Ave, Athol, Massachusetts, 01331
 Ring: 10 mile radius

Latitude: 42.59616
 Longitude: -72.22211

Summary Demographics						
2013 Population						37,429
2013 Households						14,520
2013 Median Disposable Income						\$39,799
2013 Per Capita Income						\$24,612
Industry Summary	NAICS	Demand (Retail Potential)	Supply (Retail Sales)	Retail Gap	Leakage/Surplus Factor	Number of Businesses
Total Retail Trade and Food & Drink	44-45,722	\$370,807,610	\$165,096,633	\$205,710,977	38.4	238
Total Retail Trade	44-45	\$334,601,487	\$149,268,833	\$185,332,654	38.3	197
Total Food & Drink	722	\$36,206,123	\$15,827,800	\$20,378,323	39.2	41
Industry Group	NAICS	Demand (Retail Potential)	Supply (Retail Sales)	Retail Gap	Leakage/Surplus Factor	Number of Businesses
Motor Vehicle & Parts Dealers	441	\$63,262,690	\$22,257,371	\$41,005,319	47.9	28
Automobile Dealers	4411	\$55,276,968	\$17,341,600	\$37,935,368	52.2	16
Other Motor Vehicle Dealers	4412	\$3,396,344	\$2,041,006	\$1,355,338	24.9	6
Auto Parts, Accessories & Tire Stores	4413	\$4,589,378	\$2,874,765	\$1,714,613	23.0	6
Furniture & Home Furnishings Stores	442	\$8,338,130	\$4,489,431	\$3,848,699	30.0	6
Furniture Stores	4421	\$4,134,994	\$3,985,663	\$149,331	1.8	3
Home Furnishings Stores	4422	\$4,203,137	\$503,768	\$3,699,369	78.6	3
Electronics & Appliance Stores	4431	\$11,615,711	\$2,090,505	\$9,525,206	69.5	12
Bldg Materials, Garden Equip. & Supply Stores	444	\$10,857,487	\$6,052,074	\$4,805,413	28.4	22
Bldg Material & Supplies Dealers	4441	\$9,257,921	\$5,074,709	\$4,183,212	29.2	18
Lawn & Garden Equip & Supply Stores	4442	\$1,599,566	\$977,365	\$622,201	24.1	4
Food & Beverage Stores	445	\$65,812,535	\$25,704,964	\$40,107,571	43.8	36
Grocery Stores	4451	\$55,945,535	\$12,979,835	\$42,965,699	62.3	13
Specialty Food Stores	4452	\$2,793,679	\$2,216,797	\$576,882	11.5	12
Beer, Wine & Liquor Stores	4453	\$7,073,321	\$10,508,331	-\$3,435,010	-19.5	10
Health & Personal Care Stores	446,4461	\$36,775,549	\$12,960,706	\$23,814,843	47.9	11
Gasoline Stations	447,4471	\$33,808,387	\$6,025,607	\$27,782,780	69.7	6
Clothing & Clothing Accessories Stores	448	\$23,930,420	\$991,864	\$22,938,556	92.0	7
Clothing Stores	4481	\$17,646,630	\$696,615	\$16,950,015	92.4	5
Shoe Stores	4482	\$3,257,900	\$109,846	\$3,148,054	93.5	1
Jewelry, Luggage & Leather Goods Stores	4483	\$3,025,891	\$185,403	\$2,840,488	88.5	1
Sporting Goods, Hobby, Book & Music Stores	451	\$9,808,120	\$2,091,457	\$7,716,663	64.8	20
Sporting Goods/Hobby/Musical Instr Stores	4511	\$7,950,358	\$1,959,295	\$5,991,063	60.5	18
Book, Periodical & Music Stores	4512	\$1,857,762	\$132,163	\$1,725,600	86.7	2
General Merchandise Stores	452	\$38,673,104	\$37,236,858	\$1,436,246	1.9	6
Department Stores Excluding Leased Depts.	4521	\$21,280,241	\$35,133,501	-\$13,853,260	-24.6	2
Other General Merchandise Stores	4529	\$17,392,863	\$2,103,358	\$15,289,506	78.4	4
Miscellaneous Store Retailers	453	\$9,028,218	\$2,513,610	\$6,514,608	56.4	31
Florists	4531	\$733,200	\$360,111	\$373,089	34.1	4
Office Supplies, Stationery & Gift Stores	4532	\$3,207,119	\$334,170	\$2,872,949	81.1	7
Used Merchandise Stores	4533	\$1,411,652	\$559,822	\$851,829	43.2	6
Other Miscellaneous Store Retailers	4539	\$3,676,248	\$1,259,507	\$2,416,741	49.0	14
Nonstore Retailers	454	\$22,691,136	\$26,854,387	-\$4,163,251	-8.4	13
Electronic Shopping & Mail-Order Houses	4541	\$16,092,928	\$0	\$16,092,928	100.0	0
Vending Machine Operators	4542	\$550,835	\$0	\$550,835	100.0	0
Direct Selling Establishments	4543	\$6,047,373	\$26,854,387	-\$20,807,014	-63.2	13
Food Services & Drinking Places	722	\$36,206,123	\$15,827,800	\$20,378,323	39.2	41
Full-Service Restaurants	7221	\$19,012,859	\$7,234,113	\$11,778,746	44.9	14
Limited-Service Eating Places	7222	\$14,338,519	\$7,714,969	\$6,623,551	30.0	18
Special Food Services	7223	\$1,863,494	\$450,241	\$1,413,253	61.1	3
Drinking Places - Alcoholic Beverages	7224	\$991,250	\$428,477	\$562,773	39.6	5

Data Note: Supply (retail sales) estimates sales to consumers by establishments. Sales to businesses are excluded. Demand (retail potential) estimates the expected amount spent by consumers at retail establishments. Supply and demand estimates are in current dollars. The Leakage/Surplus Factor presents a snapshot of retail opportunity. This is a measure of the relationship between supply and demand that ranges from +100 (total leakage) to -100 (total surplus). A positive value represents 'leakage' of retail opportunity outside the trade area. A negative value represents a surplus of retail sales, a market where customers are drawn in from outside the trade area. The Retail Gap represents the difference between Retail Potential and Retail Sales. Esri uses the North American Industry Classification System (NAICS) to classify businesses by their primary type of economic activity. Retail establishments are classified into 27 industry groups in the Retail Trade sector, as well as four industry groups within the Food Services & Drinking Establishments subsector. For more information on the Retail MarketPlace data, please view the methodology statement at <http://www.esri.com/library/whitepapers/pdfs/esri-data-retail-marketplace.pdf>.

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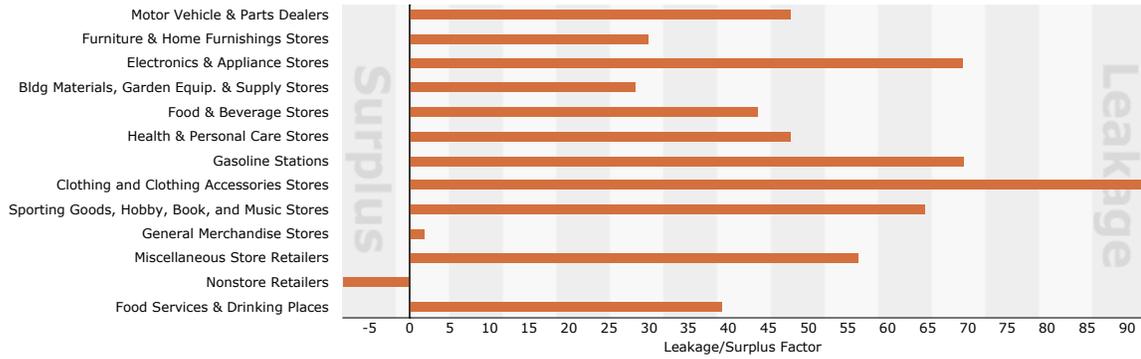


Retail MarketPlace Profile

134 Chestnut Hill Ave, Athol, Massachusetts, 01331
 Ring: 10 mile radius

Latitude: 42.59616
 Longitude: -72.22211

Leakage/Surplus Factor by Industry Subsector



Leakage/Surplus Factor by Industry Group

