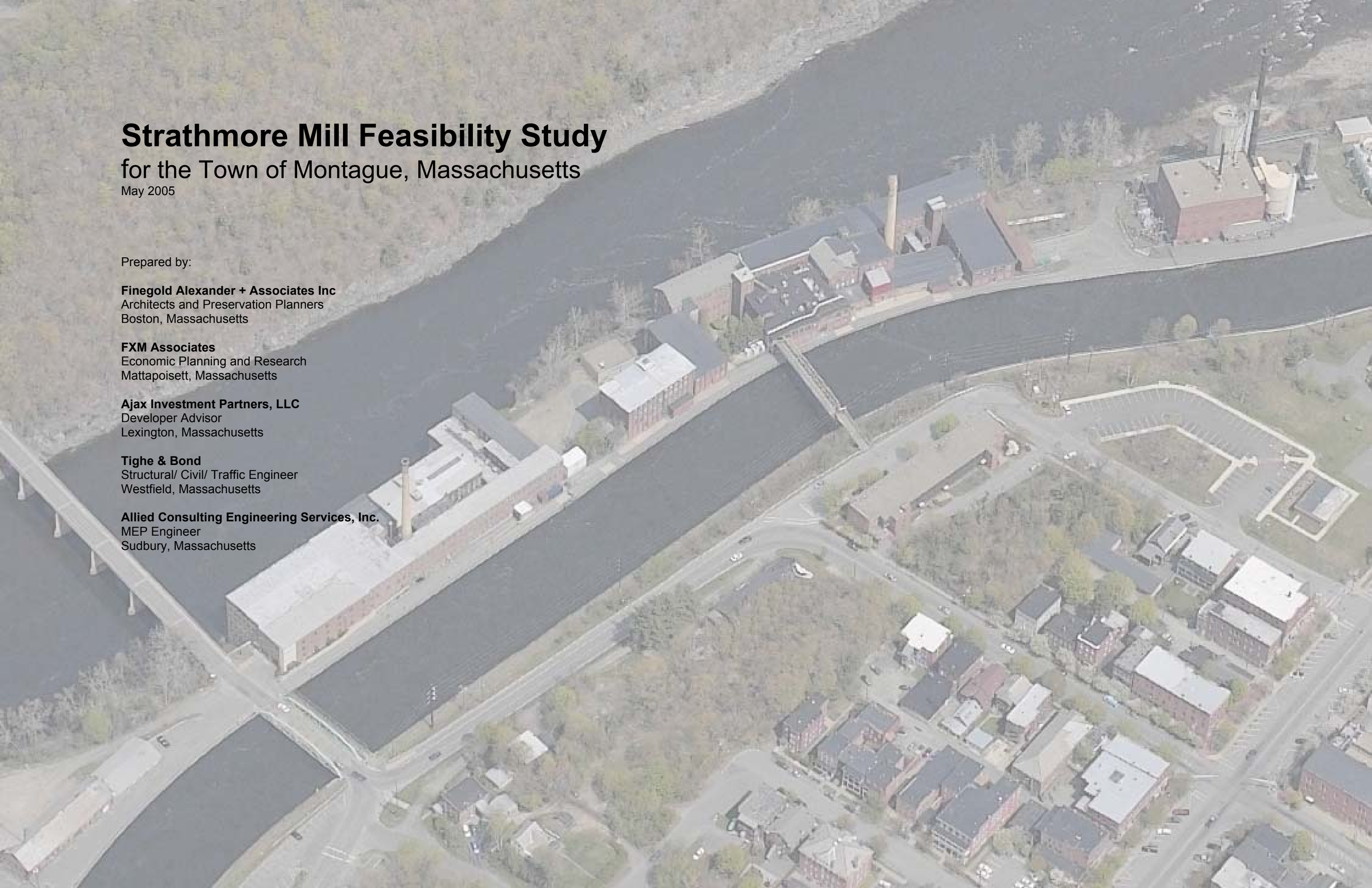
Strathmore Mill Feasibility Study

for the Town of Montague, Massachusetts

May 2005



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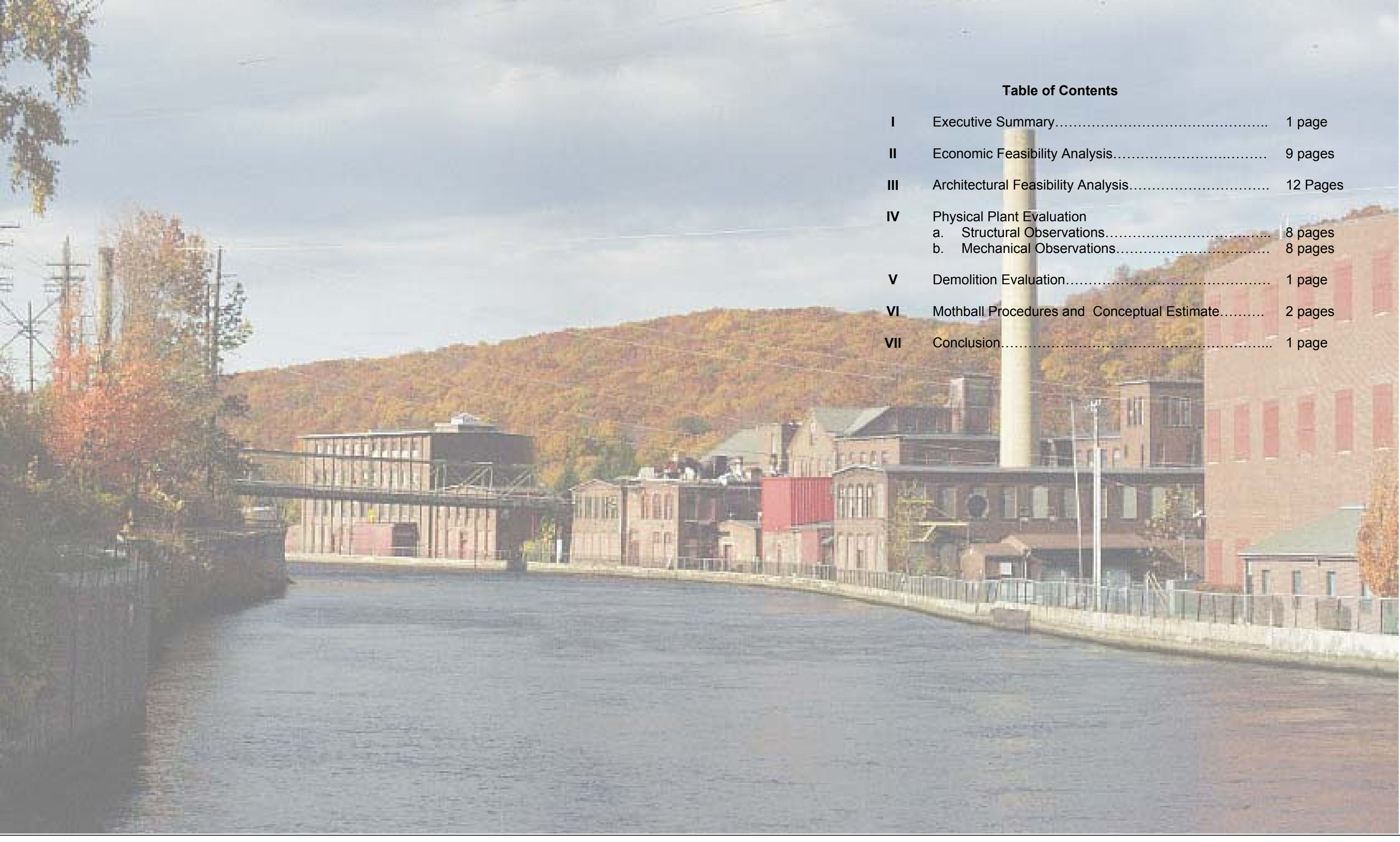

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EXECUTIVE SUMMARY

Finegold Alexander + Associates Inc – Architects and Preservation Planners and its consultant team was retained in March 2005 by the Town of Montague, Massachusetts to carry out a reuse feasibility study assessing market demand in relation to the physical characteristics of the Strathmore Mill. The feasibility study was conducted during a short 8 week period between March and May 2005. Alternative uses, development options, building and site assessments were reviewed to help determine the future of the property. Assisting Finegold Alexander + Associates Inc in the study were:

FXM Associates – Economic Planning and Research

AJAX – Investment Partners, LLC (developer adviser)

Tighe & Bond – Engineering (structure)

Allied – Consulting Engineering Services (MEP / FP)

The study team familiarized itself with the buildings over the course of several site visits and studied available documentation provided by the town and other sources. Existing documentation of floor plan layouts, structure, and mechanical systems was very limited. The scope of work and short time frame made detailed field verification of existing conditions impossible. The team has relied on their years of experience with similar structures, visual observations made during site visits, conversations with knowledgeable individuals associated with the Mill both past and present, as well as photographic records from various sources, to form their professional opinions. From visual observations the team recorded and evaluated existing conditions for structural, mechanical, electrical, plumbing, fire protection, building envelope, and accessibility for the purpose of identifying building and systems deficiencies and recommending corrective action. The team also prepared a concept level cost estimate.

In parallel to the building analysis FXM Associates conducted an economic and market analysis. The initial site visit with other team members offered an understanding of site and building characteristics that could affect market demand and development potential, including access, parking, site and building configurations, amenities, and so forth. Throughout the economic and market assessment process FXM shared their findings and was informed by the work of other project disciplines.

FXM Associates performed a general assessment of market demand to identify potential use for the Strathmore Mill. This assessment was based on available secondary source data and proprietary data sources maintained by the consultant and on a series of interviews with local real estate professionals and other sources identified by the client. FXM has identified prevailing market rents as well as potential demand based on projected growth in population, household income and employment, recent absorption trends and new construction activity, and interest expressed by specific companies or developers.

Based upon the general market assessment and input from other team members regarding site and building development costs and constraints, the market and developer consultants prepared a five-year conceptual *pro forma* of absorption, income and expenses for uses that are most likely to be captured at the site over the next five years. The report also notes the effect that potential new development at Strathmore Mill is likely to have on existing local businesses and overall market conditions in the trade area.

FA+A upon receiving information from FXM about potential market demand began development of architectural drawings summarizing options for redevelopment. The market analysis identified several potential uses including artist live work space and industrial commercial space. The architectural planning and vision for the potential redevelopment utilizes existing fabric and takes advantage of existing amenities while keeping in mind the limited resources identified in the economic analysis. Additional information from team engineers, the developer adviser, various town officials, life safety and access codes were also fed into the process. This report presents the vision, findings, and recommendations of the team.

We would like to thank the participants for their assistance and cooperation with this study. Special thanks to Mr. Peter Clark, Mr. Bucky Lete, and Mr Jim Slavis for sharing their knowledge of the facility and its history.

Strathmore Mill Market Assessment

Summary Findings

In addition to assessing market conditions and trends through analysis of relevant secondary source data and the consultant's extensive in-house files compiled from prior comparable studies, FXM Associates' senior staff completed over thirty interviews with real estate and economic development professionals, mill and other property owners and managers, artists, businesses and institutions, prior tenants, and other knowledgeable individuals throughout Franklin County and a broader market area, visited other local mills as well as the Strathmore property, and participated in each of the working committee sessions to determine realistic options for market-driven re-use of the Strathmore Mill. Ajax Partners International reviewed FXM's market and income assessment and prepared a preliminary operating cost budget to estimate potential net income that could be applied to property acquisition and reconstruction to bring the mill into acceptable levels of code compliance and prospective tenant outfitting. The full report documents the sources, analyses and findings of all work accomplished. The following paragraphs summarize key findings of the study effort:

- The Strathmore Mill buildings and site provide a keen sense of place for potential new occupants, and its location close to the village center of Turners Falls are distinctive and positive attributes for market acceptance. From a regional locational standpoint, proximity to Route 2 and Interstate 91 are also favorable site features. The emergence of Turners Falls and the surrounding area as a destination for the creative economy is an exceptionally positive indicator of immediate and longer term market potential.

- Lack of parking (on-site or within reasonable walking distance), legal issues regarding access to and use of loading docks for commercial vehicles, and a closed pedestrian walkway providing access over the canal from downtown and potential off-site parking are now crucial barriers to any redevelopment at Strathmore Mill. These barriers can be overcome but will require public administrative, technical and financial support.

- There is significant short-term market potential for the Strathmore Mill to be re-used by a combination of commercial/industrial tenants; artists, artisans and others for live/work space; and smaller ancillary uses such as a walk-in business center and exhibit space. About 100,000 square feet of rentable space could be absorbed into the market within three to five years. Over a longer time frame (7-10 years) market indicators are favorable for additional absorption of space at the Strathmore Mill by the same type of uses, potential other commercial uses, and possible live/work condominiums as well as rentals.

- The most compelling and limiting market consideration at this time is price. All of the prospective users identified are extremely sensitive to price and far less sensitive to the quality of finished space and other amenities. There is an ample supply of competitive and comparable mill space elsewhere in the market area for both commercial and residential uses and more is projected to come on line in the foreseeable future; residential rental, single family home and condominium prices are generally very low in the market area; and with inherent parking and direct access limitations at the subject site there is, therefore, little prospect for Strathmore Mill to achieve projected occupancy if prices are not at or below those in the competitive environment.

- Based on income projected at stable occupancy (3 to 5 years) and estimated operating costs, re-use of approximately 100,000 square feet of the Strathmore Mill would generate net revenue sufficient to support approximately $2 million of debt for construction and property acquisition.

Introduction

FXM Associates conducted market research and prepared an economic analysis of possible redevelopment of the Strathmore Mill in Turners Falls, with advice from Ajax International Partners, and in concert with a property and building evaluation prepared by Finegold Alexander + Associates, Inc. This assessment has been based on review of available secondary source data on market conditions and proprietary data sources maintained by the consultant; telephone interviews with more than thirty businesses, property owners and managers, real estate professionals, public officials and sources identified by the town's Study Committee; local site and building inspection and visits to other area mills; and, analysis of other relevant information collected during the study. This report has been prepared for pre-development planning purposes and is intended to provide the Town of Montague with a factual and informed basis for considering whether to purchase the Strathmore Mill property. In the context of Montague's economic development goals, financial policies and commitment to downtown revitalization, this effort focused on defining the market potential for re-use of the mill and determining the extent to which projected income from tenants could cover estimated operating and development costs.

During the course of this market research, we discovered that Millers Falls Paper Mill in the nearby town of Erving is scheduled to be sold at auction on June 13, 2005.[1] This 245,000 sq. ft. complex consists of 4 and 5-story brick buildings, a contemporary office addition, a 1-story steel warehouse building at the rear; and a 2-acre parking lot. The property is located on 24.5 acres on Route 2 and along the Connecticut River; portions of the site are wetland and not buildable. The property has five parcels, and the assessed value of the parcel with the mill complex is $2,255,800.[2] If the Millers Falls Paper Mill is redeveloped for uses similar to the proposed Strathmore Mill redevelopment program, it could help establish the Montague/Turners Falls area as an 'up and coming' source of inexpensive mill space in western Massachusetts. However, it is equally likely that the first of these two mills ready for occupancy will absorb the market demand projected for such space over the next 3-5 years.

Property Description

The Strathmore Mill complex is located at 20 Canal Road and consists of 11 brick mill buildings, ranging in height from 2 to 4 stories and comprising approximately 245,000 gross square feet, on a 2.85-acres site between the Connecticut River and a hydroelectric power canal in the Turners Falls village of Montague, Massachusetts. As described in the Town's "Fact Sheet," the property is contiguous with the Esleeck Manufacturing Company, an active paper mill employing approximately 100 workers; and, adjoining an inactive coal-fired cogeneration facility owned by Montague Energy LLC.[3] The assessed value of Strathmore Mill property is $916,800 (Fiscal Year 2005); land value is $146,500, building value is $750,000, and yard items (loading dock, elevators, tanks) is $20,200. The FY 2004 tax rate was $24.09 for commercial/industrial property; there is no record of Personal Property Tax payment; and, $84,059 is owed in real estate taxes (20003-2005) for the Strathmore Mill property.[4] A more detailed description of this property in terms of potential reuse and redevelopment (building form, spatial organization, usable (rentable) spaces, system conditions, etc.) is contained in other sections of this report.

The Strathmore Mill is currently under-utilized (Western Properties paper recycling operations occupy less than 10% of the available space). However, before International Paper sold the property, there were reportedly more than 30 tenants leasing 50,000-60,000 square feet of space. These businesses included manufacturers, professional services, artists, artisans, new and established industries including Spray Research company, the nationally known Thomas & Thomas bamboo fly-fishing rod manufacturer, The Holbeck Group exhibit fabricators, an insurance agency, an internet researcher, an R&D firm, and a recycling company. Rents ranged from $2.00 to $3.50 per sq. ft. with heat included. During this period, existing roadways (Canal Road and tunnel), loading docks, access and rights-of-way were considered adequate for the diverse industrial, commercial and creative arts businesses operating at the mill.

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[1] FXM Associates interview with S. Oglesby, Higgenbothamm Auctioneers International (May 2005).
[2] FXM Associates interview with Town of Erving Assessor (April 2005).
[3] "The Former Strathmore Paper Complex" Town of Montague Planning and Conservation Department (February 2005).
[4] FXM Associates interviews with Town of Montague Assessor (April 2005), and Tax Collector (May 2005).

Reportedly, the majority of business owners, customers and employees typically walked to Strathmore Mill, using the former footbridge. Some of these former business tenants are still operating in Turners Falls, and a few expressed an interest in returning, if rents were less than $3.00 sq. ft. and if there were effective property management. This recent occupancy is evident in several areas within the buildings that have finished construction, interior walls and other leasehold improvements. The extent to which Strathmore Mill buildings could be repaired or upgraded with minimal expenditures to meet full code requirements for industrial and commercial uses as well as potential residential uses is addressed elsewhere in the report. Construction costs are a key factor in determining feasibility for Town purchase and private investor interest.

Strathmore Mill Attributes

- The village of Turners Falls is conveniently located along the Mohawk Trail (Route 2), with a signalized intersection facilitating direct access to downtown over a scenic bridge crossing the Connecticut River, with a view of the Strathmore Mill complex and hydroelectric power canal.

- The Strathmore Mill site has a keen 'sense of place' that is distinctive; its separation from and proximity to downtown Turners Falls is an unique feature that can be enhanced by a gateway entrance directly to Building # 1 from the reconstructed footbridge, and a possible connection between Discovery Center and the hydro-power plant at the other end of the site.

- Strathmore Mill buildings are generally in good condition compared with many similar unused or under-utilized mill complexes. There are no signs of serious leaks, water or weather damage; most floors are wide-open spaces with ceilings about 14 ft. high; windows are large '12 over 12' panes and mostly intact; there are multiple entrances, elevators, stairways and loading docks.

- Just five years ago, more than 30 manufacturing, commercial and creative arts businesses and entrepreneurs leased about 50,000 sq. ft. of tenant-improved space in Strathmore Mill. During that period, there was sufficient suitable space in 3-4 buildings and adequate provisions for access, truck circulation, shipping and deliveries. Site and building conditions were essentially the same as current site and building conditions; however, the canal footbridge was functional.

- Since 1899, Strathmore Artist Papers have been known as one of the highest quality art papers used by many leading artists around the world and distinguished by the symbol of the thistle.[5] This longstanding relationship to art and nature could enhance the appeal of Strathmore Mill for prospective tenants involved in creative industries and businesses; complement the art-nature-industry theme being promoted through the downtown 'open studios' events; or enhance plans for more museum facilities in Turners Falls.

- The Phase I Environmental Site Assessment prepared by Tighe & Bond determined no need for remediation under the Massachusetts Contingency Plan. The Phase II Environmental Building Assessment also prepared by Tighe & Bond, identified a significant number of Asbestos issues and hazardous materials throughout the mill buildings. These materials should be removed as necessary from the Mill prior to demolition or renovation.

- There are a number of cultural and educational institutions in Montague and the region that may be interested in leasing inexpensive warehouse space for storing or informal exhibitions of their mission, collections, materials, etc.

[5] Horace Moses was so enthralled with the beauty of thistle in full bloom while on a visit to the Valley of Strathmore in Scotland, he used the name and the thistle as a symbol of high quality art and printing papers. The brand name began appearing on fine art papers in 1899, and remains a marketing tool, "For lasting works of art, Strathmore is the artist's choice." www.strathmoreartist.com

Reuse Options Considered

The former Strathmore Paper Mill is located in an Historic/Industrial Zone[6] where permitted uses are: business or professional offices; retail sales and services' manufacturing, manufacturing, processing or research; bulk storage, warehousing, or distribution; craft workshop or light assembly shop; and uses customarily accessory to those referenced. Uses allowed by Special Permit include: hotel: residential uses as secondary or accessory to a primary permitted use; public utility; uses that involve construction, alteration, or change of use of more than 10,000 square feet of floor area; and demolition of an existing structure.[7] The Town's request for a pre-development feasibility study of Strathmore Mill redevelopment identified several reuse options to be evaluated by the consultant team, including creative arts, industrial, commercial, educational, governmental, institutional/non-profit, and "a possible residential component if needed to make the project feasible."[8]

The consultant team determined early in the study that viability of any Strathmore Mill reuse would be constrained by site access, circulation, and abutting property interests. Resumed occupancy and redevelopment is dependent upon timely completion of: (1) reconstruction of upgraded footbridge; (2) provision of nearby off-site parking (30- 50 vehicles), and (3) amicable resolution of property access, site and truck circulation, and use of loading docks. These infrastructure and property use improvements are the essential first step to accomplishing sustainable redevelopment and attracting private investment in Strathmore Mill that will be supportive of Montague's economic development goals and Turners Falls' downtown revitalization plans. This effort will require continuing public sector leadership to facilitate and expedite planning and implementation of these prerequisites, building on the public-private partnerships and initiatives underway in Turners Falls.

Local and Regional Market Profile

This section of the feasibility study presents salient conditions, factors, and trends at the local and regional levels that could affect town objectives for strengthening downtown commercial and cultural activities, as well as an increasingly prominent and diverse creative arts community. The market overview is intended to identify opportunities, constraints, and other considerations influencing the viability of public or private acquisition and reuse of the Strathmore Mill property.

Demographic Characteristics

The Upper Pioneer Valley and Northern Tier are generally rural regions with several more densely populated activity centers including, Montague and Greenfield. Since experiencing a 9.3% growth rate from 1980 to1990, the Franklin County region's population grew only 0.9% to 119,238 from 1990-2000, less than the Massachusetts population increase of 5.5% and significantly less than the US overall growth rate of 13.2%.[9] Montague's population increased to 8,489 residents in 2000.[10] Population trends in Montague reflect overall state and national trends, including an increase in the proportion of baby-boomers (aged 45-64) and residents over 75 years old, during 1990-2000; the number of young adults (19-44) decreased during the same period.[11] In relation to residential real estate development, this report also notes that there is a population trend to decreasing household size due to the lower number of children per family and increases in single-person households over the past few decades.

Other demographic features and socio-economic characteristics of the greater Franklin County CEDS region (Franklin County plus Athol, Amherst, and Phillipston), that are potentially germane to future Strathmore Mill redevelopment include:

[6] Montague Zoning Ordinance Section 5.2.12 HI (Montague Planning and Conservation Department).
[7] Ibid.
[8] Strathmore Mill Request for Proposals, Town of Montague (February 2005).
[9] Greater Franklin County Comprehensive Economic Development Strategy, Draft 2005 Plan.
[10] Ibid .
[11] 2000 US Census Data.

- One-third of the population lives in small, rural communities (less than 5,000 people);
- Greenfield was one of only two communities to lose population in the past 10 years;
- Colleges significantly influence population distribution in the region; removing Amherst reduces the percentage of 19-24 year olds in the total population from about 19% to 8%;
- Presence of large population under 25 years old is considered a targeted consumer pool, as well as a large labor force for part-time and full-time employment;
- The number of older workers (45-64 years old) increased significantly, reflecting state and national population patterns of aging 'Baby Boomers;"
- Residents have lower per capita income ($20,672) than the state ($25,952) or national averages;
- Franklin County residents' median household income ($40,768) was lower than CEDS region median household income ($41,944) or state ($50,502); and,
- There is a highly educated workforce in the CEDS region, related to the 19 public and private higher education institutions located in western Massachusetts.

Montague and Turners Falls

The town of Montague includes slightly more than 30 square miles; it is mostly rural with five distinct villages;[12] the Village of Turners Falls is the largest as well as the government center. The town is within a 15-20-minute drive of downtown Greenfield, Shelburne Falls and Northfield; and within a 30 to 40-minute drive to Amherst, Northampton, Holyoke, Fitchburg, or, Brattleboro, Vermont, and Keene, New Hampshire. Turners Falls has a rich cultural heritage dating back more than 10,000 years when Native Americans lived where Turners Falls-Gill-Greenfield are now, when the Mohawk Trail was a primary trade route to the Atlantic and British Columbia, and tribes from all over the northeast gathered in this sacred area where the falls were mighty and the river flowed free.[13] Montague still has beautiful scenery, and the bridge over the Connecticut River provides access from Route 2 (signalized intersection) and nearby Interstate 91 to Avenue A in downtown Turners Falls.

The Montague Economic Development Plan identifies challenges confronting the town's tax base and advocates increasing the town's tax base through retention, growth and recruitment of businesses in designated target areas.[14] Unemployment, underemployment and poverty are described as persistent problems in Montague. Creating new employment opportunities for Montague residents is also critical to improving the quality of life in the community.[15] The plan identifies redevelopment of Strathmore Mill for primarily industrial and/or commercial uses, and infrastructure improvement "needed to retain existing businesses and recruit new ones."[16] It also advocates economic development strategies that would nurture and encourage entrepreneurship and self-employment as important sources of economic activity in Montague.

The Creative Economy or Creative Cluster is presented in the Turners Falls Targeted Economic Development study as one framework for advancing local economic development more effectively.[17] In economic development terms, a cluster "is a concentrated group of interrelated companies and individuals with similar product lines, shared markets, and common resource needs."[18] The New England Council, a regional business organization and a partnership of arts organizations, defines the Creative Economy as comprising these three primary elements:

- The *creative cluster* including businesses, industries, and organizations;
- The *creative workforce* including individuals with creative occupations, who may or may not be employed by a creative cluster business; and,
- The *creative community,* a geographic area with a high concentration of creative businesses, workers, non-profit organizations, etc.[19]

Over the past decade, a diverse and growing creative arts community in Montague has been working in concert with cultural and educational organizations and public officials to transform Turners Falls into an attractive, vibrant and profitable venue for creative endeavors and enterprises. Formally and informally, a series of collaborative ventures between institutional/non-profit organizations, private entities and the public sector have redeveloped key historic buildings in downtown Turners Falls, built/expanded the Great Falls Discovery Center (Connecticut River watershed interpretive center), completed streetscape and storefront façade improvements, and, construction of Montague's segment of the Canalside Rail Trail bicycle path, which is also part of the 20-mile Franklin County bikeway system. The Hallmark Institute of Contemporary Photography Museum opened recently , and plans are under way to develop a cultural heritage interpretive center on the site of the Great Falls Discovery Center across the canal from the Strathmore.

Concurrently, local cultural, educational, environmental organizations and businesses have joined to sponsor events promoting themes of art, nature and industry through open studios, entertainment, and exhibitions. A good example is the "Arts & Eats," "Arts & Hearts" and "Arts & Blooms" series held in December 2004, February 2005, and May 2005, respectively. This endeavor has been organized by a few downtown artists and merchants; it regularly brings 200-300 people to the participating studios, restaurants, stores, and cultural sites at each event. Hospitality industry representatives regard such open studio events as a prime tourist attraction, especially when there are also cultural heritage sites in the local area. New England Stoneworks' planned installation of a major sculpture, The Cathedral Project, will help to promote downtown Turners Falls as a prime public art venue.

A recent Turners Falls economic development study highlights successful accomplishments of creative economy initiatives undertaken in Shelburne Falls that are similar to those underway in Turners Falls. It also recommends five implementation strategies, two of which have specific relevance for proposed Strathmore Mill reuse/redevelopment, over the next 3-5 years and beyond.

- Partnering with Higher Education – to encourage and enhance the economic development possibilities that colleges, universities and trade institutes bring to an area.
- Promoting Alternative Work Environments – need for incubator space – affordable, small offices and large studios for start-up, as well as expanding businesses; zoning to accommodate live-work space and home-based businesses.

Franklin County Region

In describing the importance of manufacturing to the Franklin County regional economy, the 2003 Comprehensive Economic Development Strategy (CEDS) Annual Report states, "The CEDS region greatly depends on the sustainability of the manufacturing sector."[20] Manufacturing is the largest employment sector for the region; from 1998 to 2001, the total number of Franklin County employees grew by 11% and manufacturing employees grew by 37%, while the number of manufacturing jobs in the state and nation continued to decline 5% and 6%, respectively.[21] Manufacturing payroll represents over a third of the total annual payroll in Franklin County, while providing higher wages than other large employment sectors. The annual manufacturing payroll per employee was $30,166.[22] The

[12] Montague City, Turners Falls, Millers Falls, Montague Center, and Lake Pleasant.
[13] FXM Associates interview with Friends of the Wissatinnewag (April 2005).
[14] Montague Economic Development Plan (June 2004).
[15] Ibid.
[16] Op. Cit.
[17] "Targeted Economic Development in Turners Falls: Implementing Regional Strategies at the Local Level," University of Massachusetts Department of Landscape Architecture and Regional Planning (Fall 2004).
[18] Ibid.
[19] "The Creative Economy Initiative: The Role of Arts and Culture in New England's Economic Competitiveness, New England Council by Mt. Auburn Associates (2000).
[20] Ibid.
[21] Comprehensive Economic Development Strategy 2003 Annual Report, Franklin Regional Council of Governments (June 2003).
[22] Ibid.

report also notes that manufacturing employees in the CEDS region earn less than workers in the state or nation, but suggests that manufacturers may remain in, or be attracted to, the Franklin County region due to lower labor costs.

Turners Falls/Montague is one of the top ten manufacturing employment centers in the region, and is distinguished by its growth and relative stability.[23] Although the village/town does not have the largest number of jobs in the region, from 1997 to 2001, town employment steadily increased from 505 jobs (1997) to 831 jobs (2001) – a 40% increase over five years.[24] The local economy has avoided severe fluctuations afflicting other manufacturing centers in the region (Athol, Deerfield, Greenfield, and Orange), where CEDS reports a steady decline in manufacturing jobs over the past few years. There are six industrial parks in the region, including the Interstate 91 Industrial Park in Greenfield and the Airport Industrial Park in Turners Falls. In 2003, the FRCOG conducted a survey of industrial park tenants to document build-out status and identify trends; the report also notes that 71% of the businesses in the industrial parks had originated in the CEDS region.[25] This survey also revealed that a significant number of new businesses have been started by unemployed manufacturing workers who are catering to specialized niche markets.

Another sector with a higher percentage of employment in the region than in the state or nation is identified as Education Services (excluding Greenfield Community College and regional schools). In an evaluation of the economic "cluster" concept[26] for the federal Economic Development Administration (EDA), the report identifies 'high functioning cluster networks' in the CEDS region. These are relevant to proposed reuse and redevelopment of Strathmore Mill property:

- Arts, Crafts and Creative Cluster (environmental inspiration, quality of life, affordable workspace, lower cost of living)
- Precision and Cutting Tools Manufacturing and Metalwork Cluster (traditional industry, evolution to smaller, more efficient firms with niche markets)
- Private Primary and Secondary Education Cluster (local institutional relationships, tourism economy, and potential contribution to economic profile)
- Tourism & Hospitality (natural, cultural, historic assets, scenic byways, Visitor Center)
- Virtual Office/Home-Based Business Cluster (growth in wide variety of fields, including publishing, arts, and business consultants, enhanced by telecommunications accessibility)

In western Massachusetts, more than 700 hidden tech/virtual companies have affiliated with a "social/business network" being organized throughout New England by A-Z International, with support from Northeast Utilities. [27] Some of the most common business categories represented by these firms include: software/hardware developers, web designers/hosting services, marketing specialists, and management/organizational development consultants. In a 2002 survey conducted by the WMECO pilot study, these Hidden Tech companies reported maintaining business partnerships in 15 states and DC; 30% hired support personnel in 13 US cities, mostly as subcontractors; 25% rented small office space; and 75% favored growing their companies.[28] Currently, members of the Hidden Tech network are compiling a database describing their areas of expertise related to one or more occupation codes. Major skill categories with more than 25 entries from the 215 members reporting as of April 2005 include: arts and related services; book publishing; business development and management; computer application/development; computer/internet/web service; computer/telecom service; education; film/video; marketing/sales; public sector-non-profit; research; and writers/editors/agents.[29] The Zuckerman-Levin report identified Franklin County as a "potential hot spot" of hidden tech workers (overlapping with Berkshire County), and urges town officials to leverage this opportunity for economic development and social capital purposes.

Self-employed workers are also a feature of the Franklin County regional economy with relevance to proposed Strathmore Mill redevelopment. A recent presentation discussed the scope of the 'hidden economy' (self-employed workers) in the Pioneer Valley, "to determine whether such a hidden economy is a significant factor in the region's economic activity."[30] Highlights included: there were approximately 10% (1,351) self-employed workers in the sample of 13,464 workers, and slightly less than 2% (370) were at-home workers. Gender differences are slight among these workers: 50.2% are male, and 49.8% are female; however, 63.5% of self-employed persons working outside the home are male, while 57.8% of at-home workers are female.

Northern Tier Economic Development Initiative

The Northern Tier was created to develop new economic engines and sectors, and to establish a skills training system for low-income and working-class residents in northwestern Massachusetts.[31] The region is a predominantly rural area of 42 towns and cities, with Fitchburg, Leominster, Greenfield, Montague and North Adams among its major activity centers. The town of Montague is the seventh largest town, and the city of Greenfield is the sixth largest. The Greenfield-Montague area is within the central sub-region of the Northern Tier.

Northern Tier strategic investment recommendations focus on the challenges, strengths and trends for four sectors of the region's economic base: Creative Economy, Ecotourism and Recreation, Small Growth-oriented Manufacturing, and Renewable and Alternative Energy. These recommendations offer another framework for evaluating proposed redevelopment of Strathmore Mill. These elements have specific potential connections:

- Creative Cluster – promote artisan and crafts-related business development; establish the Northern Tier as a Center of Excellence in cultural education and training.[32]
- Ecotourism – broaden the region's ecotourism infrastructure; and,
- Manufacturing – Capitalize on the region's manufacturing capabilities with an interest in renewable energy.[33]

This report identifies a "new creative trail' within the Northern Tier along the Route 2 corridor that is comprised of four communities with large concentrations of artists, galleries, and creative businesses: North Adams, Shelburne Falls, Turners Falls, and Williamstown.[34] There is also reference to the Franklin County Bikeway along the Northeast Utilities power canal (Canalside Rail Trail) from Utility Park in Turners Falls to Montague City Road in Montague as a key component of the Northern Tier ecotourism sector. The manufacturing base of the Northern Tier region is characterized by a preponderance of smaller firms (fewer than 100 employees), many locally owned firms (70% in Franklin County), primarily serving regional and national markets.[35]

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[23] CEDS Region Top Ten manufacturing employment centers: Amherst, Athol, Belchertown, Charlemont, Deerfield, Gill, Greenfield, Northfield, Orange, Shelburne Falls Village, Sunderland, Turners Falls/Montague.
[24] CEDS, Massachusetts Department of Employment and Training ES-202 Series Data.
[25] "Inventory & Analysis of Industrial Park Properties in Franklin County," FRCOG (September 2003).
[26] "Clusters are groups of businesses and institutions with some similarity in industry, operation, or technology; are generally located in the same geographic area; and, may be part of the same supply chain or even direct competitors." (CEDS Report).
[27] "Tracking and Leveraging the Hidden Tech Population to Promote Economic Development and Build Social Capital," Amy Zuckerman and Mike Levin, (2003).
[28] Ibid ("HIDDEN TECH AND THE VALLEY: At the Cutting Edge of the Global Internet Economy," 2002.
[29] www.hidden-tech.net/members/skills/
[30] "The Pioneer Valley's Hidden Economy: An Assessment of Self-Employed and At-Home Workers," Paul N. Foster, Pioneer Valley Planning Commission January 2005.
[31] "Northern Tier Strategic Investment Initiatives," Mt. Auburn Associates (October 2004).
[32] Ibid "The New England Creative Cluster Product Lines: Applied Arts – graphic design, architecture, industrial design, crafts, advertising, interior design, photography, and web design; Performing Arts – music, theater, dance: Literary Arts – writing, publishing, libraries, and archives; Media – broadcast media, cable, radio, television, music, film production; Heritage – museums, historic sites; Advocacy and Support – education, cultural councils, funders.
[33] Ibid.
[34] Mt. Auburn Associates *op. cit.*.
[35] Ibid.

Mill Building Space Supply and Demand

FXM Associates contacted 12 owners/developers of rehabilitated industrial or mill buildings, interviewed 7 of them, visited 4 mill complexes, and reviewed reports, case studies, and other available documents form local and regional economic development officials, as well as private institutions, associations and non-profit organizations. Information sufficient for comparative purposes was obtained from research materials or interviews with mill representatives for 17 mill reuse/redevelopment projects in Massachusetts: North Adams (2), Easthampton (6), Northampton (1), Holyoke (1), Boston (4), Vermont (1), and Rhode Island (2). These mills ranged in size from 36,000 square feet to 600,000 square feet; most have historic significance and are multi-building complexes, located near downtowns/central business districts of older industrial cities in western Massachusetts – including five that are along the Connecticut River and adjacent to canals and bicycle paths.

- There is more than 2 million square feet of rehabilitated mill building space in the Northampton, Easthampton and Holyoke area, with an additional 700,000 square in various phases of planning and redevelopment. Existing mill properties rent, lease and sell space ranging in size from 600 square feet to 40,000 square feet at an average of $2.50-$4.00 sq. ft., generally heated, for manufacturing, business, and other commercial uses including artist and artisan studios.

- Reuse/redeveloped mill building vacancy rates vary by type of use/occupancy and specific mill characteristics. Small to medium mill projects (less than 150,000 square feet) with one primary use or a few multiple uses have mostly achieved high occupancy rates (100% to 85% range); some have waiting lists, a few maintain websites but none actively advertise their property.

- Large mill complexes (200,000+ square feet) with several types of uses are often redeveloped over long periods of time, include residential uses, and maintain active promotional campaigns; none of the mixed-used mill buildings reported any with residential vacancies. Medium and large mill complexes that have been developed in a single phase tend to be redeveloped for mainly residential space, including artist live-work space, and rental and condo loft apartments.

- Mill owner/developers with on-site and nearby parking facilities have incorporated more retail and service uses, usually on ground floor with street frontage, or have facilitated expansion of tenant businesses into other uses (e.g. a food service company operates a café or restaurant, caters on-site events, offers cooking classes) or have been able to attract a major commercial, office or educational use to locate in the complex.

- Larger mill reuse/redevelopment projects (70,000+ square feet) are often guided by a long-range vision, are built-out in phases over several years, often begin by leasing undeveloped space for micro-manufacturers, warehouse/shipping, artist/artisan studios, and other space-intensive uses requiring inexpensive rents and seeking undeveloped space. Initial occupants are mostly small industries, business, and entrepreneurs, and many tenants are creative arts professionals.

- Mill owner/developers recognize that residential use is a key element for redevelopment of larger mill complexes but are not an essential element for medium mills (less than 100,000 sq. ft.). Owners/developers of both large and small mill properties with mixed-uses or primarily residential uses have targeted their housing as live-work space to artists and artisans, home-based entrepreneurs, and others seeking an expansive, affordable environment. These mills promote the opportunity to create your own space, or for higher-end markets, offer to design and build the finished product. Most mill building live-work space or lofts (apartments with business uses allowed and regulated by local zoning and building codes) typically have 900 to 2,500 square feet of heated space, with ceiling heights of 14-18 feet, plenty of natural light, fiber optic connection, and parking; kitchens and bathrooms are usually provided, and air conditioning is usually an additional, optional expense.

- Larger mixed-use mill conversions, and smaller buildings with affordable residential space, have leveraged various kinds of public funding such as historic building rehabilitation and low-income housing tax credits. Some mills that have been reused for commercial or industrial tenants, obtain property tax relief or competitive historic tax credits. Many mill projects benefit from public sector funding for associated parking, roadway, streetscape or other public infrastructure improvements, rent subsidies, brownfield grants or loans, etc.

- Redeveloped mills with commercial, industrial and creative arts uses offer fiber optic, high-speed internet connections. Although few of these businesses are classified a ‘high tech,’ most advertise, display and sell their products and services electronically.

Summary of Market Conditions and Trends

There are market factors and patterns generally supportive of a phased redevelopment program that would market Strathmore Mill to micro-manufacturers, small businesses, entrepreneurs, artists, artisans and others involved in creative arts and industries.

- The past decade has seen steady growth of the manufacturing sector in Franklin County, even as the number of manufacturing jobs at the state and national levels continue to decline; the number of new and expanding small businesses also continues to increase, and there are increasing numbers of businesses and individuals working in the creative arts economy both within New England and western Massachusetts.

- There are institutional and community-based organizations providing extensive educational and technical services to small businesses, entrepreneurs and artists to hone their marketing and profitability skills. Activities and ‘focus groups’ organized by the Western Massachusetts Art Alliance (WMAA), A-Z International’s Hidden Tech workshops, as well as the Pioneer Valley and Franklin County Community Development Corporations (CDCs) generate a modest but steady source of potential tenants for inexpensive, undeveloped space. These start-up and expanding businesses usually find inexpensive space in formal and informal business incubators, converted mill buildings, and sometimes, in more conventionally commercial space at local industrial parks.

- In nearby Greenfield, there is approximately 75,000 sq. ft. of manufacturing and office business incubator space accommodating 20 to 25 businesses with more than 50 employees. Rents range from prevailing market rates of $3.00-$5.00 sq. ft, although the Franklin County CDC Venture Center tenants pay below-market rents for 4 of their 5 year maximum occupancy. Vacancy rates are estimated to average 12% annually, although the Venture Center is typically fully occupied. The CDC also conducts several business training workshops each year for new and expanding businesses, entrepreneurs, and home-based businesses; 25-30 participants attend each workshop, and typically 4-6 owners are seeking space for new or expanding businesses.

- The Turners Falls rental housing market has an established and slightly increasing demand for studio and 2 bedroom apartments, renting at $400-$1,200 monthly. Students from area schools, including the Hallmark Institute of Photography, UMass and Greenfield Community College, reside in many investor-owned, multi-family buildings in downtown Turners Falls.

- Although there is a general shortage of affordable hosing throughout the Franklin County region, mill developers have found it costly to comply with state building codes for new residential uses. Very few mill buildings have space layouts that are easily adaptable to conventional residential space organization. Building new affordable live-work/loft space in rehabilitated mill buildings usually involves various public subsidies for financing, construction, infrastructure or other costs; mill owners/developers view the subsidy process as time-consuming and, therefore, costly.

FXM Associates analyzed potential for additional retail activity within 10, 20, and 30 minutes drive-times of downtown Turners Falls. Data for the retail market analysis came from Claritas, Inc. (a proprietary data source) and

are based on consumer income and expenditure information.[36] By comparing what consumers spend in total with the amounts spent within the designated area, it is possible to estimate the 'leakage' of retail spending from the area to retailers outside of the area. This analysis of demographic and business sales data for Franklin County, Turners Falls, and downtown Turners Falls indicates that there is insufficient retail sales leakage to include retail and hospitality uses in the first phases of Strathmore Mill redevelopment. Suggested restaurants, conference/banquet facilities, specialty retail merchants, boutique theaters, etc. would require more parking than is projected to be available during the first 3-5 years of mil redevelopment. If retail demand increases, town officials and business organization should encourage prospective retailers to locate in empty or under-utilized storefront and commercial space in downtown Turners Falls. The analysis indicates:

- Consumers within 10, 20 and 30 minutes drive of downtown Turners Falls spend virtually all of their retail dollars within the area, except for the retail categories of food stores, general merchandise, and apparel/accessory stores;
- Area retailers attract additional spending from outside the area in all categories except food stores, general merchandise, and apparel/.accessory stores.
- There is little potential for increased retail activity within a 20 minute drive-time of downtown Turners Falls; if the trade area is extended to 30 minutes, only food stores and apparel/accessory stores offer any potential for capturing additional sales.

Reuse Concept and Redevelopment Strategy

FXM Associates used these findings to generate a market-driven development program – that is, one that bases income and absorption on space needs identified in the market and at prices that the market now responds to, or would be expected to over the next 3-5 years. The operative assumptions in this development program are that the public infrastructure improvements (reconstructed footbridge, parking, truck access) will be completed prior to occupancy, and the property title, access and easement issues are resolved satisfactorily. On that basis, the town of Montague could approach Strathmore Mill redevelopment as a public-private partnership to advance economic development goals for new and expanded business activity, additional living-wage employment opportunities, and increased local tax revenue. The scope and duration of public sector involvement could be, minimally, the time required to complete basic infrastructure improvements, estimated as an 18-24-month period. A more progressive town role might obtain and retain public ownership of the Strathmore Mill property, for a limited or long-term period, to sell or lease the buildings in whole or as condominiums, or, to enter into one or more ground leases with a developer. The latter approach could expedite reuse of Strathmore Mill, facilitate public infrastructure funding, and provide the town with a modest stream of income from future ground-lease payments, without compromising financing options for private developers or owners.

Current and projected market trends indicate that there is existing business demand for inexpensive, undeveloped space (without interior walls, finishes) from modest but steady growth of new and expanding small businesses, and self-employed workers. However, the extent and depth of that market is not well researched and documented because it is not easily identifiable in conventional secondary source data. Primary research is ongoing and has provided some insights, as previously discussed, on characteristics of the market but has given little indication to date of quantifiable market size and depth. There is a significant amount of vacant and 'pipeline' mill space within a 30-minute drive of Turners Falls. This market could be characterized as thin; supply either is now or soon will be chasing demand. Therefore, timing will be critical and low price (rent) will be an absolutely essential marketing strategy for Strathmore Mill redevelopment. There is somewhat less certainty regarding potential market demand for introducing residential uses at Strathmore Mill. Rental demand for affordable housing in redeveloped mill buildings is reportedly strong, as is rental demand within Franklin County, Greenfield and downtown Turners Falls. Rehabilitating mill space for residential use (even unfinished live-work space or loft apartments) requires significantly more time and capital than for manufacturing/commercial uses, and renovated, vacant residential mill space is not easily converted to other income-producing uses. According to real estate brokers serving the Franklin County region, market rents in Turners Falls range from $500 to $1,000 per month without utilities, and students comprise a large number of downtown property renters. Recent real estate activity in Montague has been steady, with property priced at or below average costs for Franklin County single-family homes and condominiums.

2004 –2005 Montague Residential Real Estate Activity

	All of 2004		Jan-Mar 2004		Jan-Mar 2005	
	Number	Median Price	Number	Median Price	Number	Median Price
Single-Family	89	$ 155,999	18	$ 163,900	14	$ 136,200
Condominiums	9	$ 135,000	3	$ 95,000	1	N/A
All Sales (*)	178	$ 149,335	21	$ 157,500	15	$ 140,000

Source: The Warren Group (2005) (*) Includes multi-family dwellings

At the prices shown above for detached single family homes, and even lower prices for condominiums, it is easy to understand why condominiums in a converted mill building – whatever amenities or "panache" might be afforded – would have to be made available at an extremely low cost to compete under current market conditions. Similarly, the low prices for homeownership cap achievable rents for all but transient market segments, which, as previously noted, are also have options for inexpensive rents in duplex units as well as apartment complexes.

Development Phasing and Program Elements

Research shows that most unsuccessful mill building conversions fail because too much money was invested too soon, more capital was invested in build-out or finishes than market rents could support; and build-out went beyond market capacity to absorb available space. For those reasons, FXM Associates took a fairly conservative approach to formulating a reuse program; the main criterion being financial feasibility without operating subsidy. This development program assumes that a prudent developer would undertake Strathmore Mill redevelopment in phases, beginning with the 'low-price, low-end' product (inexpensive, undeveloped mill space), with build-out occurring within 7-10 years as the market matures and prices increase. Later phases might also include residential or commercial condominiums.

During the initial 3-5 years, one or two phases of development could be undertaken to reuse approximately 70,000 square feet of unfinished, code-compliant space for a variety of business, industrial and studio uses; and, 40,000 square feet of unfinished, code-compliant residential space for live-work space or loft apartments as outlined in the following table. Leasing and occupancy of the manufacturing/business/studio space could occur as soon as there is a functional footbridge, code repairs are completed, and 30-40 designated parking spaces are available for tenant use. Residential occupancy may require 20 additional parking spaces, more extensive interior environmental clean-up or building code-related renovations. The remaining buildings (175,000-135,000 sq. ft.) would be 'mothballed' (secured from weather, deterioration and vandalism) until market demand warranted reuse/redevelopment, or until selective building demolition took place to create on-site parking.

Future Strathmore Mill development could expand manufacturing, commercial and creative arts uses, add specialty retail or office uses, incorporate educational and cultural activities (classrooms, exhibits, events, conferences, International Student Artists live-work program, or increase residential uses (live-work, loft apartments). In this regard, there are compelling reasons to foster a public-private partnership for Strathmore Mill reuse/redevelopment that involves the property abutters, local and regional cultural and educational institutions, Montague residents and businesses associations.

[36] Consumer income and expenditure data indicate how much consumers in defined areas spend in total on various types of rental activity. The information on current retail sales uses Claritas, Inc. 2004 estimates of the existing retail sales volumes for businesses in the designated area.

Strathmore Mill Market-driven Development Program

	Use & Space	Description	Rent Range	Public Sector
Pre-Occupancy		Building 'triage; stabilization C 21E clean-up Code, utility repairs, systems upgrade Fiber optic		parking spaces; new footbridge access, roadway improvements fiber optic
Phase IA	62,000 sf industrial, commercial	• 5 studios @ 800-2,000 sf (7,500 sf) • 15-20 businesses @ 500-10,000 sf (40,000 sf) • business 'walk-in' center 1,500 sf • warehouse, archive storage (10,000 sf) • exhibition (3,000 sf)	• $2-$5.00 sf • $3-$6.00 sf • $1,000/mo • $1.50 sf • $2.00 sf	25-30 parking spaces min. to attract tenants zoning requires 1 parking space per employee
Phase IB	40,000 sf residential	• 20 Live-Work, Lofts @ 1,200-2,500 sf	• $800-$1,200/mo	20 parking spaces min to attract tenants zoning requires 30 parking spaces
Subsequent Phases	Expand industrial, commercial, office, live-work space Add education, museum, galleries conference spaces Hydropower facility exhibit, ecotourism	Selective building demolition		Selective building demolition Additional parking

Development Pro Forma

A preliminary operating budget, showing projected income and operating expenses and net income available for debt service (construction costs and property acquisition),was prepared by Ajax International Partners based on the market assessment and market-driven reuse program to illustrate the overall financial feasibility of redeveloping Strathmore Mill. This *pro forma* assumes completion of the public infrastructure improvements prior to building occupancy and that, during this pre-development phase, the developer would be able to undertake site and building environmental remediation, code compliance construction, and other requisite repairs or upgrades. The project is expected to reach stabilized occupancy in the third year, with an average occupancy rate thereafter of 80% for the residential uses and 90% for commercial uses.

The preliminary development *pro forma* is also used to determine the amount of supportable debt (construction/rehabilitation loan) that can be leveraged from the project income (rent) remaining after operating expenses are paid. In this market-driven scenario, the estimated rental income generated from approximately 100,000 square feet of tenanted space would support about $2 million of debt for property acquisition and construction costs with a 30-year, 7.5% fixed-rate mortgage. This computes to about $20/sf of supportable construction costs (assuming zero cost for building acquisition) for the tenanted space only (100,000sf), not including overall costs to stabilize unused portions of the building in the first phase of development.

Phase I Development Proforma

Operating Budget				rent/sq ft	
Income		Units	TotalSf	Avg Rent	
Artist Studio		5	7,500	$ 2.50	$ 18,750
Industrial/Comm		15	40,000	$ 4.50	$ 180,000
Business Ctr		1	1,500	$ 1,000	$ 12,000
Warehouse Archives		1	10,000	$ 1.50	$ 15,000
Exhibition		1	3,000	$ 2	$ 6,000
Live/Work Res		20	40,000	$ 1,000	$ 240,000
Vacancy - Comm/Artist Studio		10.0%			$ (23,175)
Vacancy - Live/Work		20.0%			$ (48,000)
Net Income					$ 400,575
Expenses					
Management & Administration		5.0%		Net Rent	$ 20,029
RE/Sewer Taxes		$	19.03	1000 value	**$ 22,000**
	Insurance		500	Unit	$ 30,000
	Salaries	$	30,000	Each	$ 18,000
	Elevator	$	3,000	Each	$ 6,000
Cleaning Supplies		$	250	Unit	$ 4,000
Heating (Common)		$	100	Unit	$ 9,000
Electrical (Common)		$	35	Room	$ 15,000
Snow Removal		$	-	Tenant	$ 5,000
	Painting	$	35	Room	$ 4,200
Repairs/Replace		$	150	DU	$ 35,000
Accounting					$ 500
	Legal				$ 5,000
Fire Protection		$	-		$ 4,000
	Misc.				$ 5,000
CapitalReserve		2.0%		Net Inc	$ 8,012
					$ -
		as % of inc		per unit	
TotalExpenses		48%		$ -	$ 190,740
Net Available for Debt Service					$ 209,835
Debt Service Coverage Ratio				1.25	$ 167,868
Supportable Debt	7.50%	Int Rate	30	Years	$ 2,000,671

Source: Ajax Partners International and FXM Associates

Economic Impact Overview

The Strathmore Mill property is physically part of downtown Turners Falls, albeit separated by the hydroelectric power canal; and historically it has been a functional part of the downtown economy. A tremendous amount of human and financial resources is being invested in the future of downtown Turners Falls and, therein, the economic vitality of Montague and Franklin County. In this context, a public-private redevelopment approach for the Strathmore Mill property would reinforce significant investments already made and committed to downtown Turners Falls, as well as the network of other historic mill towns and canals along the Connecticut River in western Massachusetts.

An economic impact analysis would provide a comparative basis for evaluating possible future uses at Strathmore Mill in the context of public benefits and municipal costs. At this point in the planning process, there is insufficient information regarding critical costs for building stabilization, site and building environmental remediation, Phase I building repairs, and infrastructure improvements. Similarly, there is inadequate information available to evaluate prospective fiscal impacts of future Strathmore Mill property uses that could affect town costs for police, fire, emergency services, or general government administrative expenditures. The preliminary development vision for Strathmore Mill is conceptual, includes potential demolition of some buildings for on-site parking (reducing the amount of rentable space), and proposes uses that need more detailed analysis of space, market and financial requirements. However, based on Strathmore Mill as-of-right zoning and the Phase I market-driven program for industrial, commercial, and studio space, FXM Associates examined a few elements of probable economic and fiscal impacts associated with resumed manufacturing, commercial, and creative arts uses of approximately 70,000sf in the Strathmore Mill property.

- Based on standards of square footage per employee for the types of uses considered and prevailing wages in the regional economy, accommodating industrial, commercial, and creative arts uses at the former Strathmore Mill (Phase I development program) could result in 80 to 100 jobs generating $2.4 to $3 million in proprietor and wage income. Roughly half of the earned income, or $1.2 to $1.5 million, would be expected to be spent each year on retail purchases within the local area economy. Business sales estimated in the range of $14-17 million dollars annually would also include expenditures for supplies and services from other local area businesses. For the Franklin County region overall, total direct, indirect, and induced effects would be roughly estimated at over $20 million in business sales, about 130 jobs, and $4 million in household income annually. How much of this economic activity will be net new to the region depends on whether the tenants are expanding existing operations previously conducted elsewhere in the region, are new arrivals to Franklin County, or have been retained in the area rather than move elsewhere.

- Phase I industrial/commercial uses would be similar to previous and allowable occupancy of Strathmore Mill buildings, with no expectation for increased levels of municipal services. Phase I proposes a modest amount of new residential uses at Strathmore Mill which are also not expected to require additional municipal service capacity. The unfinished, industrial live-work spaces or loft apartments would be marketed to professionals, students, touring artists, and others who are typically 20-40 years old and without children, or older empty-nesters. If these tenants are new to the region, their expenditures for local goods and services (estimated at $500,000 to 700,000 per year) would also represent net new economic activity in Franklin County.

This overview of possible fiscal impact excludes public funding of property acquisition costs and source(s) of funding for the essential pre-development infrastructure improvements (canal footbridge, off-site parking, roadways and access). These items will be required whether Strathmore Mill is redeveloped by a private entity or a public-private partnership.

Next Steps

- Follow up with mill owners/developers and non-profit organizations interviewed in the course of the study who expressed interest in possible redevelopment of Strathmore Mill.

- Evaluate the Historical/Industrial zoning ordinance to determine appropriate enhancement or modification necessary to ensure that Strathmore Mill reuse/redevelopment is consistent with the Town's economic development goals and Turners Falls downtown revitalization plans.

- Examine Canal Road access, roadway and property easements, rights-of-way in terms of contemporary standards for public safety, emergency access, or site evacuation, particularly in view of public utility uses and facility security; and, implement corrective measures.

- Identify/evaluate state and federal funding resources for planning, design and construction of public infrastructure improvements (footbridge, parking lot, roadways, lighting, streetscape), and other pre-development opportunities such as clean energy technologies '(Green building), Massachusetts Renewal Energy Trust grants, sustainable development initiatives, ecotourism and cultural heritage programs.

- Host Hidden Tech Focus Groups in Montague/Turners Falls, organized by A-Z International to measure more accurately the extent, product preferences, space needs, and price points of home-based businesses and self-employed workers in the Franklin County market area, and to refine the scope and operation of the proposed 'walk-in' business center.

- Join and become an active participant in the Western Massachusetts Art Alliance (WMAA), led and staffed by the University of Massachusetts Fine Arts Center, and solicit interest in Montague studios, exhibit space, live-work space using the WMAA electronic newsletter.

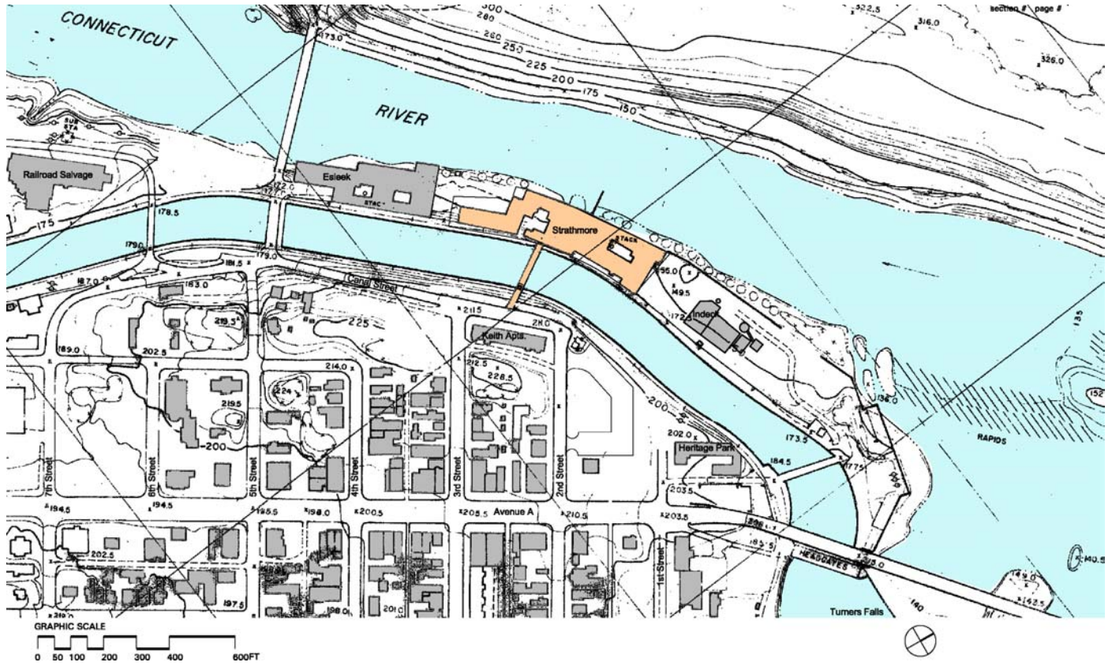
- Collaborate with the Hallmark Institute of Photography Housing Coordinator to conduct a survey of departing and incoming students regarding their potential interest in studio or live-work space at Strathmore Mill.

- Investigate the Franklin-Hampshire Connect program that is working with the Franklin Regional Council of Governments (FRCOG) to improve local access to technologically sophisticated telecommunication sources and infrastructure (2003 CEDS p. 45).

“Heard on the Street”

The process of interviewing many people to prepare this market assessment, offered valuable information, insight and ideas about proposed reuse/redevelopment of Strathmore Mill and perceptions of Turners Falls revitalization efforts. Some comments were optimistic, encouraging; several were cautionary, skeptical; and, all were useful and appreciated. Here are a few samples.

- “Some of us believe underdeveloped space is the reward of low rent; rent must be less than Easthampton, Northampton which have extensive, established art community and economy.”
- ”The Valley is rich in arts of all kinds, but Northampton, Easthampton and Florence are priced out of the market for most artists and artisans that haven’t reached Martha Stewart status.”
- “Turners is not going to compete with Greenfield, which is much bigger, but (it) has been developing its own niche of artists and artisans that seems to be going pretty well.”
- “Cheap space will get filled, and then you have to wait it out until you’re discovered. Turners Falls has a lot of charm, so one can be hopeful, but there’s no telling how long it might take”
- "Turners Falls is perceived as a mill town, working to rebuild its image –Easthampton and Northampton were similarly perceived years ago, and now have robust artist communities.”
- “Turners Falls is sitting on a gem. Native American villages in what is now Turners Falls, Gill and Greenfield date back 10-12,000 years, and the area is very sacred for many reasons.”
- “Don’t waste money on Strathmore, demolish it – it has no parking, is obsolete and has terrible access; put the money at the industrial park where growth is occurring.”
- “Strathmore Mill redevelopment is not an easy problem but it is solvable.”
- “Montague is way up there; unless there’s a draw or existing small businesses in the area, price per square foot will be the attraction.”
- “Downtown Turners has awesome architecture!”
- “Strathmore Mill’s marketing ploy could be “Green” – power at the mill for the mill. Franklin County and the Valley are environmentally friendly; this could attract tenants and state funding.”
- “Haven’t given up on moving my business back to Montague.”
- Businesses around here aren't looking for fancy space or pretty pictures. We want cheap, functional space and, of course, whatever else we can get for free."



Location

The site is located at 20 Canal Road in the Turner Falls section of the Town of Montague, Franklin County, Massachusetts. The RFP states the parcel is 2.85 acres, however, a plan of land prepared for Turners Falls Hydro, LLC states the parcel is 1.89-acres (not including Turners Falls Hydro). The footprint of the mill is 55,723 square feet (not including Turners Falls Hydro) leaving approximately 30,800 square feet of open land arranged in small pockets around the buildings. The mill is situated on an island between the Connecticut River and an active power canal in the Turners Falls National Register Historic District. The opposite bank of the Connecticut River, to the North, is a steeply sloped and undeveloped. The Strathmore mill is flanked on the west by the Esleeck Manufacturing Company, an active paper mill employing approximately 100 workers, and on the east by a coal-fired cogeneration facility constructed in the late 1980s. The Indeck cogeneration facility has been inactive since 1996. North and Northwest portions of the site are within the 100 year flood plane.

Flood of 1936

Building Description

The Strathmore Mill is a handsome, although considerably altered, mill complex on the Connecticut River. The mill was constructed in 1873 for the Keith Paper Company and operated continuously as a paper mill until 1994. During the course of its history the mill has undergone many alterations, and additions. Much of the history is detailed in a study prepared for the Montague Planning Board by Peter Clark. The paper is entitled "A Short Interpretive History of the Impact of Technology on the Manner and Location of Access to the Industrial Lots Laid Out by William P. Crocker, Engineer In 1868 Between Fifth Ave Bridge Over the Connecticut River and the Turners Falls Company Dam."

The property is currently owned by Western Properties, LLC which purchased the site in 2002 from the International Paper Company. Western Recycling occupies a small portion of the western side of the building complex which is used primarily for the warehousing of paper products. The remainder of the buildings is vacant. The mill consists of 11 contiguous buildings that range in height from 4 to 6 stories, totaling approximately 244,500 square feet in area according to the RFP. Our estimate based on plan information provided by the town and limited field measurements by FA+A is that the building may be closer to 263,500 gross square feet (not including Turners Falls Hydro). Based on the plan of land it appears that 1,400 gross square feet of loading dock violates the East property line or the coal-fired cogeneration facility side of the property.

Historic image 1902

Building Condition

Overall the Strathmore Mill is in relatively good condition considering the facility is over 100 years old. Although the building is minimally occupied and is in fair to good condition, it is by no means ready for the uses identified in the market analysis to move-in. Age combined with deferred maintenance and upgrades required to meet current codes suggest a substantial amount of work is required to make the buildings fit for occupancy.

The structures of the buildings are sound, with only localized areas of concern. The building envelope is dated and showing signs of water infiltration. The fire protection system and the fire alarm sytem are functional but do not meet current code. In fact one of the two water lines serving the system is broken which may render the system inoperable. Also of concern is the facility's lack of compliance with the Americans with Disabilities Act. The site is serviced by town water and sewer. Natural Gas can be made available from fifth street. Currently a 10,00 gallon tank supplies fuel for heat.

A Phase II Environmental Site Assessment performed by Tighe & Bond, Inc., found no need for remediation under the Massachusetts Contingency Plan. A hazardous materials survey also performed by Tighe & Bond, Inc. has identified a significant number of Asbestos and hazardous materials throughout the mill buildings. These materials should be removed as necessary from the Mill prior to demolition or renovation.

Vehicular Access

The site is located within ½ mile south of Route 2, and is about a 10 minute drive to Interstate-91. Vehicular access to the mill is through a narrow 10'-0" wide shared driveway owned in part by Northeast Generation Services Company and in part by the mill owners. The Strathmore is also served by a tunnel through the basement of the Esleeck plant adjacent to its loading dock.

Previous traffic studies for the area indicate activities at the Esleeck paper mill generate 40 trucks per day. The Esleeck trucks when backing into their loading docks stop through traffic on 5th street. The Indeck cogeneration plant when in operation generated anywhere from 8 to 15 coal trucks per day. These trucks headed in cab first and turned around on Indeck property.

When the Strathmore mill was in operation trucks backed onto the access way. The 55 foot trucks could not make the turn from 5th Street onto the access way cab first without making several turns.

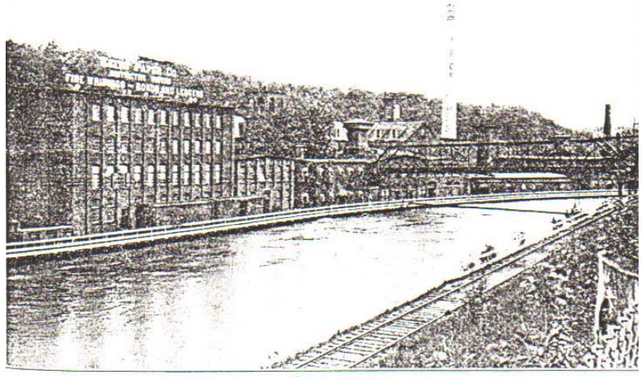
Access to the thirteen parking spaces labeled "A" on the parking plan is via the tunnel through Esleek. The added traffic from these few vehicles at the entry to the tunnel on 5th Street will no doubt complicate activity at the Esleek loading dock.

It is our recommendation that access to the right of way be limited to delivery and drop-off only. This is supported in part by the fact there is little opportunity for parking on site. There is also little opportunity for onsite turn around. Currently vehicles are forced to back-in or to use the Indeck property for turn around. We have identified buildings 5a, 6a, and 8 for demolition in later phase. This would allow for turn around space of smaller delivery vehicles not 55' trucks.

Loading activities along the access road

Pedestrian Access

Pedestrian access to the mill has always utilized a footbridge across the canal. This option for dramatic pedestrian access to the mill remains one of the very positive aspects of this site. The earliest image of the mill dating back to 1873 show a low lying bridge spanning the canal near building #4. At the turn of the century the canal was widened and a new footbridge in its current elevated position was established.



KEITH PAPER COMPANY, TURNERS FALLS, 1928

The bridge spans approximately 150 feet from abutment to abutment and 230 feet from Canal Road to the fourth level of Building #4. The current configuration utilizes stairs at either end of the bridge to make up the difference in elevation. The bridge is owned by Northeast Generation Services who has conducted a structural review. The stair structures and members supporting the wooden deck are in need of repair after years of de-icing with salt. Renovations to the foot bridge have been estimated at $275,000. Any proposed development of the mill utilizing the bridge must also make the bridge ADA accessible. One way to achieve this is to provide lifts at either end. A better solution is to remove the stairs, raise the bridge on the Canal Street side to meet the road and span across to meet the 5th level of the tower near building #1. The tower junction is envisioned as the heart for circulation throughout the mill. A connection through building #1 to the Connecticut River side might include an observation deck that will help draw pedestrians across the bridge. The proposed bridge is approximately 250 feet long from the river to Canal Street. We also recommended the bridge be enclosed in large part by glass to allow light and visual interest to pedestrians. Further structural investigation is required to determine the capacity of the existing bridge to carry the enclosure. The cost of the proposed covered bridge is $780,000.

Amenities and Challenges

Amenities

- Connecticut River
- Handsome masonry structure
- Wonderful south facing courtyards
- Intact and interesting downtown in close proximity
- Bike path
- Community Interest

Challenges

- Ownership / Easement issues
- Vehicular access
- Lack of onsite Parking
- Pedestrian Access (travel distance)
- Competition from neighboring mills
- Renovation costs
- Noise from the hydro plant

Parking

There is virtually no on-site parking for the facility. The market assessment has identified a minimum of 45 parking spaces to attract tenants, 25 for phase 1a commercial and 20 for phase 1b residential. These numbers fall well short of the 275 spaces prescribed by current zoning and will require a variance.

Parking is possible within the Strathmore Mill building. However, in light of the limited amount of supportable debt this idea was abandoned due to the high costs associated with making the scenario viable. The scenario would require concrete ramps, fire separations, smoke evacuation system (often required to vent through the roof), fire suppression system, and structural upgrades to support cars, new concrete driving lanes, protection for columns, and miscellaneous transfer structures to allow for a vehicle turning radius.

We were asked to consider parking at the housing authority site across from the Esleeck mill labeled "F" on the parking plan. We identified possibly 62 parking spaces if the existing structure is removed. Parking at this location is not ideal for the Strathmore mill because of its remote location approximately 900 feet from the mill's front door and because it will promote foot traffic along the access road. The costs would be approximately $120,000 plus the cost of demolishing the existing building.

Thirteen spaces have been identified at the north west section of the site near the water treatment plant labeled "A". The spaces are associated with the live work use proposed for Phase 1b. The numbers of spaces fall short of both the market analysis and current zoning for residential. It should be noted that these spaces are less than ideal because access can only be achieved via the tunnel through Esleek. The added traffic at this junction will no doubt complicate activity at the Esleek loading dock. The cost for these spaces is about $26,000.

Forty-two spaces labeled "B" have been identified along canal street. These space provide the safest and most direct access to the mill. The number exceeds the amount of spaces identified in the market analysis but falls well short of current zoning. A variance will be required. The cost associated with this parking is approximately $84,000.
Parking labeled "C" is also in a prime location to serve the mill. The location does require pedestrians to cross both 3rd and Canal Street to gain access to the pedestrian bridge. Thirty spaces at a cost of $60,000 have been identified. An additional 30 spaces may be available directly to the south labeled "D". These space will cost a premium due to the amount of ledge needed to be removed.

There are 67 existing parking space at the Heritage Park. Some of these spaces could be reserved for the mill. In total 232 parking spaces have been identified. Only 13 of those are on-site. Zoning requires that all parking demand for the project be accommodated on site. The lack of on-site parking will require a variance.

Zoning for Parking

6.2 Parking and Loading

6.2.1 All parking demand created by new structures or uses, additions to existing structures or uses, and change of use in existing structure shall be accommodated on the premises entirely off-street. At least the following shall be provided unless the Board of Appeals allows a reduction upon their determination that a lesser amount will satisfy all parking demand owing to particular circumstances:
One and a half parking spaces per dwelling unit, plus one space per employee, plus one space per 175 square feet of retail or office floor space, plus one space per motel, hotel or lodging house (11/17/99) unit, plus one space per four seats in a restaurant, theater or such. In the CB District, retail, office, restaurant, theatre and such uses are not required to provide off-street customer parking. (11/17/99)

6.2.2 Parking areas for six or more cars shall be so designed that their use does not require backing onto a public way, and shall be screened from any abutting residential use by densely planted shrubs.

6.2.3 Adequate off-street loading facilities and space must be provided to service all needs created by new construction, whether through new structures or uses, additions to existing structures or uses of change of use. Facilities shall be so sized and arranged that no trucks need back onto or off of a public way, or be parked on a public way while loading, or waiting to do so.

6.3 Vehicular Egress/Access to a Lot

6.3.1 Vehicular egress/access to a lot must be across the front-lot line meeting the minimum frontage requirements, except that in particular instances, the Planning Board may issue a Special Permit permitting vehicular egress/access to a lot over a front lot line having less than the required minimum frontage, or over any side lot line or rear lot line.

6.3.2 For residences with a setback of 500 feet or more from an accepted way, a driveway for such residence must have a grade of no greater than 10% a curve radius not less than 30 feet, a turn around area with a minimum 30 foot turn around radius and that the driveway be no less than 20 feet in width over its entire length.

Zoning

The site is located in a Historic Industrial Zone. Permitted uses are outlined below.

Zoning for Historic Industrial District, current as of May 1, 2004 (unofficial copy)

5.2.12 HI..Historic Industrial
The purpose of the Historic Industrial District is to encourage adaptive reuse of historic industrial buildings and sites.

(a) Permitted Uses:
- Business office or professional office
- Retail sales and services
- Manufacturing, processing, or research
- Bulk storage, warehousing, distribution
- Craft workshop or light assembly shop
- Uses customarily accessory to the above

(b) Uses allowed on Special Permit from the Board of Appeals
- New structures
- Alteration to the exterior of an existing structure
- Hotel
- Residential uses, as accessory or secondary to a primary permitted use, with management plan
- Public utility
- Uses that involve the construction, alteration or change of use of more than 10,000 square feet of floor area
- Demolition of an existing structure

Other uses similar to the above in externally observable attributes

(c) Uses allowed on Special Permit from the Planning Board
Self-service storage facility, in accordance with section 7.7

Note: residential use is not allowed under current zoning and will require a variance.

Proposed Scope of Work

The proposed scope of work for **Phase 1a** includes but is not limited to:

1. HAZ MAT removal for approximately 74, 400 gsf
2. Gut demolition for approximately 74, 400gsf
3. New roof for approximately 22,760 gsf
4. New windows for approximately 74, 400gsf
5. New egress stairs as identified in architectural plans to meet current codes
6. New elevator as identified in architectural plans to meet current codes
7. new ADA lift at access road entrance as identified in architectural plans to meet current codes
8. New mechanical systems to meet current codes
9. New fire protection system to meet current codes
10. New plumbing system to meet current codes
11. Replace 8" water line crossing canal at pedestrian bridge.
12. Review condition and capacity of lift station (budget assumes no work required here)
13. New electrical system to meet current codes / separate from existing transformer
14. Partial repointing at exterior and interior of structural bearing masonry walls
15. Seismic structural upgrades
16. New rated and non-rated partitions for approximately 74,400 gsf
17. Renovation and addition to 250 foot pedestrian bridge.

We estimate the cost of the renovation not including the pedestrian bridge, HAZ MAT removal, or parking to be $80 to $100 per square foot. At the low end this means a building renovation cost of $5.95 million. The conceptual HAZ MAT removal cost is $470,000.

Phase 1a

Costs	Description
$300,000	Cost to acquire propert
$5,952,000	Gut renovation cost Phase 1a 62,000 nsf (74,400 Gsf)
$780,000	Renovation / Extension of pedestrian Bridge (250'+/- from tower to Canal Street)
$84,000	42 SPACES Off Site Parking Canal Street (Labeled "B")
$470,000	HAZ MAT removal Phase 1a
$7,586,000	**Total**

The proposed scope of work for **Phase 1b** includes but is not limited to:

1. HAZ MAT removal for approximately 48,000 gsf
2. Gut demolition for approximately 48,000 gsf
3. New roof for approximately 12,000 gsf
4. New windows for approximately 48,000 gsf
5. New egress stairs as identified in architectural plans to meet current codes
6. New elevator as identified in architectural plans to meet current codes
7. New mechanical systems to meet current codes
8. New fire protection system to meet current codes
9. New plumbing system to meet current codes
10. New electrical system to meet current codes / separate from existing transformer
11. Partial repointing at exterior and interior of structural bearing masonry walls
12. Seismic structural upgrades
13. New rated and non-rated partitions for approximately 48,000 gsf

We estimate the cost of the renovation not including the pedestrian bridge, HAZ MAT removal, or parking to be $100 to $120 per square foot. At the low end this means a building renovation cost of $4.8 million.
The conceptual HAZ MAT removal cost is $270,000.

Phase 1b

Costs	Description
$3,840,000	Gut renovation cost Phase 1B 40,000(48,000 sf)
$26,000	On site Parking (Labeled "A")
$270,000	HAZ MAT removal Phase 1b
$4,136,000	**Total**

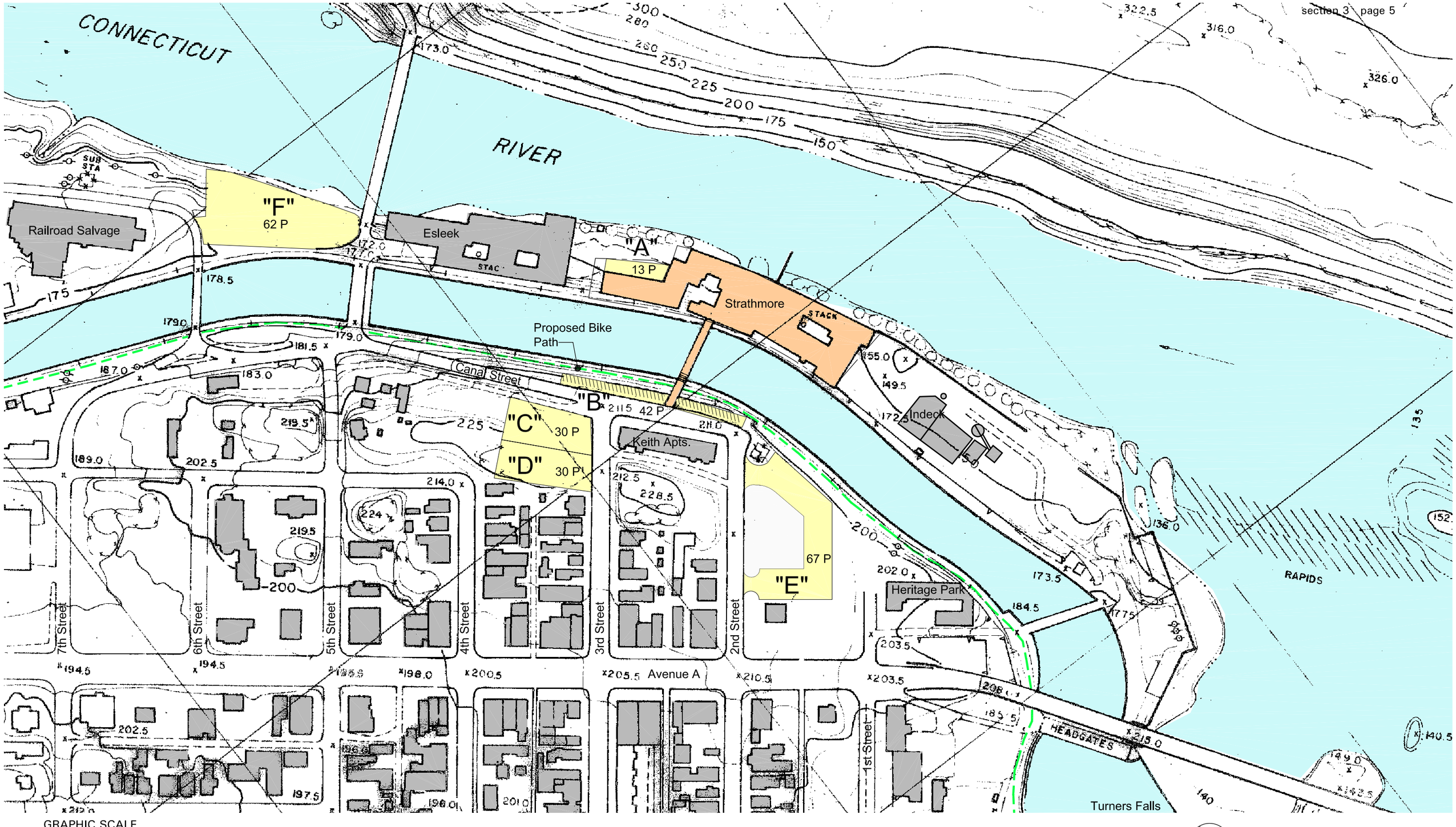
Mothball unused portions of building

Costs	Description
$141,000	Mothball
$882,000	Stabilization
$1,023,000	**Total**

Based on the consultants costs identified to date for redevelopment and the supportable debt projected by FXM the following comparison is generated:

Total cost Phase 1a and 1b

Supportable Debt from FXM report	Costs	Description
	$7,586,000	Phase 1a
	$5,896,000	Phase 1b
	$1,023,000	Mothball / Stabilization of undeveloped section of mill
$2,000,000	**$14,505,000**	**Totals**


CONNECTICUT
RIVER
"F"
62 P
Railroad Salvage
Esleek
STAC
"A"
13 P
Strathmore
STACK
Proposed Bike Path
Canal Street
"B"
2115 42 P
"C"
30 P
"D"
30 P
Keith Apts.
Indeck
"E"
67 P
Heritage Park
RAPIDS
HEADGATES
Turners Falls
7th Street
6th Street
5th Street
4th Street
3rd Street
2nd Street
1st Street
Avenue A
GRAPHIC SCALE
0 50 100 200 300 400 600FT

AREA PER FLOOR EXIST

FIRST FLOOR	56,264 G. SQ. FT.
SECOND FLOOR	59,073 G. SQ. FT.
SECOND FLOOR HALF	6,500 G. SQ. FT.
THIRD FLOOR	61,779 G. SQ. FT.
FOURTH FLOOR	53,069 G. SQ. FT.
FIFTH FLOOR	31,777 G. SQ. FT.
SIXTH FLOOR	6,500 G. SQ. FT.
TOTAL	275,000 G. SQ. FT. including Swift Hydro

NET AREA ALL FLOORS - PHASE Ia and Ib

ARTISTS' STUDIO 7,250 NSF
INDUSTRIAL, COMMERCIAL 38,700 NSF
BUSINESS CENTER 4,230 NSF
WAREHOUSE, ARCHIVES 9,036 NSF
EXHIBITION 3,000 NSF
LIVE WORK 35,540 NSF
SHELL SPACE 2,540 NSF

NET TOTAL 102,000 NSF

CONNECTICUT RIVER

ARTISTS' LIVE & WORK 4,230 NSF
WAREHOUSE/ARCHIVE 9,036 NSF

NSF - IST FLOOR 13,266 NSF/PHASE I
TOTAL GSF - IST FLOOR 17,417 GSF/PHASE I

WASTE WATER TREATMENT PLANT
BLDG. #1
BLDG. #2
BLDG. #3
EXIST. BRIDGE ROOF ABOVE TO BE REMOVED
NEW STAIR #3
NEW ELEVATOR
ST#3
BLDG. #10
BLDG. #4
BLDG. #9
BLDG. #5
BLDG. #6
COURTYARD
PARKING #13
NEW STAIR #2
NEW ELEVATOR
TUNNEL
COURTYARD
NEW RETAINING WALL
SWIFT RIVER HYDRO OPERATIONS
ENTRY
UNEXCAVATED AREA
REMOVE BUILDING 5A, 6A & 8
BLDG. #7
NEW STAIR #1
BLDG. #11
BRIDGE ABOVE

PHASE 1B
TOTAL 40,000 NSF (48,000 GSF)

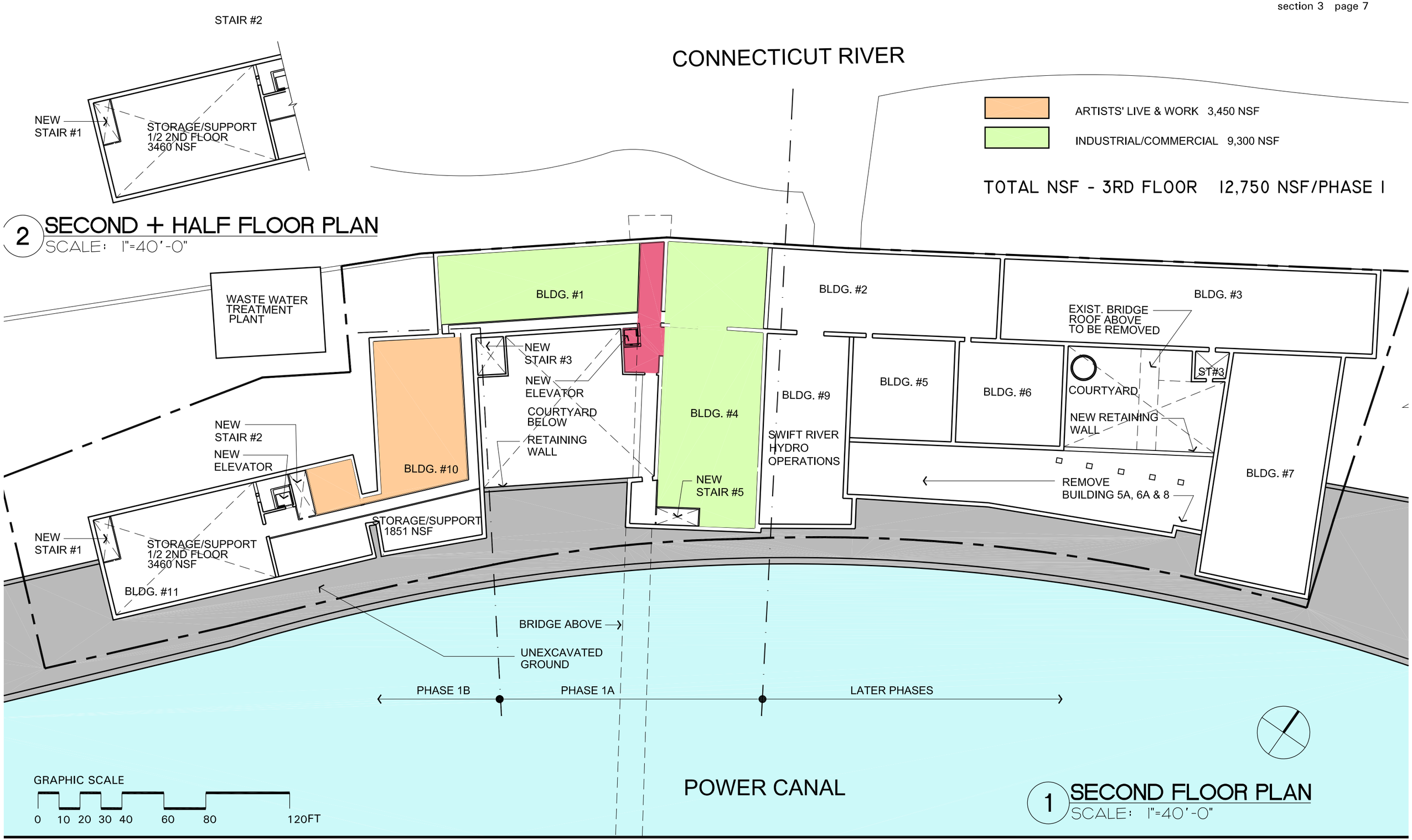
PHASE 1A
TOTAL 62,000 NSF (74,400 GSF)

LATER PHASES
TOTAL 142,800 GSF (DOES NOT INCLUDE SWIFT HYDRO)

GRAPHIC SCALE
0 10 20 30 40 60 80 120FT

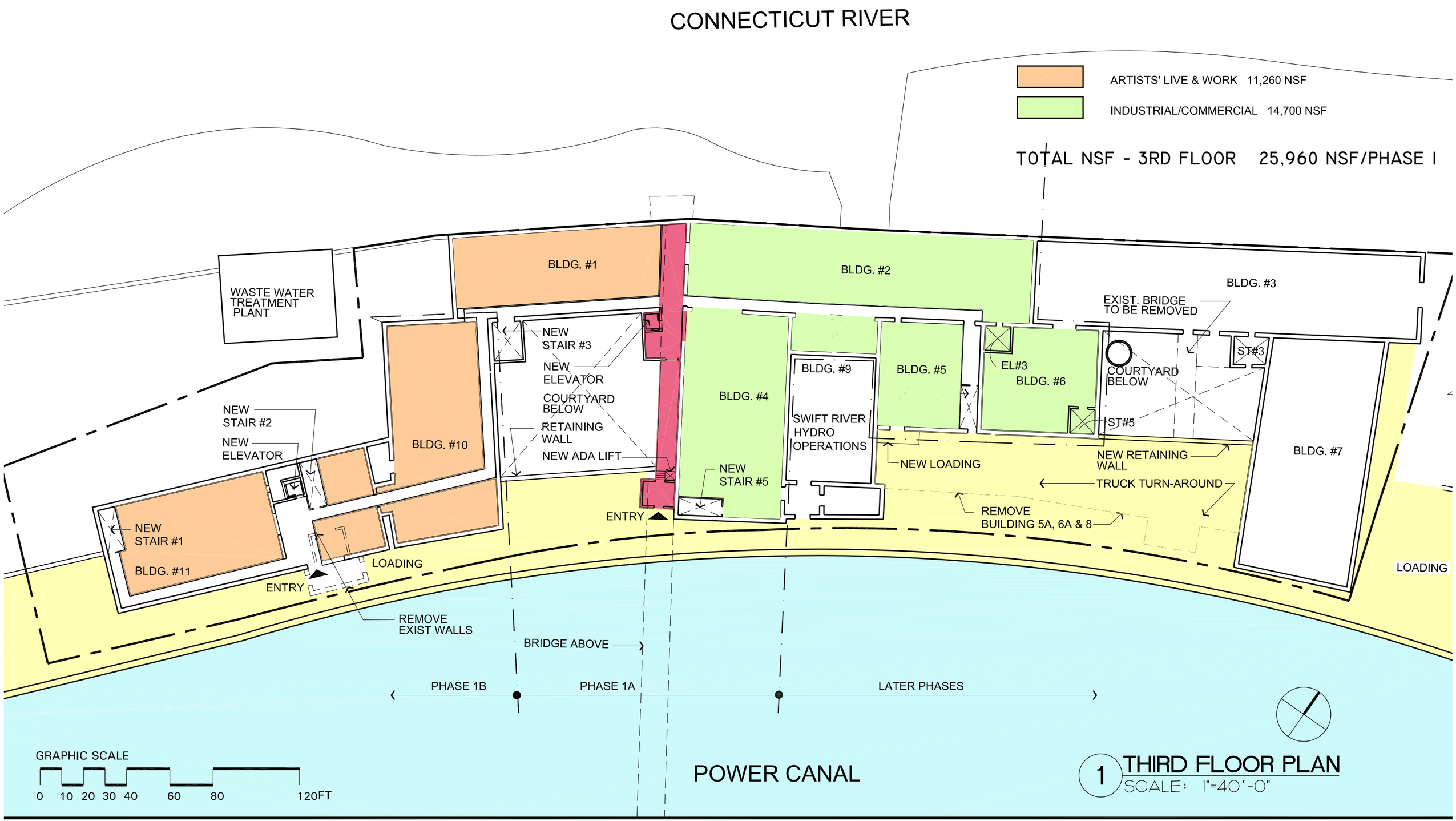
POWER CANAL

1 FIRST FLOOR PLAN
SCALE: 1"=40'-0"



2 SECOND + HALF FLOOR PLAN
SCALE: 1"=40'-0"

1 SECOND FLOOR PLAN
SCALE: 1"=40'-0"



1 THIRD FLOOR PLAN
SCALE: 1"=40'-0"

CONNECTICUT RIVER

ARTISTS' LIVE & WORK 8100 NSF

BUSINESS CENTER 3160 NSF

INDUSTRIAL COMMERCIAL 14,700 NSF

TOTAL NSF - 4TH FLOOR 25,960 NSF/PHASE I

WASTE WATER TREATMENT PLANT

BLDG. #1

BLDG. #2

BLDG. #3

EXIST. BRIDGE ROOF BELOW TO BE REMOVED

NEW STAIR #3

NEW ELEVATOR

COURTYARD BELOW

RETAINING WALL BELOW

BLDG. #4

BLDG. #5

NEW STAIR #4

EL#3

BLDG. #6

ST#3

COURTYARD BELOW

ST#5

SWIFT RIVER HYDRO OPERATIONS

NEW STAIR #5

REMOVE BUILDING 5A, 6A & 8

BLDG. #7

NEW STAIR #2

NEW ELEVATOR

NEW STAIR #1

BLDG. #10

BLDG. #11

ENTRY VESTIBULE BELOW AT 3RD FLOOR

EXIST. LOADING DOCK BELOW TO BE REMOVED

PHASE 1B

PHASE 1A

LATER PHASES

BRIDGE ABOVE

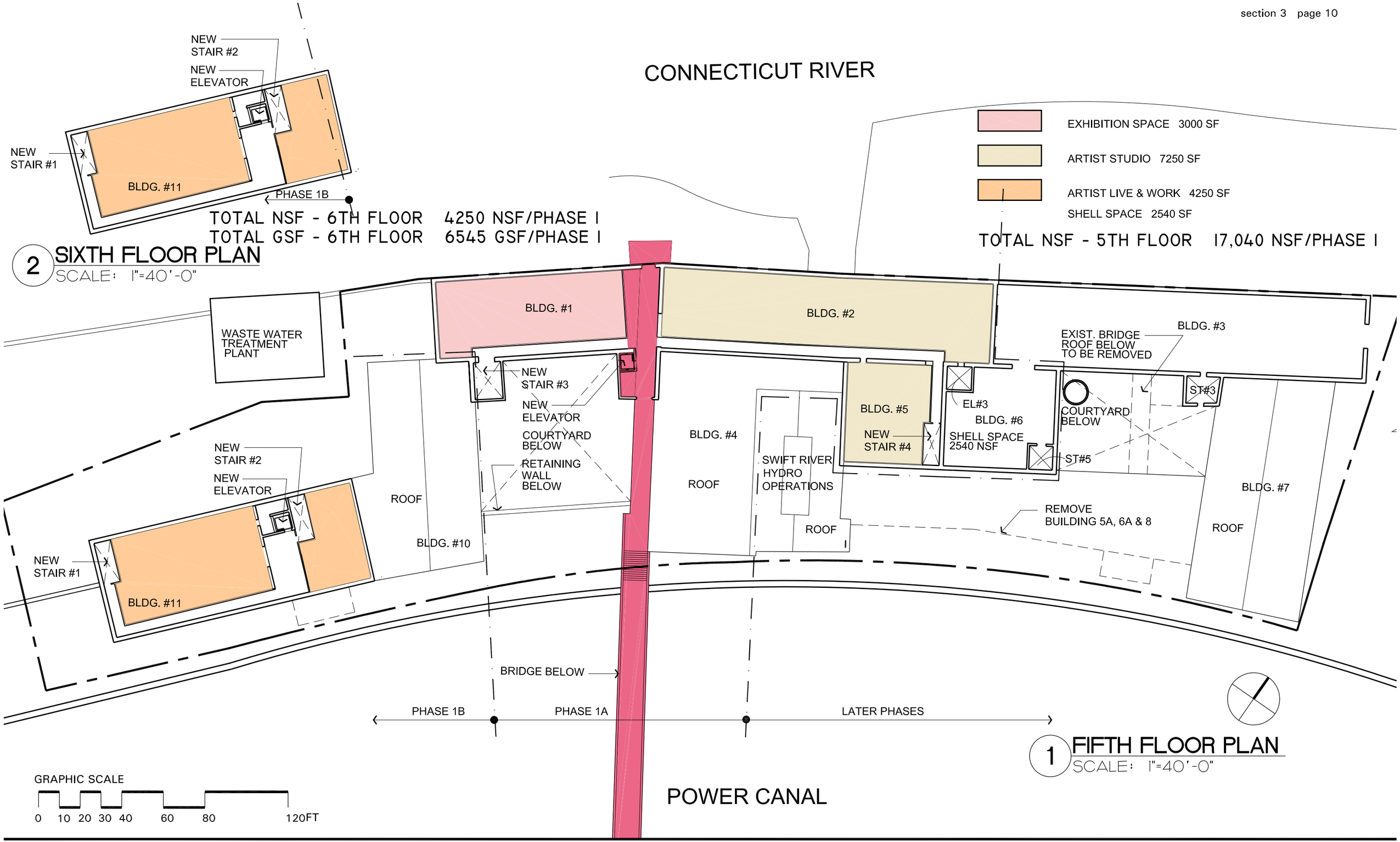
GRAPHIC SCALE

0 10 20 30 40 60 80 120FT

POWER CANAL

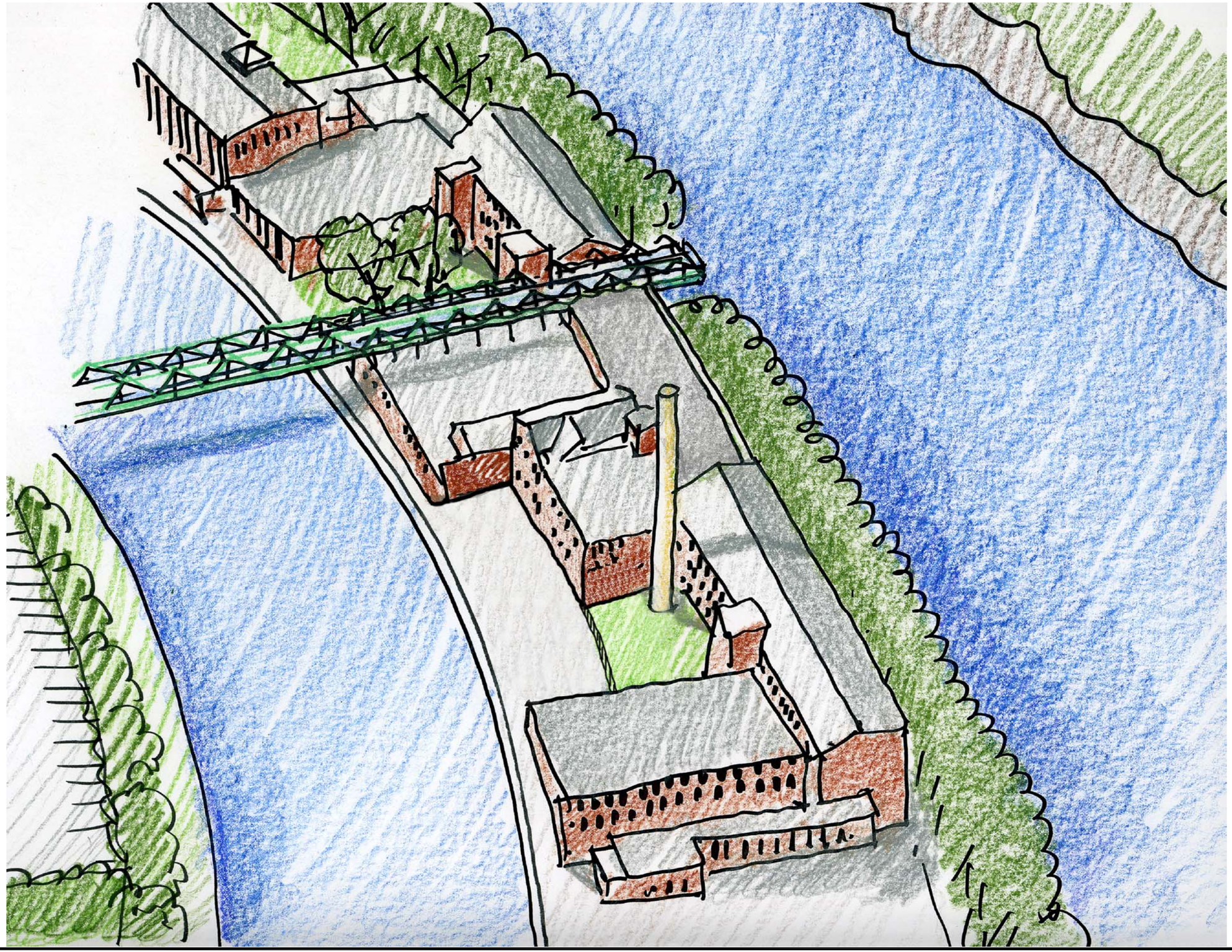
1 FOURTH FLOOR PLAN

SCALE: 1"=40'-0"



2 SIXTH FLOOR PLAN
SCALE: 1"=40'-0"

1 FIFTH FLOOR PLAN
SCALE: 1"=40'-0"



Aerial Perspective of
Redeveloped Strathmore Mill

Aerial Perspective of
Reconfigured Pedestrian Bridge

STRATHMORE MILL STRUCTURAL EVALUATION

INTRODUCTION

This Technical Memorandum has been prepared by Tighe & Bond to document the current structural conditions of the Strathmore Mill buildings as it relates to the future use of the buildings. The memo will also discuss Chapter 34 of the Commonwealth of Massachusetts Building Code, as it relates to the repair, alteration, addition, and change of use of the existing buildings at the Strathmore Mill complex.

It should be noted that the building survey was limited, due to time, to visual observations and information provided by the town and that no measurements or detailed calculations to verify structural adequacy of the building were conducted for this report. Copies of selected photographs, taken during the building survey are included with this technical memorandum for your reference.

GENERAL BUILDING DESCRIPTION

The Strathmore Mill facility is located on an island between the Connecticut River and an active power canal in the village of Turners Falls in Montague, Massachusetts. The facility consists of eleven interconnected brick masonry buildings ranging from 4 to 6 stories in height, and contains approximately 244,500 square feet of floor area. The majority of the buildings for the facility were constructed between 1873 and 1906. Additions to the facility were also constructed at later dates, including a loading dock that was added to the facility as recently as 1981. The majority of the buildings within the facility are currently unoccupied. However, a hydroelectric generating plant remains in operation in Building No. 20. In addition, a recycling business occupies space in Building No. 1

BUILDING OBSERVATIONS

Our survey of the Strathmore Mill Facility consisted of general visual condition assessments of the interior and exterior masonry walls, the floor and roof framing systems, building foundations where visible and the building roofing. The following observations were made during the visual survey of the facility.

General

The entrance to the mill facility is from the third floor on the east or canal side of the buildings. The ground elevation on the west side or river side of the buildings is at the first floor level of the buildings.

Building No. 1

Building No. 1 is a 5-story building approximately 108 feet long by 43 feet wide and was constructed in 1877.

The building exterior is constructed of load bearing multi-wythe brick masonry walls. The east and west exterior walls have regularly spaced windows on each floor throughout the five stories of the building. Several the windows have been bricked up. The exterior masonry wythe has been laid up in a common bond pattern, where approximately every eighth course of stretcher bond has been made a header course. The mortar joints on the exterior face of the building were deteriorated in many locations. The west side of building No. 1 and the stair tower located on the east side of the building appear to be in the worst condition. The exterior surface of the west-building wall, from the third floor level of the building down to grade, was covered with a cement-like coating that prevented us from examining the masonry.

Mr. Jim Slavis, a former building tenant that we contacted, stated that Building Recycling International (BRI) had hired an engineering company to evaluate the buildings when they were considering buying it a few years ago. Mr. Slavis stated that it was his recollection that BRI's engineer determined that the west walls of the buildings along the river were in very poor condition. He stated that he thought that the problem was found to have been caused by water infiltration into the building walls. Mr. Slavis stated that there was a 1-1/2 foot bulge in the masonry wall between the first and second floor where Building No. 1 and Building No. 2 meet. Mr. Slavis estimated the bulge extended horizontally along the face of the wall approximately 8 to 10 feet. Mr Slavis stated that the cement and fiberglass coating was added to the face of the masonry as a means of strengthening the walls. Based on visual observations, it is our opinion that the wall coating is providing very little if any added strength to the wall.

The exterior surface of the west masonry wall above the third floor appears to be in fair to poor condition. The mortar joints that were observed above the third floor appear to be deteriorated. The mortar has been eroded from the brick joints at many locations. In addition, some areas of the brick appear to have moss growing on the face of the brick. This usually indicates that water is infiltrating the wall.

The interior surfaces of the perimeter brick walls are in fair to good condition. The interior brick walls were covered with paint. However, the brick mortar joints were observed to be deteriorated and soft in many locations. When probed with a screwdriver, the mortar disintegrated to a dust.

Cracks were observed on the interior of the building on the second floor, in the west masonry wall near the southwest corner of the building. A masonry arch had failed over a window in the west wall of the building. In addition, a saw-toothed crack had formed in the masonry wall below the window. Mr. Slavis stated that these cracks were caused by the collapse of a tailrace that runs diagonally beneath Building No. 1. We did not observe the tailrace during our visual survey and therefore cannot confirm if the tailrace structure collapsed or if it contributed to the cracks observed in the masonry wall. The cracks in the masonry were observed in the same room on the second floor where supplemental steel framing was added to support the floor above. A former maintenance foreman at the Mill informed us that the supplemental framing was added to provide support for machinery on the third floor.

The building floors are constructed of wood and are supported by the masonry walls, wood beams and interior wood columns. The fourth and fifth floors have additional floor supports consisting of tension rods. The fourth and fifth floors each have two rows of tension rods that are equally spaced throughout the length of the building. The rods on the fourth floor provide support for the fourth floor and extend up through the fifth floor. The rods on the fifth floor provide support for the fourth and fifth floor and extend up into the attic where they are attached to the attic roof trusses. The tension rods appear to have been added by the paper mill to increase the live load capacity of the floor. Also, steel plates have been added to the floor beams for the fourth floor where they frame into the brick walls.

The roof framing for the building consists of timber trusses. The trusses appeared to be in good condition. We did not observe any signs of water infiltration into the attic space. The roofing consists of asphalt shingles that appeared to be worn. We estimate that the roof shingles are at least 30 years old.

Building No. 2

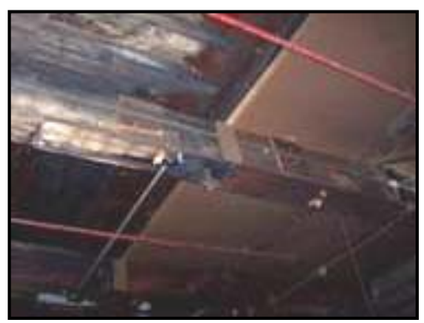
Building No. 2 is a 5-story building approximately 160 feet long by 43 feet wide and was constructed in 1873.

The building foundation walls along the west wall of the building appear to have been constructed of fieldstone masonry. The exterior face of the wall was covered with a cement and fiberglass coating and could not be visually inspected. However, the fieldstone wall could be observed where the tailrace that runs under Building No. 2 exits the building. The coating had fallen off the foundation wall adjacent to the tailrace, exposing the fieldstone wall. The foundation wall was deteriorated at this location; the mortar has eroded from between the stones.

The building exterior is constructed of load bearing multi-wythe brick masonry walls. The west exterior wall has regularly spaced windows on each floor throughout the five stories of the building. Several of the windows have been bricked up. The mortar joints on the exterior face of the building were deteriorated in many locations. Similar to Building No. 1, the exterior surface of the west building wall, from the third floor level of the building down to grade, was covered with a cement and fiberglass coating that prevented us from examining the masonry. As stated above, it is our opinion that the wall coating is providing very little if any added strength to the wall.

The exterior surface of the west masonry wall above the third floor appears to be in fair to poor condition. The mortar joints that were observed above the third floor appear to be deteriorated. The mortar has been eroded from the brick joints at many locations. In addition, some areas of the brick appear to have moss growing on the face of the brick. This usually indicates that water is infiltrating the wall.

The interior surfaces of the perimeter brick walls are in fair to good condition. The interior brick walls were covered with paint. However, the brick mortar joints were observed to be deteriorated and soft in many locations. When probed with a screwdriver, the mortar disintegrated to a dust.



The building floors are constructed of wood and several are topped with concrete. The floors are supported by the masonry walls, a combination of steel and wood framing and interior steel lally columns. The fifth floor has additional floor supports consisting of tension rods that are equally spaced throughout the length of the building. The rods on the fifth floor provide support for the fifth floor and extend up into the attic where they are attached to steel beams that span between the east and west building walls. The tension rods and steel beams appear to have been added by the paper mill to increase the live load capacity of the floor.

Evidence of a fire in the building was observed on the fifth floor. Several roof planks and wood beams were charred. Also, the wood ceiling was deteriorated at several locations on the third floor. The deterioration appears to be from moisture.

The roof framing for the building consisted of timber beams and planks. The framing appears to be in fair condition except for the areas damaged by the fire. The roofing consists of a membrane roofing system that is approximately 20 to 25 years old.

Building No. 3

Building No. 3 is a 5-story building approximately 176 feet long by 43 feet wide and was constructed in 1892.

The building foundation walls along the west wall of the building appear to have been constructed of fieldstone masonry. The exterior face of the wall was covered with a cement and fiberglass coating and could not be visually inspected.

The building exterior is constructed of load bearing multi-wythe brick masonry walls. The west exterior wall has regularly spaced windows on each floor throughout the five stories of the building. Several of the windows have been bricked up. The mortar joints on the exterior face of the building were deteriorated in many locations. Similar to Building No. 1 and Building No. 2, the exterior surface of the west-building wall, from the third floor level of the building down to grade, was covered with a cement and fiberglass coating that prevented us from examining the masonry. As stated above, it is our opinion that the wall coating is providing very little if any added strength to the wall.

The exterior surface of the west masonry wall above the third floor appears to be in fair to poor condition. The mortar joints that were observed above the third floor appear to be deteriorated. The mortar has been eroded from the brick joints at many locations. In addition, some areas of the brick appear to have moss growing on the face of the brick. This usually indicates that water is infiltrating the wall.

The interior face of the perimeter brick walls is in fairly good condition. The interior brick walls were covered with paint. However, the brick mortar joints were observed to be deteriorated and soft in many locations. When probed with a screwdriver, the mortar disintegrated to a dust.

A steel frame has been constructed in front of the west interior masonry wall on the third floor of the building. The steel frame columns extend from the floor up to the underside of the fourth floor beams. Horizontal steel framing members frame between the columns. We have been informed by

a former Strathmore Mill maintenance foreman that the frame was constructed to prevent fork lifts from hitting the wall while picking up pallets from the floor in this area. We did not see any evidence of damage to the fourth floor beams or masonry wall in this area and do not believe this framing system was installed for any structural reasons.

The building floors are constructed of wood and several are topped with concrete. The floors are supported by the masonry walls, a combination of steel and wood framing and interior steel lally columns.

The wood ceiling was deteriorated at several locations on the third floor. The deterioration appears to be from moisture.

The roof framing for the building consisted of timber beams and wood planking. The timber beams span east to west and are equally spaced throughout the length of the building. The beams are supported by the east and west masonry walls and steel lally columns located in the middle of the floor. The framing appears to generally be in fair condition.We observed evidence of possible water damage on some of the roof beams. The roofing consists of a membrane roofing system that is approximately 20 to 25 years old.

Building No. 4

Building No. 4 is a 4-story building approximately 95 feet long by 51 feet wide and was constructed in 1873.

The building exterior is constructed of load bearing multi-wythe brick masonry walls. The mortar joints on the exterior of the building were deteriorated in many locations. The south exterior wall has covered walkways that extend along the exterior face of the third and fourth floor of the building to provide access to Building No. 1 from the canal road level or pedestrian bridge level.

The interior surfaces of the brick walls are in fair to good condition. The interior brick walls were covered with paint. However, the brick mortar joints were observed to be deteriorated and soft in many locations.

The interior brick walls on the second floor were plastered with mortar at several locations.

The building floors are constructed of wood and several are topped with concrete. The third floor is supported by the masonry walls, a combination of steel and wood framing and interior steel lally columns. Steel beams encased in brick masonry arches support the first and second floors.

The roofing consists of a membrane roofing system that is approximately 20 to 25 years old.

Building No. 5

Building No. 5 is a 5-story building approximately 50 feet long by 38 feet wide and was constructed in 1873.

The building foundation walls for Building No. 5 were not visible and could not be observed.

The building walls consist of multi-wythe load bearing brick masonry. The first floor of the building, which is located two stories below the canal road, houses the boilers. The boilers extend from the first floor up to the third floor. Catwalks located above the first floor provide access between the boilers. The building does not have a second floor.

The brick walls are covered with paint. However, the brick mortar joints were observed to be deteriorated and soft in many locations.

The building floors are constructed of wood and several are topped with concrete. Steel beams encased in brick masonry arches support the third floor. Masonry walls, a combination of steel and wood framing and interior steel Lally columns, support the fourth floor. The fifth floor is supported by the masonry walls and wood framing. The fifth floor has additional floor supports consisting of tension rods that are equally spaced throughout the length of the building. The rods on the fifth floor provide support for the floor and extend up into the attic where they are attached to timber roof trusses.

The roof framing consists of timber trusses. The timber trusses appear to be in relatively good condition. We did not observe signs of water damage in the attic area. The roofing consists of asphalt shingles. The shingles look to be well worn; we estimate the age of the shingles to be at least 30 years old.

Building No. 6

Building No. 6 is a 4-story building approximately 50 feet long by 50 feet wide and was constructed in 1892.

The building walls consist of multi-wythe load bearing brick masonry. The brick walls are covered with paint. However, the brick mortar joints were observed to be deteriorated and soft in many locations.

The building floors are constructed of wood and are topped with concrete. Steel beams encased in brick masonry arches support the third floor. Masonry walls, a combination of steel and wood framing and interior steel Lally columns, support the fourth floor.

The roof framing consists of timber beams, wood plank and steel columns. The roofing consists of a membrane roofing system that is approximately 20 to 25 years old.

Building No. 7

Building No. 7 is a 4-story building approximately 116 feet long by 56 feet wide and was constructed in 1892.

The building exterior is constructed of load bearing multi-wythe brick masonry walls. The mortar joints on the north exterior wall of the building were deteriorated in many locations. In additions, bricks from the exterior wythe were missing in a few locations along the north exterior wall.

The interior surfaces of the brick walls are in fair condition. The interior brick walls were covered with paint. However, the brick mortar joints were observed to be deteriorated and soft in many locations. The brick walls on the first floor were in need of repointing.

Concrete tanks were observed on the first floor of the building. The tanks look like sand filters. A tunnel of some sort runs under the floor. We did not inspect the tunnel.

The building third floor exits to the canal road on the east side of the building. The first and second floors are located below grade at the east end of the building and the first floor is on grade at the west end of the building. A storage and loading dock structure has been added on to the north side of the building.

The building floors are constructed of wood and are topped with concrete. Steel beams encased in brick masonry arches support the second and third floors. In addition, brick piers provide additional support for the third floor. The fourth floor is supported by the masonry walls, steel framing and interior steel lally columns.

The roofing consists of a membrane roofing system that is approximately 20 to 25 years old.

Building No. 8

Building No. 8 is a 2-story building approximately 74 feet long by 51 feet wide and was constructed in 1873.

Fieldstone masonry foundation walls were observed along the east wall of the building adjacent to the canal. The foundation walls were in fair condition.

The exterior brick mortar joints were observed to be deteriorated and soft in many locations. Some deterioration of the brick was observed on the exterior wall adjacent to the canal.

The building floors are constructed of wood and wood topped with concrete. The wood flooring on the second floor of the building is warped and looks like it has been wet in the past. A combination of wood and steel trusses support the second floor. Steel cables were attached to the tops of the columns below the second floor along the west side of the building and attached to the first floor. It appears that the cables were installed to prevent the top of the columns from moving outward toward the courtyard. The building is in poor condition.

The roof framing consists of timber beams, wood plank and timber columns. The roofing consists of a membrane roofing system that is approximately 20 to 25 years old.

Building No. 10

Building No. 10 is a 4-story building approximately 104 feet long by 50 feet wide and was constructed in 1894.

The building foundation walls are constructed of fieldstone masonry. A vehicle tunnel constructed of fieldstone masonry runs under the 2nd floor of the building along the east exterior wall of the first floor. The field stone walls of the tunnel are in fair conditions.

The building exterior is constructed of load bearing multi-wythe brick masonry walls. The north and south exterior walls have regularly spaced windows on each floor throughout the buildings 4-stories. The mortar joints on the exterior of the building were deteriorated and have been eroded from the brick joints at many locations. The brick wall adjacent to the canal has missing and deteriorated bricks. Efflorescence stains are also visible on the masonry wall, indicating the water is washing the soluble salts out of the mortar. In general, the exterior surfaces of the brick walls are in fair condition for the age of the building.

The interior brick walls are in fair to good condition. The interior brick walls were covered with paint. However, the brick mortar joints were observed to be deteriorated and soft in many locations. Brick piers located on the first floor and support the second floor are deteriorated and will require some minor repairs.

The building floors are constructed of wood and are supported by the masonry walls, wood beams, brick piers and interior steel lally columns.

The wood flooring on the second floor is damaged in several locations. In addition, the wood ceiling was deteriorated in several spots.

The roof framing for the building consisted of timber beams supported by steel lally columns. The framing is in relatively good condition. The roofing consists of a membrane roofing system that is approximately 20 to 25 years old. Several seams and patches were observed in the roofing membrane.

Building No. 11

Building No. 11 is a 7-story building approximately 105 feet long by 48 feet wide and was constructed circa 1900.

The building foundation for the masonry wall adjacent to the canal is constructed of brick and fieldstone. The foundation wall along the canal is visible from the first and second floor of the building. Evidence of water infiltration is visible on the second floor adjacent to the canal. The wood floor is rotting in this location.

The building exterior is constructed of load bearing multi-wythe brick masonry walls. The west exterior wall has regularly spaced windows on each floor throughout the 6-stories. The mortar joints on the exterior of the building were deteriorated and have been eroded from the brick joints at many locations. In general, the exterior surface of the brick is in fair condition for the age of the building.

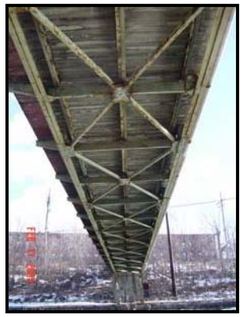
The interior surfaces of the brick walls are in fair to good condition, especially above the third floor. The interior brick walls were covered with paint. However, the brick mortar joints were observed to be deteriorated and soft in many locations. A few brick walls on the upper floors were furred out with gypsum board and could not be seen.

The building floors are constructed of wood or are topped with concrete. The floors are supported by the masonry walls, wood beams and wood or brick columns.

The wood flooring on the second floor was damaged in a few locations. In addition, the wood ceiling was deteriorated in several spots.

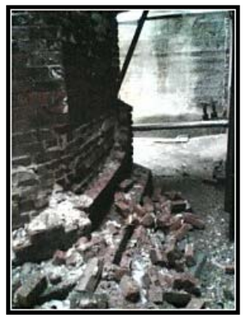
The roofing consists of a membrane roofing system that is approximately 20 to 25 years old.

Pedestrian Bridge

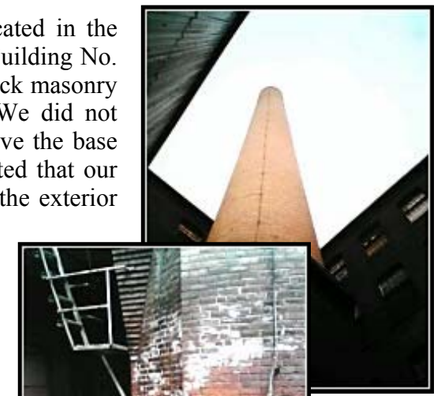


The Strathmore Pedestrian Bridge provides access to the Strathmore Mill from the village of Turner Falls over the Turners Falls canal. The bridge is currently owned and maintained by Northeast Generating Services (NGS). The bridge has a span of 153 feet and is constructed of riveted steel trusses, steel angle cross bracing and a 3-inch wood plank walking surface. A 60 foot long steel framed walkway begins at the Canal Street side of the footbridge and connects to a steel and wood framed staircase that leads down to the pedestrian bridge. On the paper mill side of the bridge, a similar steel and wood framed staircase leads from the end of the bridge down to the entrance to the mill on the fourth floor of Building No. 1. The bridge is currently closed which prevented us from making close observations. NGS had the bridge inspected in 2004 and have provided the report to us for our review. The results of their inspection indicate that the lower chord framing has suffered corrosion and will require a combination of repair and replacement. In addition, angle cross bracing and gusset connections that brace the lower chords of the truss are corroded and will have to be replaced. The stairs, located at each end of the bridge are severely corroded and will need to be replaced. The severe corrosion was most likely caused by de-icing salts used on the pedestrian bridge. Cianbro Construction provided NGS a budgetary estimate of $275,000 to repair the bridge in kind. However, the proposed development of the mill complex will require that the pedestrian bridge be enclosed and elevated to the fifth floor of the mill complex. In addition, the bridge will be extended through Building No. 1, where it will provide an outlook to the river. It is Tighe & Bond's opinion that the costs to repair and upgrade the existing pedestrian bridge for the proposed development will most likely approach the cost for a new bridge.

Smoke Stack



The base of the brick smoke stack, located in the courtyard between Building No. 8 and Building No. 3 is deteriorated. The outer wythe of brick masonry has fallen off the base of the stack. We did not observe any additional deterioration above the base of the stack. However, it should be noted that our observation of the stack was limited to the exterior surface of the stack from the ground. We did not visually observe the interior of the stack.



Massachusetts Building Code Chapter 34 Review

We have reviewed chapter 34 of the Massachusetts Building Code to identify the structural requirements that apply to the proposed redevelopment of the Strathmore Mill complex. Based on our review, the following provision will apply:

780 CMR 3408 - Structural Requirements for Existing Buildings

- 3408.5 – Alterations, Repairs and Change of Use.

    1. Floor load capacity shall be adequate to support the required design live loads listed in CMR 1605 through 1608, 1613 and 1614.

- 3408.5.4.4 – For Seismic Hazard Category = 2

    1. Earthquake resistance shall comply with the requirements of 780 CMR 3408.3.5.

    2. The existing building shall be investigated for the presence of special earthquake hazards as described 780 CMR 3408.6.3.

- 3408.3.5 – Existing Lateral Load Capacity.

    1. Alterations shall not be made to elements or systems contributing to the lateral load resistance of the building which will reduce their capacity to resist lateral loads unless a structural analysis has been prepared conforming to 3408.3.4.

- 3408.6.3 – Reduction of Earthquake Hazards

    1. Parapets: All parapets not meeting the requirements of 780 CMR 1612.0 shall be removed or braced so as to meet the requirements of 780 CMR 1612.7 and, for unreinforced masonry parapets, 780 CMR 3408.6.4.

    2. Masonry walls: All masonry walls shall be connected to floor or roof diaphragms, or other elements providing their lateral support, so as to conform to the requirements of 780 CMR 1612.7. The design force for the connection shall not be less than 100 pounds per foot of wall.

Recommendations

Based on our visual survey of the Strathmore Mill buildings, it is our opinion that the majority of the mill buildings are in relatively good condition considering their age. The majority of the structural deterioration that we observed was to the brick mortar joints throughout the mill complex. In particular, deterioration to the west exterior masonry walls of Build No. 1, 2 and 3. However, the deterioration that we observed is repairable and is not uncommon for buildings of that age.

We have prepared recommendations for two alternatives. Alternative No. 1 outlines our recommendations for structural repairs assuming that all the buildings within the mill complex will be "mothballed" for a three-year period. Alternative No. 2 outlines our recommendations for structural repairs assuming that Building No.'s 1, 4 10 and 11 will be redeveloped and the remainder of the buildings will be "mothballed". Both alternatives assume that Building No. 5A and 8 will be demolished. Therefore, the costs for repairing or maintaining these buildings have not been included.

Mothballing Alternative

This alternative assumes that the buildings within the mill complex will be "mothballed" for a three-year period.

It is difficult to identify the repairs that are necessary to protect the buildings from further deterioration over the next three years, as compared to shorter or longer periods. The most important element when "mothballing" a building is to maintain a weather tight building envelope, which will reduce further deterioration of the building structural systems. Repairs should be made to all damaged masonry wall areas including deteriorated masonry joints. In addition, all building roofs should be inspected. Repairs should be made to damaged sections of roofing, including any flashing. In general, any paths or sources for water infiltration into the building should be eliminated.

For the Strathmore Mill Complex, we recommend that all of the building exterior walls be re-pointed. Although this represents a very significant work effort, repairs of some type are recommended for virtually all of the exterior walls. Since erecting staging, which is necessary for most of the repairs, represents a very significant portion of the repair cost, it is prudent to maximize the value of the staging by performing all of the masonry repairs at once.

In addition, we recommend that a roofing contractor be retained to conduct a thorough inspection of all of the roofing surfaces and make repairs as required. Contractors making limited repairs will not provide a guarantee, and experience has shown that subsequent repairs on roofs this large will be necessary. As a result, this recommendation includes an on-going obligation to monitor and continue to repair the roofing systems over the three-year mothball period.

We estimate that the structural repair costs associated with Alternative No. 1 to be approximately the following:

• Re-pointing of the exterior brick walls.	$1,750,000
• Roofing Inspection & Repairs (allowance)	$ 15,000
Total Estimated Structural Costs for Alternate No. 1	$1,765,000

Phase 1a and 1b

This alternative assumes that Building No. 1, Building No. 4, Building No. 10 and Building No. 11 will be developed. The remaining buildings will be "mothballed" for a three-year period.

The buildings being "mothballed" will need to have weather tight building envelopes as described under the mothballing alternative.

The buildings being developed will require masonry joint re-pointing on the exterior and interior surfaces of the building walls. As described in our survey observations above, the mortar joints are deteriorated and soft in many locations. In addition, the cement and fiberglass coating on the west wall of Building No. 1, in the area of the reported bulge, should be removed and the wall be properly repaired.

The tailrace that runs under Building No. 1 and is reported to have collapsed in several areas must be investigated and repaired.

The roofing on the buildings being developed will need to be removed and replaced. We assumed that new roof sheathing and fiberglass shingles will be installed on Building No. 1 and a new membrane roofing system will be installed on Buildings 4, 10 and 11.

In accordance with Chapter 34 of the Massachusetts Building Code, all masonry walls shall be connected to each floor or roof diaphragm, or other element providing their lateral support for the building. In addition, any roof parapets will have to be strengthened.

Also, a new enclosed pedestrian bridge will be required to provide access to the mill complex. The pedestrian bridge shall extend from Canal Street to the fifth floor of Building No. 1.

We estimate that the structural repair costs associated with Alternative No. 2 to be approximately the following:

"Mothballed" Buildings:

• Re-pointing of the exterior brick walls	$872,000
• Roofing Inspection & Repairs (allowance)	$ 10,000
	$882,000

Buildings 1, 4, 10 and 11 Developed:

• Re-pointing and repairs of the exterior brick walls	$ 866,000
• Re-pointing of interior brick walls	$ 432,000
• Installation of new roofing	$ 430,000
• Chapter 34 Seismic Structural Upgrades	$ 273,000
• New pedestrian bridge and walkway through building No. 1 out to the river (not including architectural enclosure)	$ 500,000
• Collapsed Tailrace Repairs	$ 50,000
	$2,551,000
Total Estimated Structural Costs for Phase 1a and 1b	$3,433,000

Figure 1 - Weil McLain Boilers

Figure 2 - Water In Box Enclosure

Introduction

Allied Consulting Engineering Services (ACES) was contracted by Finegold Alexander and Associates to perform a review of the heating, plumbing, fire protection and electrical systems for the Strathmore Mill per the Feasibility Study Request for Proposal.

ACES conducted a visual site survey on March 25, 2005. While on site parts of all of the buildings were reviewed for the condition of the hvac, plumbing, fire protection and electrical systems. To supplement information gathered during the site visit, ACES spoke with Mr. Bucky Lete, the former caretaker of the building, Mr. Michael Brown, Superintendent of the Turner's Falls Water Department, Mr. Robert Trombley, Water Pollution Control Facility Superintendent, Mr. Peter Clark, President of Swift River Hydro, and had brief conversations with several other people familiar with the facility.

Existing Systems

Heating

The Strathmore is served by a steam heating system. There is an existing boiler room located in Building 5/6. There are currently four oil fired boilers, two (2) HB Smith 28A-8, 1,500 MBH output each, and two (2) Weil McLain 888, 1,904 MBH output each. The Weil McLain boilers appear to be in poor condition. The HB Smith boilers appear to be newer than the Weil McLain boilers. Mr. Lete indicated that when he left the facility in 1990 only one or two of the boilers was functioning properly. Mr. Clark indicated that he believed International Paper installed two new boilers in 2000 or 2001. Based on our observations, the HB Smith boilers are the new boilers. It is our understanding that the heat has been maintained in the facility by these boilers, but it is unclear if both or only one of the boilers is functioning, although both appear to be operable.

We were unable to access and assess the oil tank located in Building 5A. We have been advised that the tank is 10,000 gallons, was installed in the early 1990's, is double wall, and was installed to the applicable codes at the time.

There is a steam distribution piping system and steam heating devices throughout the facility. The piping system appears to have been in use for a long time, and many of the steam heating devices appear quite old. It is our understanding, from Mr. Lete, that there were several steam leaks in the facility, and that there was a significant leak in a 12" distribution main that made maintaining steam pressure problematic. It is not known if any of the leaks have been repaired. It is also our understanding that International Paper had replaced several of the steam traps in the facility. Based on the apparent age of the piping, we would anticipate increased problems with leaks and steam trap failures as the system stays in operation.

Fire Protection

Strathmore is protected throughout by an automatic sprinkler system serving all portions of the building. Although parts of the system appear to be fairly old, the system appears to be in functional condition. According to two sprinkler drawings we received, sprinkler upgrades were made to the third floor of Buildings 1, 3, 7, 10 & 11 in 2003 for the Western Recycling Company. It is unknown if the system has been inspected, tested and maintained in accordance with NFPA 25 – Standard for the Inspection, Testing and Maintenance of Water Based Fire Protection Systems.

Based on drawings provided by the Town, we have determined that the sprinkler system is served by two 8" water lines connected to the town water system. The first line comes from Canal Street and crosses the pedestrian bridge. The 8" pipe crossing the bridge is contained in a boxed enclosure which is in a poor state of repair. Mr. Michael Brown, the Superintendent of the Turners Falls Water Department, indicated

Figure 3 - Indeck Water Meter Location

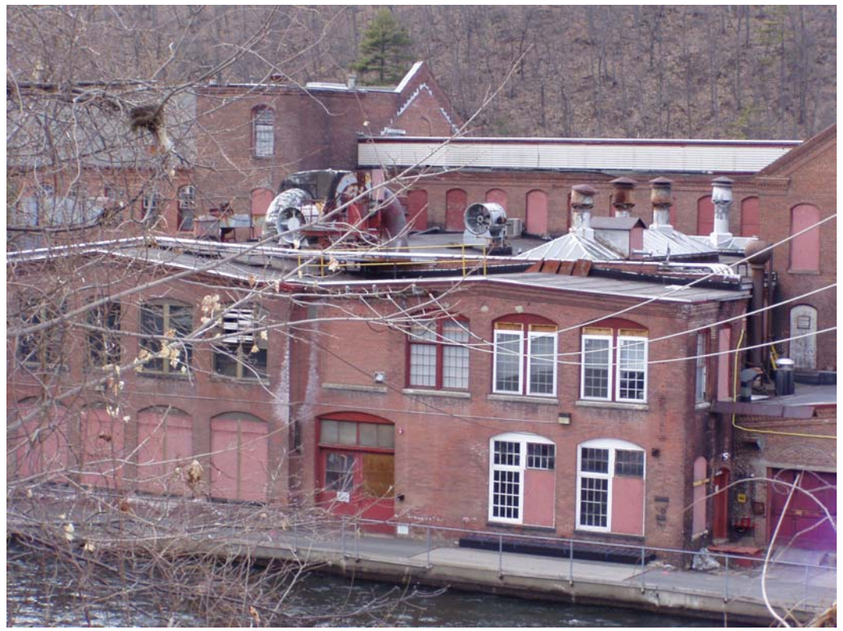


Figure 4 - Power Lines Crossing Canal

that the line froze recently, is currently broken, and is shut off on the Canal Street side of the bridge and is not functional.

The 8" water line from the bridge enters Building #4 at the pedestrian bridge level and drops to a valve room on the second floor. In the valve room the 8" line splits into separate lines for domestic water and fire protection, each with a backflow preventer. The fire protection line feeds the Strathmore sprinkler system and also feeds the exterior yard main.

The other 8" water line comes from a connection to the town water system in Fifth Street, outside the Eesleck Building. The line runs below the right-of-way on the canal side of the buildings. There is a take-off from this line to serve the domestic service of the Esleeck Building. After the Esleeck take-off the 8" line has a backflow preventer in a pit after which it is the dedicated fire protection yard main.

There are several hydrants on the site fed from the yard main. The yard main also feeds the fire protection system for the Indeck Building. Available drawings and discussions with various people indicate that the available pressure at the site is in excess of 100 psi. It is our understanding that Owners of Esleeck, Strathmore and Indeck are responsible for any repairs required to be made to the 8" water lines from Canal Street and Fifth Street.

The fact that the 8" water line crossing the pedestrian bridge is inactive creates a potential safety issue for the building that needs further investigation. The original sprinkler design may have required both 8" lines in order to provide adequate flow for the system. The 8" line crossing the bridge should be repaired or the sprinkler system should be recalculated to ensure that the system will operate as designed.

Plumbing

Domestic water for the Strathmore is also provided from the 8" water main that crosses the pedestrian bridge from Canal Street. This line is not functioning. There is a meter and backflow preventer in the Building 4 valve room.

In addition to feeding the Strathmore, the domestic water also serves the Indeck building. In Building 4 there is a 4" water line that comes from the valve room. This line is labeled as feeding the Indeck Building. This line does not appear to be active as the water meter has been removed. This line runs through Level 2 of Building #4 and drops to the basement where it runs out the wall at the end of Building #1.

Mr. Clark stated that the domestic water for Swift River hydroelectric plant located in Building 20 is also served from the Strathmore water service. Since it is our understanding that the 8" line crossing the pedestrian bridge is inactive, we expect that the domestic water in the Strathmore is and will remain inactive. There must be some crossover allowing at least part of the Strathmore system to be fed from the fire protection yard main. This issue should be reviewed and remedied, as a connection to the yard main creates an illegal cross connection between the fire protection and domestic water systems.

The sanitary discharge from the building flows to a lift station located behind Building #10, from which the effluent is pumped over the pedestrian bridge to a sewer line in Canal Street. Mr. Trombley believes that the pumps and discharge line across the bridge are in poor condition. Mr. Lete stated that the pumps were replaced around 1998, but that the line across the bridge dates back to the 1950's. We could not view the pumps during the site survey. It is our understanding that the Esleeck Building and water treatment plant are not connected to the lift station. We were unable to determine if the Indeck Building is connected to the lift station, but we did see sanitary pipes labeled as being from the Indeck Building. We have also been told by Mr. Clark that the sanitary drainage for the hydro plant is served from the Strathmore sanitary system.

While in the basement of Building #1 and #2 we noted an underground waterway. Mr. Lete explained that this is a weir box, which is part of the canal seepage system. Mr. Lete believes the canal seepage system runs to the river. Mr. Trombley believes the canal seepage system or some portion of it may

Figure 5 - Newer HB Smith Boilers

Figure 6 - 8" Water from Ped. Bridge Entering Building

run to the lift station, and would recommend separation because the sanitary charges for the Strathmore are based on the flow from the lift station.

Electrical

Strathmore and the Swift River hydroelectric plant are both served by a 13.8 kV power service. The power is fed by overhead wires that travel from the Keith Substation on Canal Street over the canal to Building 20. There is a primary switch for the service located within the Swift River Hydro Plant. The electrical one-line diagrams from the 1992 Strathmore Electrical Study that were provided to us indicate that the power plant generator is on the same transformer as a portion of the Strathmore. However a conversation with Mr. Peter Clark has revealed that after a fire in the late 1990's or early 2000's, the electrical was reconfigured so that the generator is now on a separate transformer from the rest of the Strathmore, but they continue to be served by the same main switch.

The age of the electrical system is unknown. The electrical infrastructure in the building appears old and is in various states of repair.

The fire alarm system is an early style addressable system. The system appears to be in proper working order.

Building Reuse

We have been asked to provide information for the two scenarios for redevelopment provided by Finegold Alexander, and to provide information about what would be required for mothballing the building for an extended period of time. The following sections will explain what can be expected to be required for the three options for the future of the building.

Mothballing for Extended Period

Heating

The most important issue related to mothballing the building is the fact that there is a wet sprinkler system throughout the building. In order to prevent freeze-up and failure of the sprinkler system the building will have to be heated to maintain the temperatures throughout above 40ºF. In order to maintain the temperature in all areas of the building above 40ºF, some areas may have to be maintained at temperatures higher than 40ºF.

As previously stated, there are four oil fired boilers serving the building, two of which appear to be in poor condition, and two of which are believed to have been installed in 2000. The exact condition of these boilers is not known, but it is our understanding that these boilers have been used to maintain temperature in past years. The piping in the building is antiquated and may have or may soon develop leaks.

If the existing boilers and steam piping system are to be used to maintain heat in the building, a thorough review of the boilers, piping and steam traps should be performed by a qualified mechanical contractor and boiler technician. Any leaks in the piping should be repaired and the boilers cleaned and tested. The existing oil tank, oil piping, and leak detection systems should also be thoroughly reviewed and tested.

It may be cost effective to provide a new minimal heating system throughout the building to maintain temperature if the mothballing period is to extend for a number of years. Given the age of the steam system, it will probably be unreliable, costly to maintain and may not even be adequately maintaining temperature everywhere in the building at this time. The new system could be forced hot water or gas unit heaters, if gas is brought to the building from Fifth Street. If the existing boilers are found to be in good working order, they can be converted to water and serve new hot water heating devices throughout the

Figure 7 - Underground Waterway

building. Providing a new minimal heating system could prove more reliable and cost effective than maintaining the existing steam system.

We reviewed the option of converting the sprinkler system to a dry system or closing the post indicator valves, draining the system and allowing the system to be manually operated. Both of these options do not seem viable. The current system has alarm check valves in several locations in the building. If these were changed to dry valves, the systems would not be code compliant due to their size and volume, and the spaces with the dry valves would still require heating. The option of draining the system and allowing it to be manually operated is not code compliant, and since there are several post indicator valves serving the buildings, does not allow for a central shut off point. For these reasons we believe maintaining the system as wet type and heating in the building is the only reasonable option.

Throughout the mothballing period, periodic maintenance will be required for the boilers. Consideration should also be given to installing a security system with the ability to provide freeze alarms.

Sprinkler System

The sprinkler system will require periodic inspection, testing and maintenance during the mothballing period. The system should also be inspected and tested in accordance with NFPA 25. This will include but not be limited to annual inspection of the sprinklers, piping, hangers, etc., quarterly testing of alarm devices, and monthly review of pressure gauges to confirm water pressure is maintained.

It is in not known if the inspection, testing and maintenance is up to date. If this cannot be determined it is advisable to perform all of the required items at the start of the mothballing period and address all issues. A qualified sprinkler system testing company should be approached to provide the initial and future inspections.

It is our understanding that the existing 8” water main crossing the pedestrian bridge is currently inactive. This line serves the domestic water and the sprinkler systems. The sprinkler system is also served by the 8” water line from Fifth Street. When the sprinkler system was designed it required both water lines being active to assure adequate flow. The system may not function as designed with the 8” line from Canal Street being non-functional. In order to ensure that the system will operate as designed, either the 8” water line crossing the pedestrian bridge should be repaired, or the system should be recalculated to ensure that it will function properly without this line.

Plumbing Systems

There is a minimal amount of work required on the plumbing systems in order to mothball the building. Temperature in the building will have to be maintained above freezing for the sprinkler system, so freezing of the plumbing lines will not be a concern.

Based on our conversation with Mr. Clark, the Strathmore water system also serves the Swift River Hydro plant. As noted earlier, the 8” water line over the pedestrian bridge is inactive and there should not be any domestic water available at Strathmore at this time. The source of the Swift River domestic water should be investigated to ensure that it is coming from a domestic service that is protected from cross connection with the sprinkler system.

The unused portion of the Strathmore system can be isolated and drained to lower the potential for leaks that would go undetected in an unoccupied building.

All plumbing traps should be filled with glycerin to prevent the backup of sewer gases into the building.

It is our understanding that the Swift River Hydro plant sanitary flows to the lift station. It is advisable to have the lift station be evaluated further to determine if any maintenance or repairs are required.

Figure 8 - Fire Alarm Panel

The sanitary system and lift station should also be investigated further to determine if the canal seepage or any other sources of flow currently drain to the lift station. If it is determined that he lift station does receive flow from the canal seepage system, it may be advisable to investigate separation. The sewer charges for the building are based on flow from the lift station, and canal seepage can be diverted back to the river, which will result in lower sewer charges.

Electrical Systems

There is a minimal amount of work required on the electrical systems in order to mothball the building.

The electrical service feeding the heating system (boilers, condensate pumps, fuel pumps, etc.), the sanitary lift station and fire alarm system will have to remain operational. The panels serving this equipment, as well as the wiring and any disconnect switches, should be inspected to ensure that they are all in safe, good working order. Any problems discovered during this review should be repaired.

The remaining portions of the electrical system can be de-energized and locked out to lower the potential for fire or injury to anyone who may be in the building without authorization. This should be done methodically to ensure that nothing that is required is inadvertently de-energized.

The fire alarm system will require periodic inspection, testing and maintenance during the mothballing period. The system should be inspected and tested in accordance with NFPA 72 – National Fire Alarm Code. This will include but not be limited to inspection and testing of initiating devices, pull stations, batteries and panels.

It is in not known if the inspection, testing and maintenance of the fire alarm system is up to date. If this cannot be determined it is advisable to perform all of the required items at the start of the mothballing period and all address all issues found. Testing should be performed by a qualified fire alarm testing company.

Summary

The following is a summary of the issues recommended to be addressed in order to mothball the building:

- Evaluate the existing boilers and service as required.
- Evaluate oil system and repair as necessary.
- Repair steam leaks in the piping system.
- Review steam traps and replace as necessary.
- Consider a freeze alarm system.
- Consider a minimal new heating system.
- Determine the source of the Swift River domestic water, and separate from any non-potable water source it may be connected to.
- Repair the broken 8” water line crossing the pedestrian bridge.
- Drain the unused portion of the domestic water system.
- Put glycerin in all sanitary traps.
- Test the sprinkler system.
- Evaluate and perform maintenance on the sanitary lift station pumps.
- Review the canal seepage system to determine any connection to the lift station and review separation if applicable.
- Review the electrical serving the boilers and associated components, fire alarm and lift station. Repair as necessary.

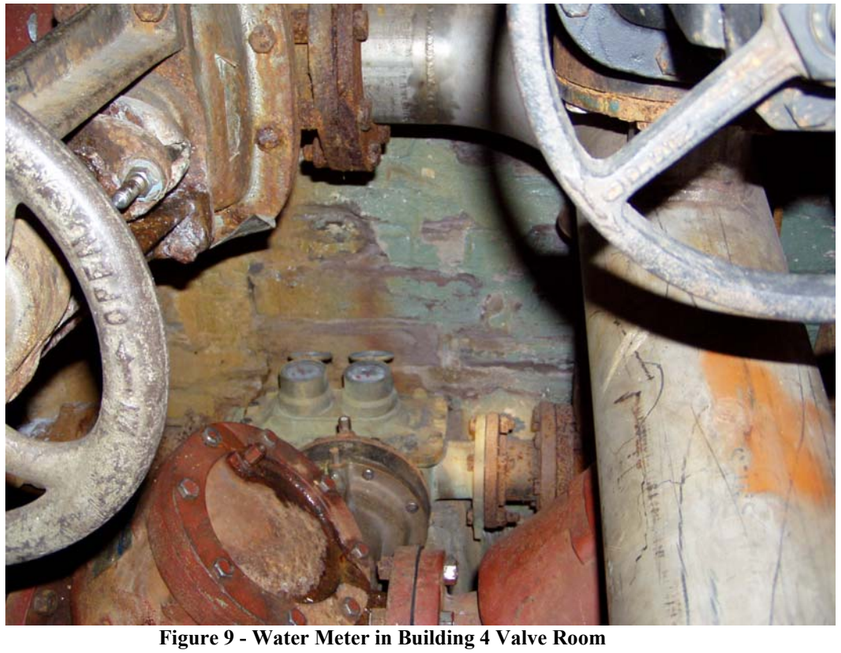


Figure 9 - Water Meter in Building 4 Valve Room

- De-energize any unused portion of the electrical system after careful evaluation of what is connected.
- Test the fire alarm system.

Rehabilitation/Renovation of Portion of Building, Mothballing the Remainder

Two scenarios have been provided for reuse of the building. The two scenarios have spaces earmarked for Artists' Live Work Space, Warehouse/Archive, Industrial/Commercial, Business Center, Artists' Studios and Exhibition Space. The two scenarios also call for a new pedestrian bridge to replace the existing. The following is a discussion of the issues associated with the rehabilitation and reuse of the space.

Heating, Ventilation and Air Conditioning

The existing steam system is near the end of its useful life. Although two of the boilers are relatively new, the piping system, heating devices and steam traps are old, mostly in poor condition and prone to leaks and failures. We do not recommend the reuse of this system as the source of heat for any of the rehabilitated portions of the building.

There is potential for reuse of the boilers and existing steam piping for the mothballed portion of the building, but given the age the system it may prove more cost effective to install a new minimal heating system.

The existing ventilation of the building is either non-existent or not up to current codes for the various proposed occupancies. When the building is rehabilitated new ventilation systems will be required. There is a minimal amount of air conditioning in the building at this time, and it is of no use for the rehabilitation.

There are many alternatives to provide the heating, ventilation and air conditioning for the rehabilitated spaces. Potential systems are 2-pipe fancoils, water source heat pumps, packaged rooftop units and VAV rooftop units. Given the two different occupancies of artist's studios or artists' live/work spaces, and industrial commercial, it might be appropriate to have completely separate systems for the two occupancies, with a boiler room for one and rooftop units for the other. It might also be desirable to have a centralized boiler room and chiller plant or cooling towers. Whatever system is chosen, it should not rely on any of the existing piping or heating devices within the building.

Plumbing

All of the plumbing within the building is old and undocumented. We do not recommend reusing any of this piping for the rehabilitation.

There is an existing 8" domestic water line that enters Building 4. Given the apparent age of the domestic water piping, it likely has lead soldered joints. The piping to serve the rehabilitated areas would begin back
before the meter in the valve room in Building 4. The new system can be individually metered by tenant, building or whatever is most appropriate for the new occupancy. The existing water service should be large enough for any of the proposed occupancies.

The sanitary discharge line for the building currently runs to a lift station that may be in a poor state of repair and is of unknown capacity. Due to the age of the existing sanitary we don't recommend reusing any of the existing piping. The artist live/work spaces would have a higher concentration of bathrooms than are in the current facility, and would most likely require a larger sanitary piping than currently exists. In the commercial/industrial spaces the sanitary requirements may not be dramatically different than what is

Figure 10 - Existing Transformers

Figure 11 - Utilities Crossing Pedestrian Bridge

existing. The existing underground sanitary piping in these areas could be reviewed with a camera to determine if the existing pipe is reusable.

The condition of the existing lift station should be closely evaluated to determine its actual condition and capacity. It may prove to be more cost effective to install a new lift station rather than refurbish and maintain the existing one.

There is no natural gas service at Strathmore, but there is a gas line located in Fifth Street that serves the Eesleck building. There is the potential for gas service at the Strathmore if that is found to be an attractive fuel for the rehabilitation.

Fire Protection

The existing sprinkler and standpipe system is functional but does not conform to current NFPA standards. The sprinkler system will require extensive modifications to upgrade it to meet the current code.

At a minimum, new standpipes will be required in the new stairs, any ¾" piping must be removed and replaced with 1" piping, and some or all of the sprinkler heads may be beyond their allowable life and may require replacing. We recommend that the budget include the cost for a new sprinkler system to serve the renovated portions. This new system would either be connected to the existing yard main or taken from the valve room. The water pressure on the site is adequate and we do not foresee the need for fire pumps.

Electrical

The existing electrical wiring, panels and equipment within Strathmore are of unknown age and questionable condition. They were installed at least 15 years ago. It is unlikely that any of the existing equipment is salvageable. In addition, many components of the system do not conform to the current code. There will be a variety of tenants, and since individual metering will probably be requested, we recommend the installation of new secondary distribution within the portions of the building to be rehabilitated.

The electrical service for Strathmore is shared with Swift River Hydro. The main switch is located in the Swift River building. The age of the existing transformers is unknown. The existing transformers can be inspected by a qualified inspection company, but consideration should be given to separating the rehabilitated areas from the existing transformers, and installing new transformers properly sized to serve the new loads.

The existing fire alarm is functional but does not conform to the current code. Since the occupancy of will be changing in a significant part of the building, the code requirements will be significantly different from what is installed. Therefore, we recommend providing a new, fully addressable fire alarm system with new devices for the rehabilitated portion of the building. This system will be able to be integrated with the existing system to provide monitoring of the mothballed portion of the building.

Pedestrian Bridge

The existing pedestrian bridge currently carries an 8" water main, sewer force main, steam line and two lines from the water treatment plant. The 8" water main is required to serve the domestic water needs of Strathmore. The sewer force main is required to serve the Strathmore lift station. The steam line is believed to be abandoned. The two lines from the water treatment plant are believed to be still in use.

If the pedestrian bridge is replaced and raised, the water, sewer and waste water treatment lines will have to be replaced.

Summary

The following is a summary of the findings with regards to rehabilitating portions of the building:

- A new heating system should be provided for the portions of the building to be rehabilitated.

Figure 12 - Overall View of Strathmore

- New air conditioning will be required in the areas requiring air conditioning.
- A new ventilation system will be required.
- Domestic water to serve the rehabilitated portions should be new from the location of the existing meter.
- Sanitary piping to serve the rehabilitated portions should be new.
- The lift station should be reviewed to determine condition and capacity. Replacement should be considered.
- Natural gas is available in Fifth Street and may be an attractive fuel source for any new heating systems.
- The existing sprinkler system requires extensive modifications to be brought up to code.
- New standpipes will be required in the new stairs.
- New fire protection for the areas to be rehabilitated should be considered.
- New electrical should be considered for the portions to be rehabilitated.
- Consideration should be given to separating the rehabilitated portions from the existing transformers.
- A new fire alarm system should be considered for the portions to be renovated. The new system will monitor the mothballed portion of the building.

Conclusion

All findings in this report are based on information from the field visit, documentation provided to us by the Town of Montague and discussions with people familiar with the building. Information and documentation concerning the Strathmore provided by the Town of Montague and parties cited is considered to be factual. To the extent possible information provided was verified, and in cases where conflicting information was obtained, the situation was evaluated and explanation provided. The conclusions represent Allied Consulting's best professional judgment based on information and data available to us during the course of the assignment.

Demolition

The location of the mill not only creates challenges for redevelopment it also complicates possible demolition activities in the future. The access road is 10 feet wide at its narrowest point. Jackson Demolition, a contractor currently working with FA+A to remove sections of the General Cable Mill in Williamstown Massachusetts, has stated that much of their equipment requires a clear access of 11 feet wide. The mill's proximity to the Connecticut River will require permitting through DEP and require additional work to prevent debris and erosion from spilling into the river. Most of the non-built or open area of the site is on the River side and is not accessible to trucks. Lack of open area may dictate an offsite staging area for the separation of materials for some portion of the removal work. The added traffic from trucks removing debris will cause increased delays on 5th Street and disrupt activities at the Esleeck Mill. Any demolition below the level of the access road should consider structural investigation of the canal wall. It is probable that the heavy masonry walls of the mill are providing some lateral support for the canal. The Hydro Plant must remain intact and active. Careful labor intensive removal of buildings surrounding the hydro plant is required. Careful labor intensive removal is also required in areas housing utilities feeding the Esleeck and Indeck properties to the east and west. It is possible that additional work may be required to protect newly exposed utilities from both demolition activities and freezing weather. These factors and others suggest a high premium for the conceptual cost of demolition. We have identified a cost between $7 and $8 per square foot for demolition. The estimate does not include possible bracing of the canal or HAZ MAT removal. Based on plan information provided by the town and limitated field measurements, we estimate the Mill consist of approximately 263,500 Square Feet, not including the hydro plant. Finegold Alexander + Associates Inc has identified structures 5A and 8 for demolition at a later phase. The two buildings measure approximately 15,000 sf.

Conceptual Demolition Cost

1. Assuming all buildings to be demolished : estimate **$2.1 million**

(Includes Bldgs 1, 2, 3, 3a, 4, 5, 5a, 6, 6a, 7, 8, 10, 11, 11a and courtyards.)

2. Assuming partial demolition of buildings 5a and 8 later phases: estimate **$120,000**

Prior to demolition, hazardous materials must be removed and disposed of in accordance with all state and federal regulations. Tighe and Bond was asked for conceptual cost estimates for HAZ MAT removal:

Conceptual HAZ MAT Removal Cost

1. Assuming all buildings to be demolished or renovated: estimate **$1.85 million**

(Includes Bldgs 1, 2, 3, 3a, 4, 5, 5a, 6, 6a, 7, 8, 10, 11, 11a and courtyards.)

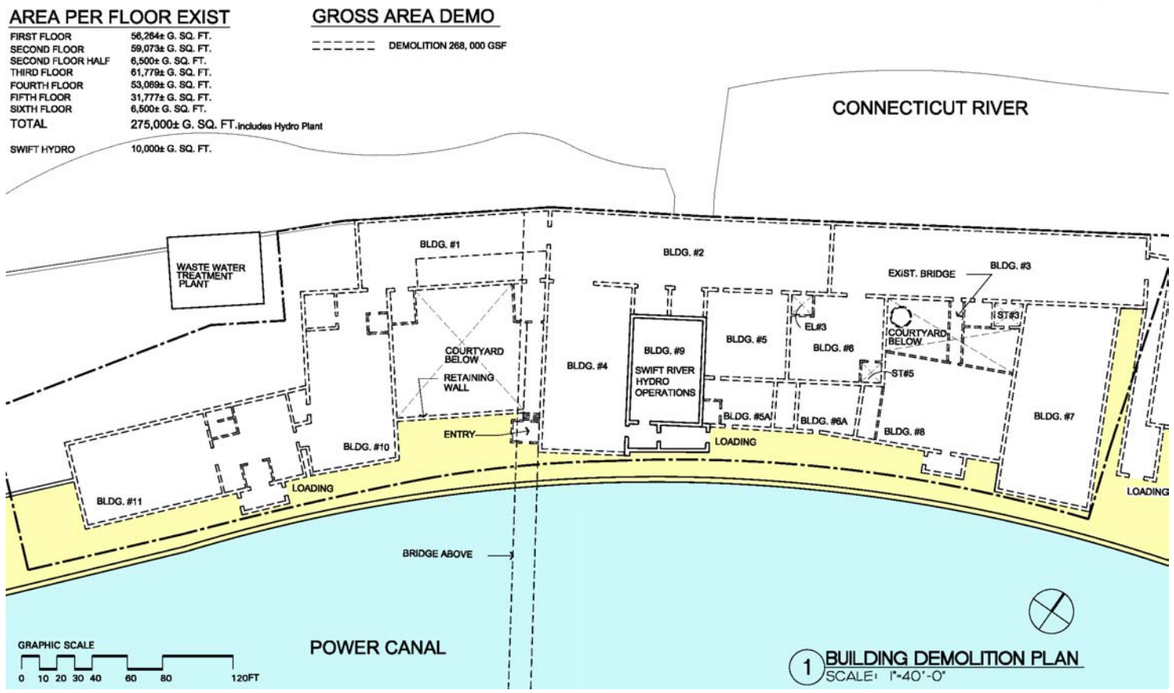
2. Assuming 62,000 nsf (74,400 gsf) of buildings identified for renovation phase 1a: estimate **$470,000**

(Includes all or portions of Bldgs 1, 2, 4, 5, 10, 11, 11a and courtyards.)

3. Assuming 40,000 nsf (48,000 gsf) of buildings identified for renovation phase 1b: estimate **$270,000**

(Includes all or portions of Bldgs 1, 10, 11)

4. Assuming demolition of buildings 5a and 8 later phases: estimate **$100,000**



Note: The costs above are relative to 2005 costs. We recommend a 4% average annual inflation rate for the next three years.

STRATHMORE MILL MOTHBALLING / STABILIZATION RECOMENDATIONS

INTRODUCTION

The following procedures include recommended activities to secure the Strathmore Mill for long-term storage. All mothballing efforts should be coordinated with the local fire department and the department of public safety. It is possible that the local fire department or DPS may require adjustments to these recommendations. The following recommendations are meant as a guide for the development of biddable plans and specifications and are not meant as a final construction document.

GROUNDS

1. All manhole covers, storm drain covers and tunnel or vault covers should be inspected to be sure they are in place and properly secured. Spot weld if necessary.
2. Repaint or flag all fire hydrants and PIV so as to be easily located.
3. Locate and seal all doors, entrances, tunnel manholes, and ventilation shafts to prevent entrance to closed buildings.

BUILDING EXTERIOR

- All windows and doors in wells, basements and first floors up to a height of not less than 12 feet above grade shall be sealed. In addition, seal all windows or openings accessible from porch roofs, entryways, and projecting roofs.

Windows

1. Seal windows with ¾" exterior grade plywood type CDX or 4" CMU block.
2. CMU block should be properly anchored to existing structure and grouted solid. The face of block should be sealed, stained, or painted with a water resistant product. The color should match the exterior of the building.
3. Plywood should be cut to fit inside the window opening, with a max. clearance of 1/8" inch. The gap between the plywood and the opening should not be caulked.
4. Plywood shall be stained on all edges and on both faces with a combination of exterior grade stain and a sealer. Color of the stain shall match the exterior of the building.
5. Plywood shall be secured by 3/8" diameter carriage bolts passing through 2x4 wood braces.
6. For openings over 4' X 8' the contractor should submit drawings for approval of framing method.

Doors

1. All exterior doors should be sealed with ¾" exterior grade plywood, type CDX.
2. Remove and dispose of all screen doors.
3. Remove door knob.
4. Existing lock to remain and be secured in the locked position.
5. Cut plywood to overlap door, hinges, and door jamb.
6. Secure door with min. 2" long galvanized screwnails 6" O.C. around the perimeter of the door into the doorjamb and through the center of the door. If the door is rotted the contractor will provide 2 X 4 framing to replace the door frame.
7. Plywood shall be stained on all edges and both faces with a combination exterior grade stain and sealer. For doors to be permanently sealed, color of stain shall match the building exterior.
8. Emergency access / egress doors shall be provided as determined by the local fire and public safety officials. Each emergency door shall be keyed alike. Keys shall be turned over to the local fire department.
9. Emergency access / egress doors are to be painted fire engine red. The building number and location f the door are to be painted in red on a yellow background.
10. Doors designated emergency access / egress doors shall be shown on the plot plan and a copy of this plot plan shall be given to the local fire department.

Fire escapes / Ladders

1. Remove from all buildings, fire escapes and ladders attached to the building up to a height of 12 feet above grade.

Roofs

1. Patch existing roofs and flashings as required to stop water infiltration into the buildings and the masonry walls. Establish a maintenance and

Building Interior

Plumbing (see more detailed description in MEP Mothballing section)

1. The unused portion of the Strathmore system can be isolated and drained to lower the potential for leaks that would go undetected in an unoccupied building.
2. All plumbing traps should be filled with glycerin to prevent the backup of sewer gases into the building.
3. Drain all water storage tanks and other tanks containing water not in use.
4. The lift station should be evaluated further to determine if any maintenance or repairs are required.

Electrical (see more detailed description in MEP Mothballing section)

- If the wet system is converted to a dry system or a PIV valve is used then the power plant can be shut down.

1. The electrical service feeding the heating system (boilers, condensate pumps, fuel pumps, etc.), the sanitary lift station and fire alarm system will have to remain operational. Maintain electric service to any sump pumps used to keep tunnels, cellars, etc. from flooding.
2. Notify local telephone Company to disconnect phone service.
3. Remove all trash and debris from the mill. Follow all state and federal regulations for proper disposal of materials.
4. Remove all locksets and latching devices from interior doors, which may hinder access / egress.

Elevator Shutdown

1. Provide for elevator shutdown in accordance with 524 CMR 11.00 Elevators placed out of service.

Elevators Placed out of service

a. The owner or his agent shall notify the authorized elevator inspector in writing, giving the date when the elevator will be placed out of service.
b. If the out of service period exceeds 1 year from the date of notice received, the complete installation shall be subject to a complete inspection and safety test before again being placed in service.
c. The car and counterweight shall be located to the lowest landing.
d. All ropes removed.

e. Service switch opened and the cabinet sealed with a pad lock.
f. Where landing doors are in use, the door shall be bolted securely to the closed position from the hoistway side.
g. When landing gates are in place, the landing opening shall be totally enclosed and strongly reinforced.
h. Exception: the lowest landing door shall be locked from the landing side.

Fire Alarm and Fire Protection System (see more detailed description in MEP Mothballing section)

- Note: It is our understanding that the fire department will require the mill's wet sprinkler system to remain active during any mothballing period. This means water, electrical, and oil services to the building must remain active to supply water to the system and prevent sprinkler pipes from freezing. In the short term this scenario may make some sense. However, extended periods may warrant the cost to convert the wet sprinkler system to a dry system. All utility service could be terminated with a dry system. Yet another scenario might allow the interior sprinkler system to be drained to prevent freezing. An exterior PIV valve could be installed. In the event of a fire, the local fire department can open the PIV valve and flood the interior sprinkler system.

1. All fire alarm and fire protection system must remain active.
2. The shutting down of fire sprinklers requires a permit signed by the local fire department. Shutting down fire suppression systems without a permit is in violation of MGL chapter 148, Section 27A and is considered a criminal offense.
3. Water mains supplying fire hydrants, and PIV valves and other fire protection systems shall not be turned off.
4. Do not remove fire hoses, fire detectors or fire extinguishers from the buildings.
5. The sprinkler system will require periodic inspection, testing and maintenance during the mothballing period. The system should also be inspected and tested in accordance with NFPA 25. This will include but not be limited to annual inspection of the sprinklers, piping, hangers, etc., quarterly testing of alarm devices, and monthly review of pressure gauges to confirm water pressure is maintained.

Power Plant (see more detailed description in MEP Mothballing section)

- If the wet sprinkler system must remain in service then the heating system must also remain active to prevent freezing.

1. If the existing boilers and steam piping system are to be used to maintain heat in the building, a thorough review of the boilers, piping and steam traps should be performed by a qualified mechanical contractor and boiler technician. Any leaks in the piping should be repaired and the boilers cleaned and tested. The existing oil tank, oil piping, and leak detection systems should also be thoroughly reviewed and tested.
2. Throughout the mothballing period, periodic maintenance will be required for the boilers. Consideration should also be given to installing a security system with the ability to provide freeze alarms.

- If the wet system is converted to a dry system or a PIV valve is used then the power plant can be shut down.

1. Power down boilers in accordance with manufacture's operating manual.
2. Oil delivery should be scheduled prior to shut down, so that a minimum of oil is left in each tank. The residual oil should be pumped out by the supplier as soon after shutdown as possible.
3. Allow boiler water to return to room temperature and drain the boiler water.
4. Clean both fire and water sides of the boilers to remove scale and soot.
5. Install drying agent in both water and fire sides of units. Leave access manhole covers on the boiler open.
6. Drain deaerator and open inspection doors and rays. Drain all boiler feed pumps and lines.
7. Drain condensate receiver tank. Open manhole on tank.
8. Drain chemical feed pump barrels and dispose of chemicals per state and federal regulations.
9. Drain water softener tank and brine receiver.
10. Shut off valves to main water supply. Drain lines.
11. Drain all treated water from the equipment.
12. Turn off all steam valves to steam distribution lines leading to the various buildings. Disconnect the steam lines at the trap or lowest point to drain condensate from steam lines.
13. Drain down all steam distribution and condensate lines, expansion joints and traps.

Closure Report

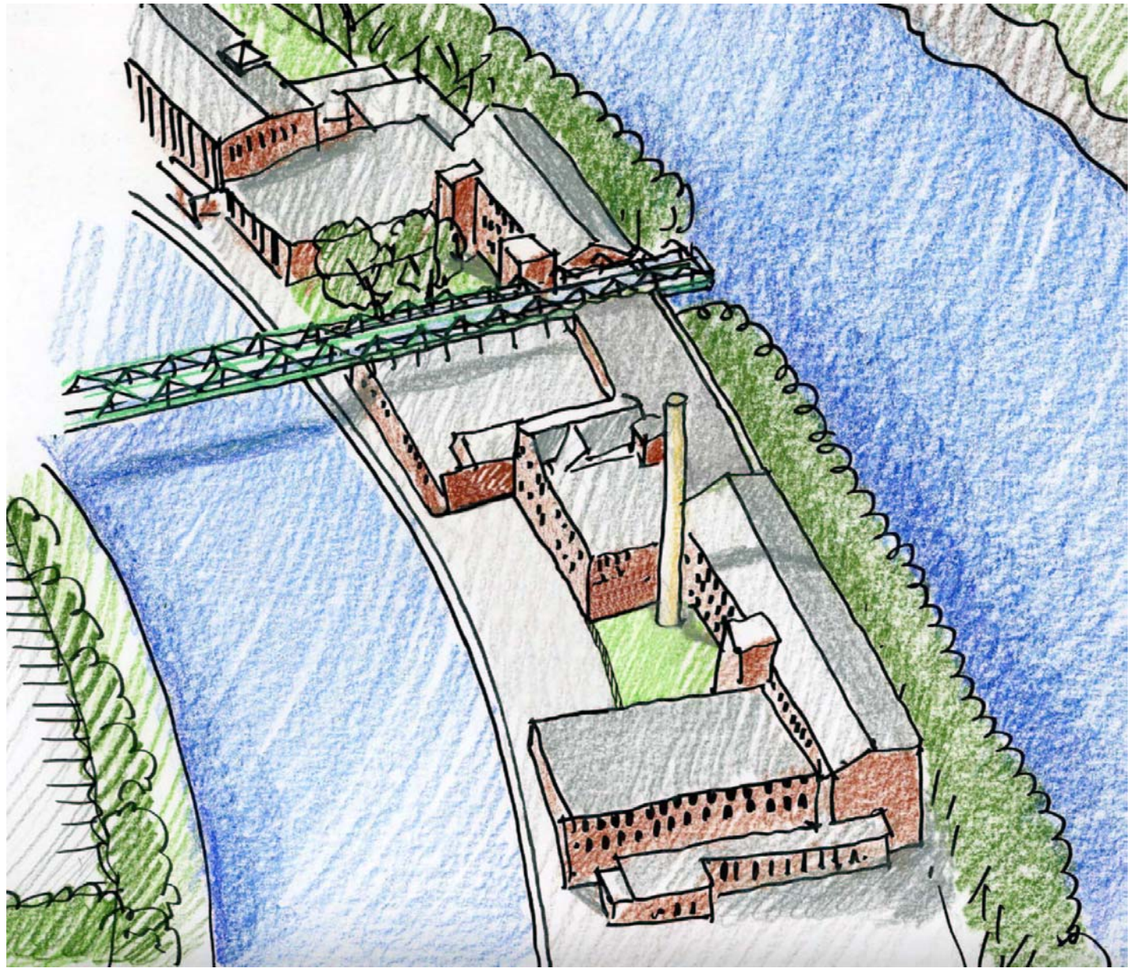
- The contractor should prepare a closure report with the status of all utilities. As a min. the report should provide the following information.

1. Location and status of water shut-off valves
2. Location and status of fire hydrants if applicable.
3. Location of electrical distribution boxes and status.
4. Provide information on fire alarm and fire protection systems still in operation.
5. Locations of sump pumps still in operation and locations of electrical distribution boxes.
6. Status for boarding up windows and doors for each building.
7. Status of outdoor lighting and location of electrical distribution boxes.

Mothballing / Stabilization Costs

Description	Costs
Architectural Closures	$260,000
Repointing	$1,750,000
Roofing	$15000
Mechanical / Plumbing / Fire Protection	$50,000
Total	**$2,075,000**

Estimated Yearly Heating and Electric Bill	**$37,000**



Conclusion

The historic qualities, unique location and dramatic development potential for the Strathmore Mill create an attractive prospect. The consulting team led by Finegold Alexander + Associates has identified the property as a handsome jewel, full of character and uniqueness, as well as being a source of pride and history for the Town of Montague. The mill's charm is what attracted the study team to the project in the first place. The same charm and character will also attract investors.

The mill's location and the scope of work needed to restore and redevelop it create challenges. Any successful redevelopment effort is likely to require public/private partnerships to address the need for infrastructure improvements. The critical items identified in this report for successful redevelopment are access via a new or refurbished pedestrian bridge, development of convenient offsite parking, and a clear agreement with surrounding owners as to access, easements, and utility rights. Local, state and federal government support for Smart Growth and brownfields cleanup and redevelopment, green building design, tax credit programs, and low interest loans for innovative development will be important sources of funding to support a vibrant future for the Strathmore Mill.

The team recognizes that a potential investor may be currently available and perfectly suited to acquire the entire mill. FXM's diligent efforts to identify the market suggest that this probability is very low at this time. It is clear, however, that Turners Falls is an attractive location for artists, creative cluster businesses and innovative manufacturers. The team believes that development of the mill will become viable at some point in the future, as the local market develops. With a more favorable market and with questions of access rights, ownership, and activities at neighboring sites answered, the amount of risk required by investors will be minimized.

To maintain the possibility of redevelopment, further deterioration of the mill must be prevented. To assure that end, it is critical that the Town remain active. The Town should maintain communication with current and future owners of the mill and ensure that codes are enforced to prevent deterioration that could create public safety hazards and make future development more difficult. The Town should review zoning and other regulatory tools to ensure that local regulations express desired outcomes. At the same time, the Town can and should assist and facilitate responsible developers of the property by providing flexibility in code enforcement and permitting where warranted, undertaking infrastructure improvements, lending support for grants and financing, and working with abutters with an eye focused on a positive future for the Strathmore Mill.