Wright's Mill Master Recovery Plan DRAFT

January 2025

Warren, MA

Weston & Sampson SM

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1.0 EXECUTIVE SUMMARY

To be completed after the final public meeting.

2.0 INTRODUCTION

The Town of Warren (herein, the "Town") contracted with Weston & Sampson to develop the Wright's Mill Master Recovery Plan to support the redevelopment of the Wright's Mill Complex in West Warren. This effort was funded by the U.S. Economic Development Administration (EDA). The goals of this plan are to identify opportunities for job creation, economic development, and historic preservation. Wright's Mill is a 600,000-square-foot mill campus located in West Warren. The final plan will identify redevelopment opportunities for the site that will transform the historic Wright's Mill into a vibrant economic hub that supports the overall economic development of the Town and the region.

To identify potential opportunities, this effort begins with an assessment of existing conditions. This information will help the Town identify infrastructure needs and analyze market demand. Based on this initial assessment, three conceptual approaches to mill redevelopment were developed. The Town worked with its consultant to assess these three approaches in terms of their ability to be permitted, infrastructure investment needs, and potential benefits to the Town and region. This project also engaged Warren residents and took advantage of stakeholder expertise.

This Master Recovery Plan includes a summary of the concepts, as well as their potential benefits. The final recommendations include a general approach to redevelopment, including potential funding sources, project phasing, and next steps. This report begins with a brief discussion of the project site, and then summarizes the project team's evaluation of current conditions and is organized as follows:

- **Existing Conditions (see Section 2)**

  Wright's Mill presents an opportunity for the Town of Warren and the Central Massachusetts region to bring a historic mill campus back to economic prominence. The complex is in good condition, considering its age, because the owner has invested in ongoing maintenance. Its remote location, however, presents an economic barrier to redevelopment. Recent market trends, including a nationwide need for housing supply and a greater prevalence of remote work, are trends that could support redevelopment.

- **Infrastructure Capacity and General Condition (see Section 3)**

  The existing condition assessment reveals a need to repair and replace aged infrastructure. While water capacity has been flagged as an investment needed to encourage redevelopment, there appears to be sufficient wastewater capacity to support new uses. The environmental site investigation recommends additional site investigation but did not uncover any areas of particular concern.

- **Assessment of Concepts (see Section 4)**

  Using the information in sections 2 and 3, the team developed three conceptual redevelopment scenarios. These concepts were used to provide a visual demonstration of a redeveloped Wright's' Mill, and for the team to be able to assess and compare approaches related to design,

circulation, and land uses. The goal of this exercise is for the Town of Warren to understand how the different reuse options will benefit the community and region.

- **Next Steps (see Section 5)**

  Section 5 includes a summary of the type of approach that will provide the most benefit to the Town and a list of steps that the Town can take to move the project forward.

2.1. Project Location

The Town of Warren is located midway between Worcester and Springfield, as depicted in Figure 2-1.The Wright's Mill complex is approximately six miles from the Massachusetts Turnpike (I-90) via the Palmer interchange (Exit 63). Wright's Mill is within the area of town referred to as West Warren.

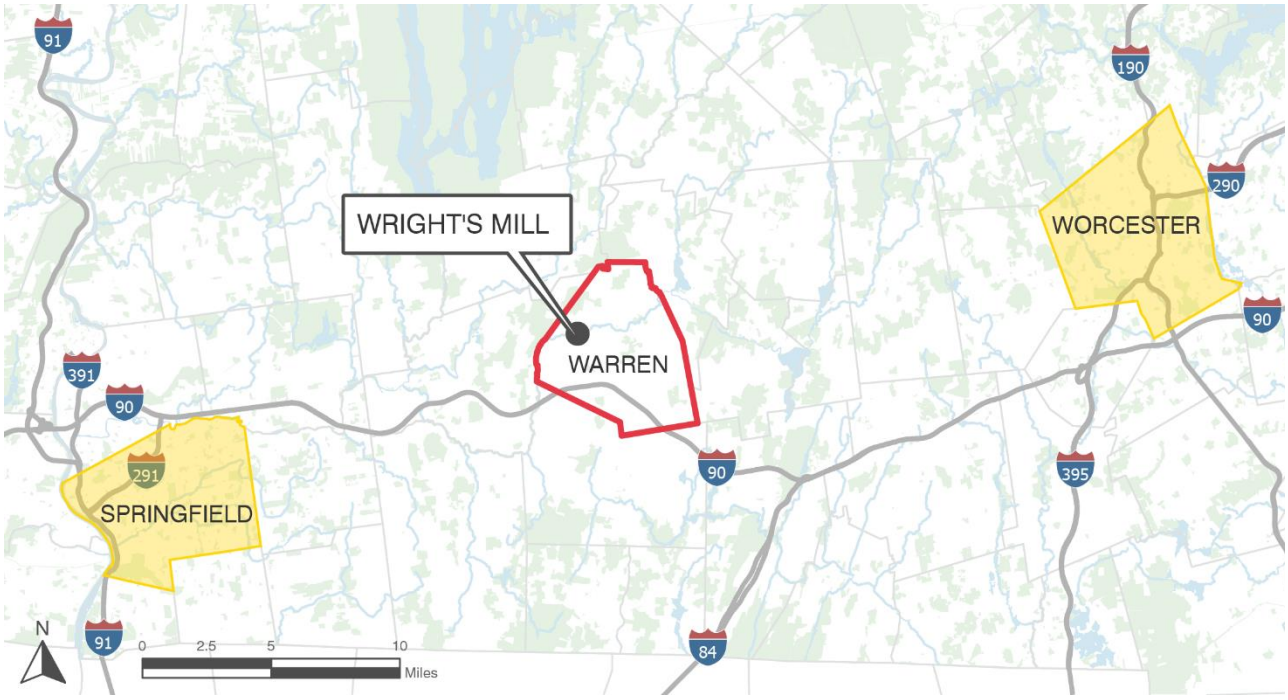


Figure 2-1: Wright's Mill Regional Location Map

Source: Weston & Sampson, MassGIS

2.1.1. Site Details

The Wright's Mill Complex includes 15 buildings that are part of a mill complex that historically produced scythes, a variety of textiles including parachutes for World War II, and, more recently, ribbons. The site is located within the historic village of West Warren. The Quaboag River runs along the northern boundary of the site. The 15 buildings comprising the site are located on three parcels owned by MDP Development through a Limited Liability Corporation. The 15 buildings at Wright's Mill will be referred to in this report by an assigned number. There have been several different numbering schemes used for these buildings, but this study utilizes the one found on a 1999 HSB Industrial Risk Insurance Map, as well as in other materials about the complex and conversations with current owners (HSB Industrial Insurance). Figure 2-2 shows a map of the building numbering. The large building in the figure between

building 11 and 13, with the dark-colored roof that is not numbered is the Hardwick Mill, which is not part of this study.

Figure 2-2: Building Numbering Scheme

Source: Weston & Sampson, MassGIS

The buildings range from single-story, up to five stories tall. Figure 2-3 shows an axonometric diagram of Buildings 2-12, created during operations as Wright's Mill.

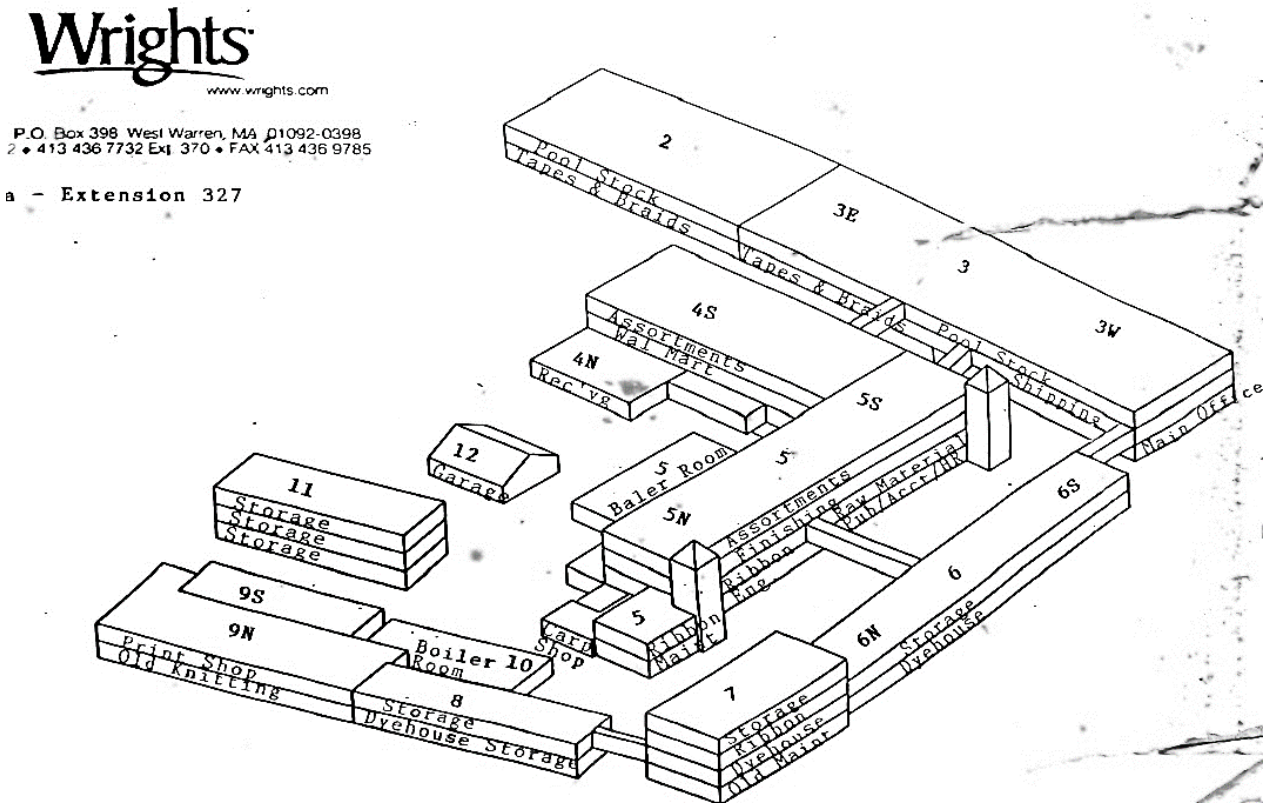


Figure 2-3: Historical Axonometric Diagram

Source: Wrights

Table 2.1 summarizes the address of each parcel in the project, as well as its area and the buildings located on it. In addition to the buildings, the site includes undeveloped acreage, with the largest parcel at 91 South Street encompassing 65 acres. Figure 2-4 shows the boundaries of the parcels.

Table 2.1: Parcel Details

Parcel ID	Address	Buildings	Lot Area (Acres)
21-0-83	50 South Street	15	2.4
21-0-39	91 South Street	3, 2, 6, 7, 4,5 8, 9, 10, 11, 12, 13	65.6
21-0-62	70 Pulaski	1, 14	10.8

Source: MassGIS

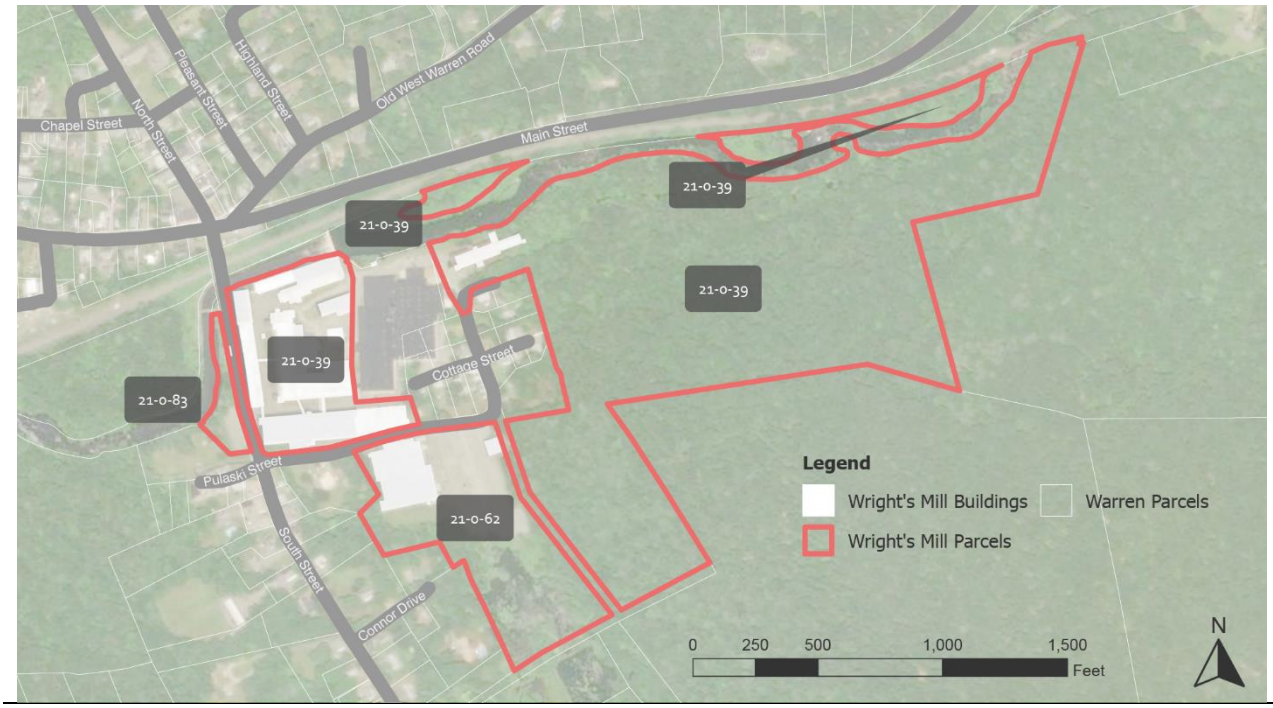


Figure 2-4: Wright's Mill Parcels

Source: Weston & Sampson, MassGIS

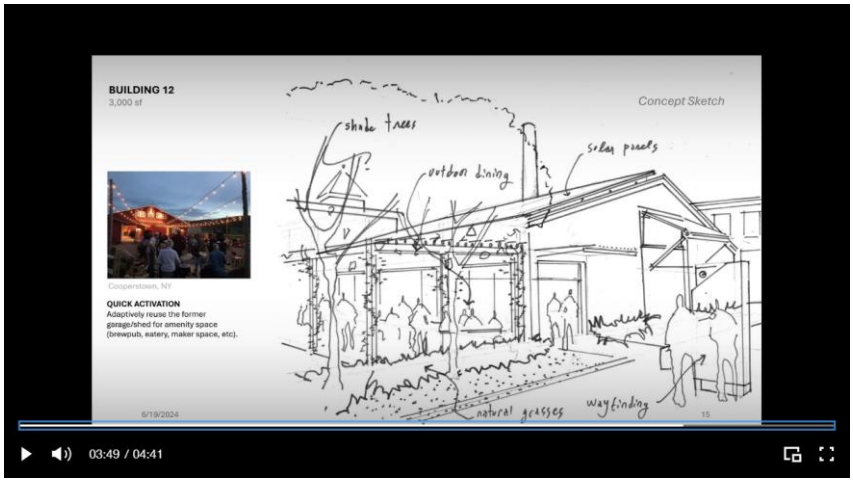
2.2. Public Engagement

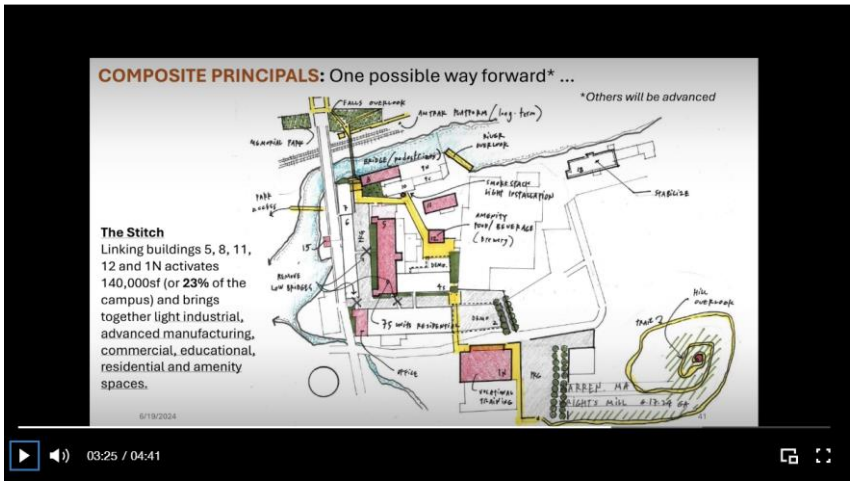
The Wright's Mill project has been informed by extensive public input, received through a community survey and two public workshops. The project website has been utilized to keep the public up to date on the project. During the first third of the project, the team created a video to inform the public about existing conditions findings and suggested approaches to redevelopment.

Project Website

The project's public engagement included a website providing the public with a project overview and status tracker, as well as sections where planning work products were posted throughout the project. The public engagement section of the website provided digital access to public meeting information and the community survey while active.

Project Video





The project website also hosted a project video, released in fall 2024, which provided an overview of existing conditions analysis, and the team's urban design and market research. The video concluded by presenting principles to be considered for redevelopment and to be factored into the final development concepts.

2.2.1. September 18, 2024, Public Meeting

Figure 2-5: Flyer for Public Meeting

The public meeting began with a streamlined presentation on the project, including key findings from the existing conditions research. There were approximately 50 attendees. Many attendees had lived most or all their lives in Town. Many participants had first-hand knowledge of the buildings from former employment or as long-time residents in the area.

Attendees rotated through small group stations where project team members led discussions on the community's preferred project approaches, insights on existing conditions, reflection on economic factors, and redevelopment goals. Each station facilitated in-depth discussions and allowed for written comments.

Common redevelopment themes across the four stations emerged. There was cautious optimism that the campus could be redeveloped. There was a sense of cautious optimism among the attendees about the potential redevelopment of the campus. However, the attendees also recognize the scale of the complex and are mindful of its long-standing vacancy. Attendees familiar with the complex agreed that the buildings appeared to be in decent condition, an observation that was reinforced by the team's inspection and site visit. While a few of the campus structures have been compromised by the passage of time and disuse, most of the buildings are structurally sound, with intact walls, windows, and insulation that protect against weather intrusion, while ongoing investment by the building owners and on-site caretakers ensures they remain clean and climate controlled.

Photos from September 18, 2024 Public Meeting

A need for diversity of housing typologies was identified in both the Town and the larger region, especially for active adult or senior housing. Several of the buildings lend themselves to conversion to residential use, although expansive floor plates for others make conversion to housing less likely. Some concerns were expressed about low-income housing. There was general agreement that a mix of uses would enliven the campus at all times of the day and create more of a destination that could draw people from a wider area. Many participants could cite experiences in other adaptive reuse projects in older industrial uses that have been repositioned into commercially viable places.

Community members identified various economic needs and service gaps, including the desire for more children's activities, daycare centers, gyms, indoor recreation like bowling or arcades, and essential services such as grocery stores, hardware stores, a pharmacy, banks, and urgent care facilities. Despite its great schools and efforts to invest in parks, a major drawback residents identified is the lack of easy access to the Mass Pike, which may hinder the viability of businesses at the redeveloped mill, especially compared to better-connected areas like Sturbridge with similar mill redevelopment opportunities.

Regarding the economic conditions and benefits of potential uses for the Wright's Mill site, there were mixed reactions. Residential development raised concerns about the impact on local services like schools and some expressed concerns about low-income housing. Suggestions for retirement or elderly communities received more interest. There was skepticism about upscale restaurants and breweries being a draw for Warren, given the Town's affordability challenges and the need to draw visitors with disposable income to support those types of ventures in Warren. Renewable energy projects like hydro and solar received some support, but many were wary of more solar farms due to existing projects. Other key developments residents mentioned emerging in the region include a horse racing proposal at the Planning Board and marijuana manufacturing in neighboring Hardwick.

Comments and Questions at Public Meeting # 1

- The mill is historic; it would be great if we could keep it.
- What uses are allowed in the new project?
- Traffic impact will be a big concern.
- Does the new development include affordable housing?
- Aesthetic of the project needs to align with the historic mill.
- Keep open areas and access for pedestrians and bikers.
- What is the timeline for this project?
- Address environmental impacts and possible contamination of the site.
- There should be amenities that benefit the community.
- Will there be opportunities for job creation in this development?
- Can the project include green space for the community to use?
- Concern over parking space availability.
- How will the project impact nearby schools and services?
- Safety during construction and long-term safety of the site is important.
- Consider flood management and stormwater issues.
- What partnerships with local businesses will this project create?
- Retain the building's original charm and history during the renovation.

Through a dot voting exercise, meeting participants identified their top redevelopment goals. These are listed in Figure 2-6.

Dot voting is a quick, visual decision-making method where participants use dots to vote on options or prioritize ideas. It's often used in group settings to identify preferences or focus areas.

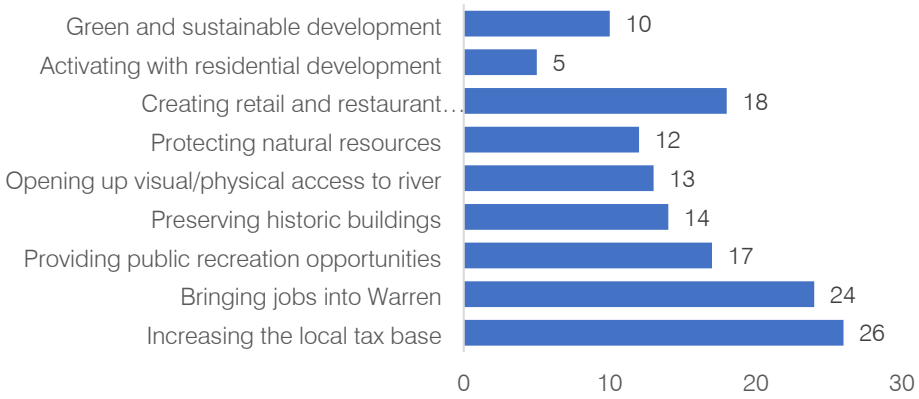


Figure 2-6: Top Redevelopment Goals from the First Public Meeting

2.2.2. Public Survey Summary

The Wright's Mill Master Recovery Plan survey provides a clear picture of the community's views on potential redevelopment. Of the 137 respondents, 27.74% were over the age of 60, with the majority (71.53%) having lived in the area for more than 10 years.

When asked about desired facilities, 71.65% of respondents expressed interest in restaurants, 69.29% wanted retail shops, and 55.91% favored a community center. There was also notable support for fitness centers (49.61%) and light manufacturing (40.94%), but less enthusiasm for art galleries (23.62%) and co-working spaces (22.05%).

Regarding redevelopment priorities, economic development, particularly the creation of jobs and tax revenue, was a significant focus, with 51.56% of respondents marking it as "very important." Green and sustainable development followed closely, with 36.22% of participants rating it highly. Public access to outdoor recreation areas and the river was another key consideration, with 37.01% of respondents placing high importance on this aspect.

Traffic concerns were prevalent, with 32.81% of respondents expressing strong concern about increased traffic due to redevelopment. Noise pollution was also a major worry, as 41.86% of participants rated it a serious issue. Environmental impact and the potential loss of historical value were additional concerns, although to a lesser extent, with 27.91% and 26.98% respectively highlighting these issues.

In conclusion, the survey indicates strong community support for economic growth and public amenities, particularly retail and dining, while also reflecting concerns about traffic, noise, and environmental sustainability in the redevelopment of Wright's Mill.

According to the survey, 55.81% of respondents have never visited Wright's Mill, while others visit less frequently, with 21.71% going less than monthly, 7.75% visiting monthly, 5.43% visiting weekly, and 9.30% visiting daily. Those who do visit often walk or drive by as part of their daily routines, or out of curiosity and historical interest in the mill's significance. Some respondents also engage in recreational activities in the surrounding areas like hiking and biking. However, many noted the mill is private property and generally inaccessible to the public.

2.2.3. February 26, 2025, Public Meeting

This section is to be finalized after the final public engagement.

2.2.4. Stakeholder Meetings

This section is to be finalized after the final public engagement.

The team met with various stakeholders throughout the process and attended local meetings. Below is a list of the meetings that the team attended to present information and gather feedback, and a list of the stakeholders.

Boards and Commissions

- Town of Warren, Board of Selectmen
- Central Massachusetts Regional Planning Council
- Town of Warren Economic Development Committee

Stakeholder Agencies

- National Grid (TBD)
- Town of Warren, Town Administrator
- Town of Warren Highway Supervisor
- US Economic Development Administration, Northern New England Region
- SR Commercial Realty
- Town of Warren Sewer Commission
- West Warren Water District

3.0 EXISTING CONDITIONS

Section 3.0 describes the existing conditions for Wright's Mill. These existing conditions are intended to provide information on the potential costs and opportunities for redevelopment. This section includes the following:

- Environmental conditions
- Infrastructure
- Historic Resources
- Renewable energy
- Zoning and regulatory context
- Socioeconomic and market conditions
- Building assessment

3.1. Environmental Conditions

The existing buildings at the Wright's Mill Complex are spread across four different parcels, all of which consist of developed areas. Wright's Mill is bordered by mixed residential and forested areas to the southeast and west and is bordered by the Quaboag River to the north. Figure 3-1 below outlines the project area and environmental receptors on or near the site. The resource areas discussed in this study are the result of a desktop investigation. A formal onsite wetland delineation would be required to confirm the locations of these resource areas for permitting and design purposes.

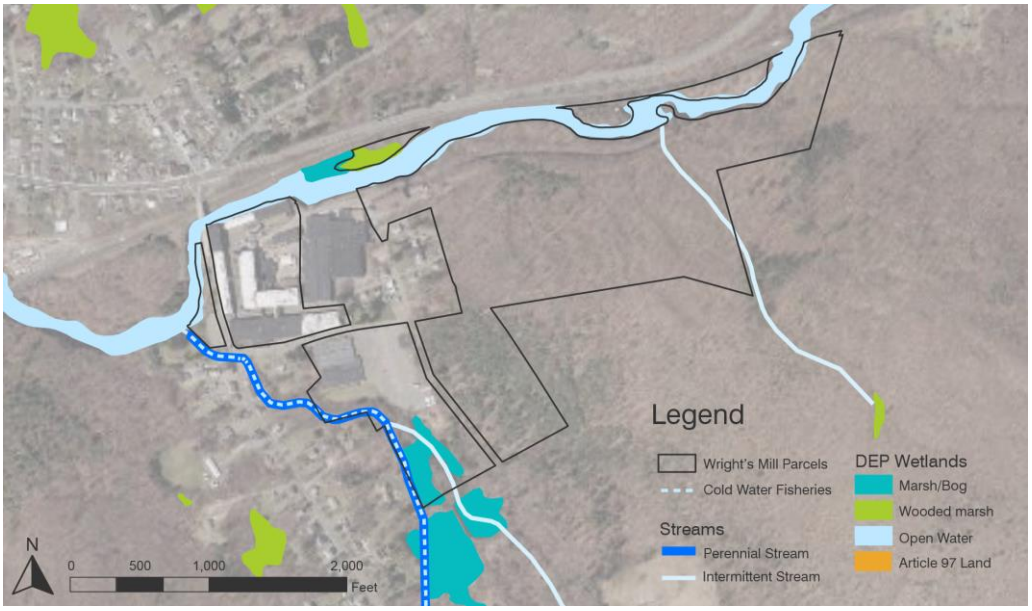


Figure 3-1: Environmental Resource Map

Source: Weston & Sampson, MassGIS

3.1.1. Water Resources

Per Figure 3-1 above and Figure 3-2 below, while there are not any mapped wetland complexes within the mill complex, several small complexes surround the site. To the north, there is an emergent freshwater wetland and a freshwater forested/shrub wetland associated with the Quaboag River. To the south, there is a small freshwater pond and a freshwater emergent wetland (US Fish & Wildlife Service). In addition to wetlands and ponds, there are also several rivers and streams surrounding the site. To the north of the project area is the Quaboag River, a perennial stream that runs east to west along the project site. To the south/southwest of the project site, there is a tributary to the Quaboag River that is mapped as a cold-water fishery. Coldwater fisheries are under the jurisdiction of the Massachusetts Division of Fisheries and Wildlife. To the east, there is an intermittent stream.

Quaboag River

As mentioned, the Quaboag River is a perennial stream that runs from east to west along the northern edge of the project area. The Quaboag River is classified as a 303(d) listed waterway. Per the EPA website:

> A Clean Water Act Section 303(d) listed impaired water is a waterbody that is impaired or threatened and needs a TMDL restoration plan. Once a waterbody is placed on the list of threatened and impaired water, it becomes one of many in line for evaluation and development of a plan for solving the problems (United States Environmental Protection Agency).

Specifically, the Quaboag River is impaired for fish, other aquatic life, and wildlife as well as primary contact recreation. This is due to the dissolved oxygen levels in the river and the presence of Escherichia coli (*E. coli*). To date, there are no plans in place to address these impairments.

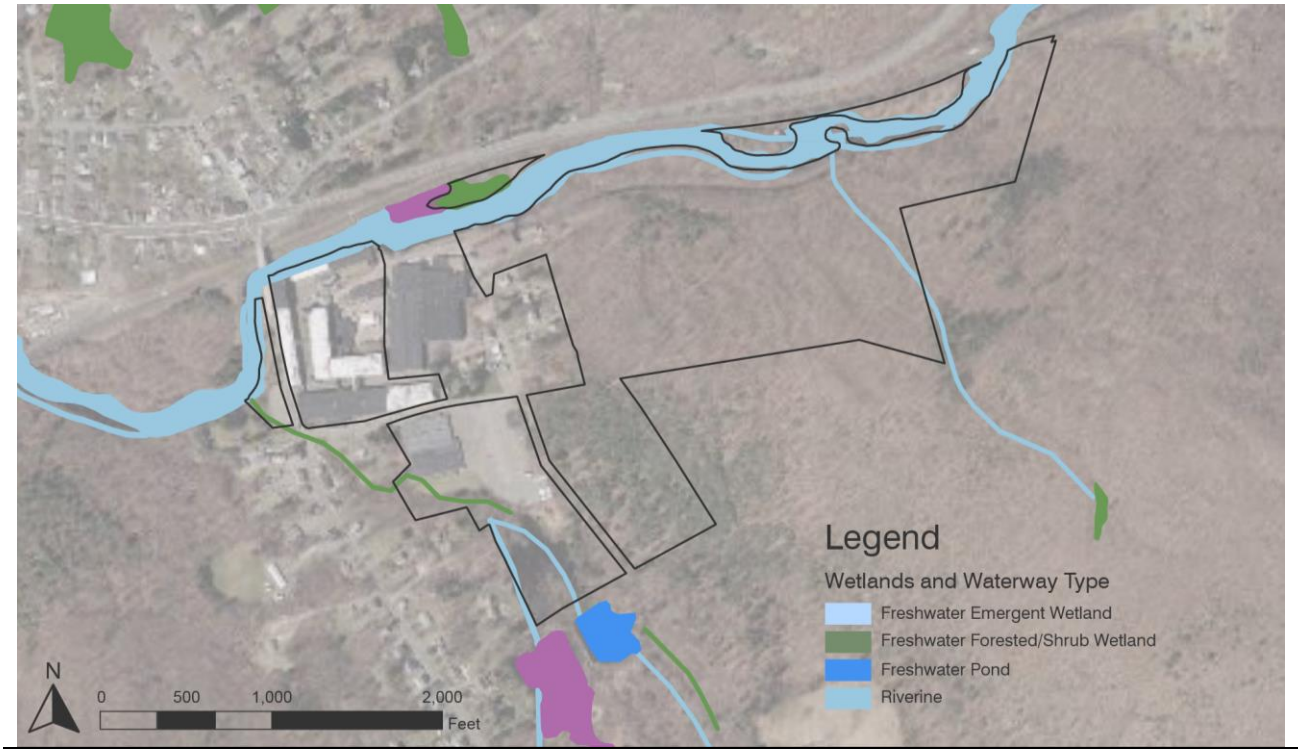


Figure 3-2: National Wetlands Inventory (NWI) Map

Source: Weston & Sampson, MassGIS

3.1.2. Natural Heritage & Endangered Species Habitat (NHESP)

GIS analysis using MassGIS layers shows there is no NHESP priority habitat or estimated habitat within the study area.

3.1.3. Soils & Groundwater

Multiple soil types make up the Wright's Mill study area. These soil types are generally considered appropriate for development. The soil type that makes up the highest percentage of the site is the Brimfield-Brookfield-Rock outcrop complex, with 15 to 35 percent slopes (shown in Figure 3-3 as soil type 101E). This soil type represents most of the undeveloped land east of the Wright's Mill campus. This soil type has a depth-to-restrictive feature of about 10 to 20 inches to lithic, with a high runoff class. The depth to the water table is generally more than 80 inches and this soil type does not typically present a frequency of flooding or ponding. Table 3.1 includes the description of the soil types shown in Figure 3-3.

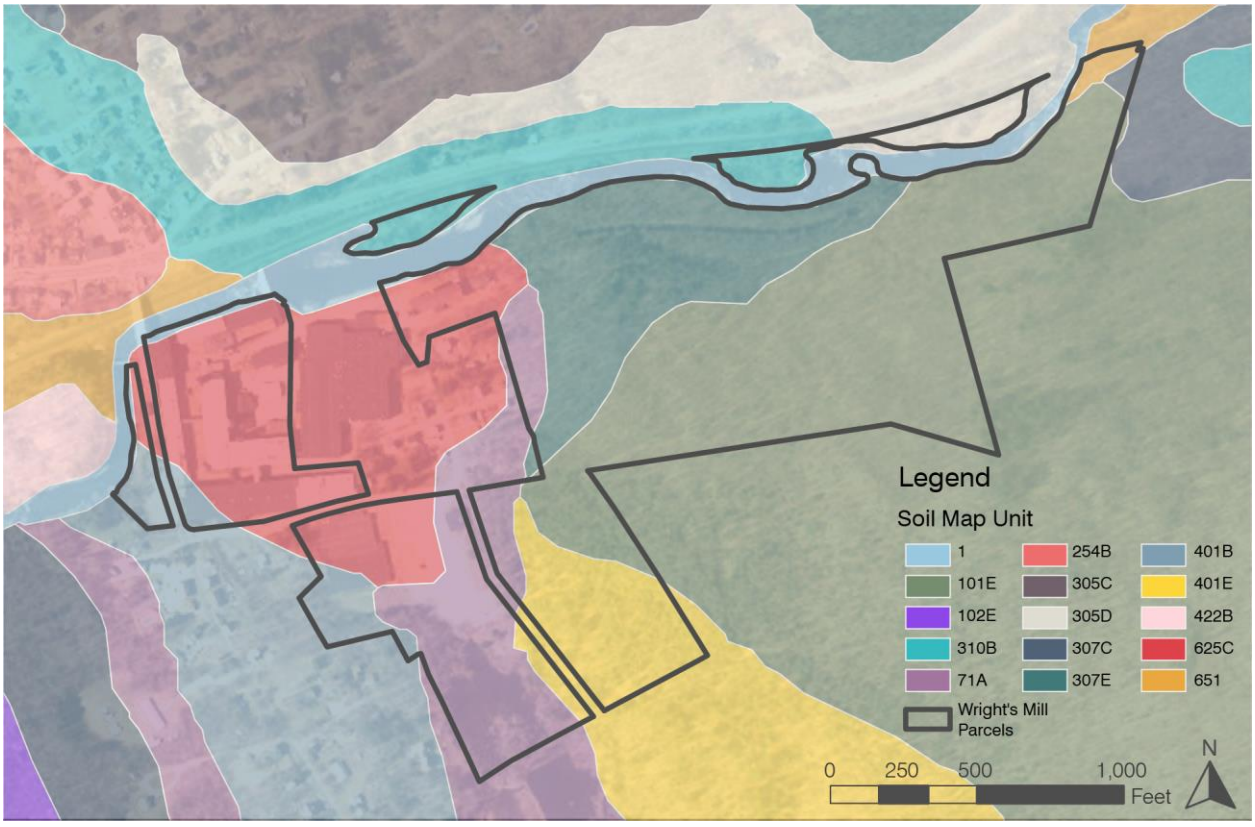


Figure 3-3: Site Soil Map

Source: Weston & Sampson, MassGIS

Other dominant soil types include Paxton fine sandy loam, with 15 to 35 percent slopes (307E), and Hinckley-Urban land complex, with 0 to 15 percent slopes (625C). Please see the table below for soil types present within the project parcels (Natural Resources Conservation Service).

Table 3.1: Soil Types

Soil Type	Slope	Map unit Symbol	Area (SF)	Percentage of Total
Brimfield-Brookfield-Rock outcrop complex	15-35%	101E	1,067,018	34.8%
Hinckley-Urban land complex	0-15%	625C	549,626	17.9%
Paxton fine sandy loam	15-25%	307E	530,082	17.3%
Ridgebury fine sandy loam	0-3%	71A	367,243	12.0%

Table 3.1: Soil Types				
Soil Type	**Slope**	**Map unit Symbol**	**Area (SF)**	**Percentage of Total**
Brookfield fine sandy loam	15-35%	401E	251,029	8.2%
Brookfield fine sandy loam	3-8%	401B	116,328	3.8%
Woodbridge fine sandy loam	3-8%	310B	72,665	2.4%
Paxton fine sandy loam	0-15%	305D	53,598	1.8%
Water	0%	1	33,450	1.1%
Udorthents, smoothed	0%	651	18,133	0.6%
Paxton fine sandy loam, extremely stoney	8-15%	307C	9,525	0.3%

Source: USDA Web Soil Survey

The Wright's Mill Parcels include areas with a range of slopes, with much of the site currently developed on slopes between 3 and 8%, which are well-suited for construction and present minimal challenges for maintenance or expansion (see Figure 3-4). These slopes encompass the existing complex and represent the most favorable areas for future improvements or redevelopment. In contrast, the largest parcel features steep slopes exceeding 25%, which significantly limit development options due to challenges such as restricted buildable land, higher preparation costs, and erosion risks. These steep areas would require advanced engineering solutions and careful planning to ensure stability and compliance with environmental regulations.

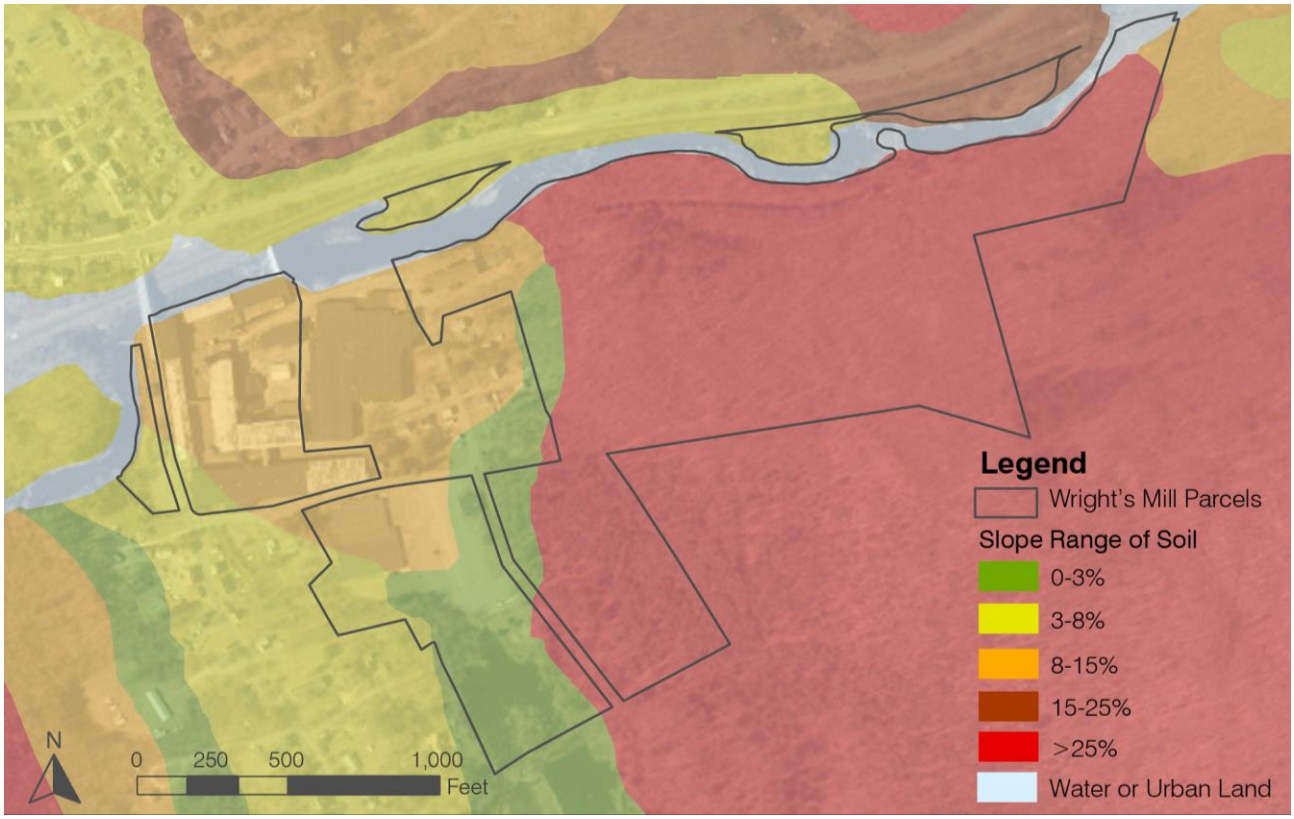


Figure 3-4: Site Slopes

Source: Weston & Sampson, MassGIS

3.1.4. Floodplain

The Wright Parcel is located within areas designated by FEMA Q3 Flood Zones, based on paper Flood Insurance Rate Maps (FIRMs) where National Flood Hazard Layer (NFHL) data is unavailable. Portions of the parcel are within Zone AE, which represents areas with a 1% annual chance of flooding (100-year floodplain) with Base Flood Elevations (BFEs) determined. Other sections fall within Zone X500, indicating a 0.2% annual chance of flooding (500-year floodplain) and moderate flood risk. These flood zone classifications emphasize the parcel's vulnerability to flooding and the necessity of accounting for these risks in planning or development decisions, as shown in Figure 3-5.

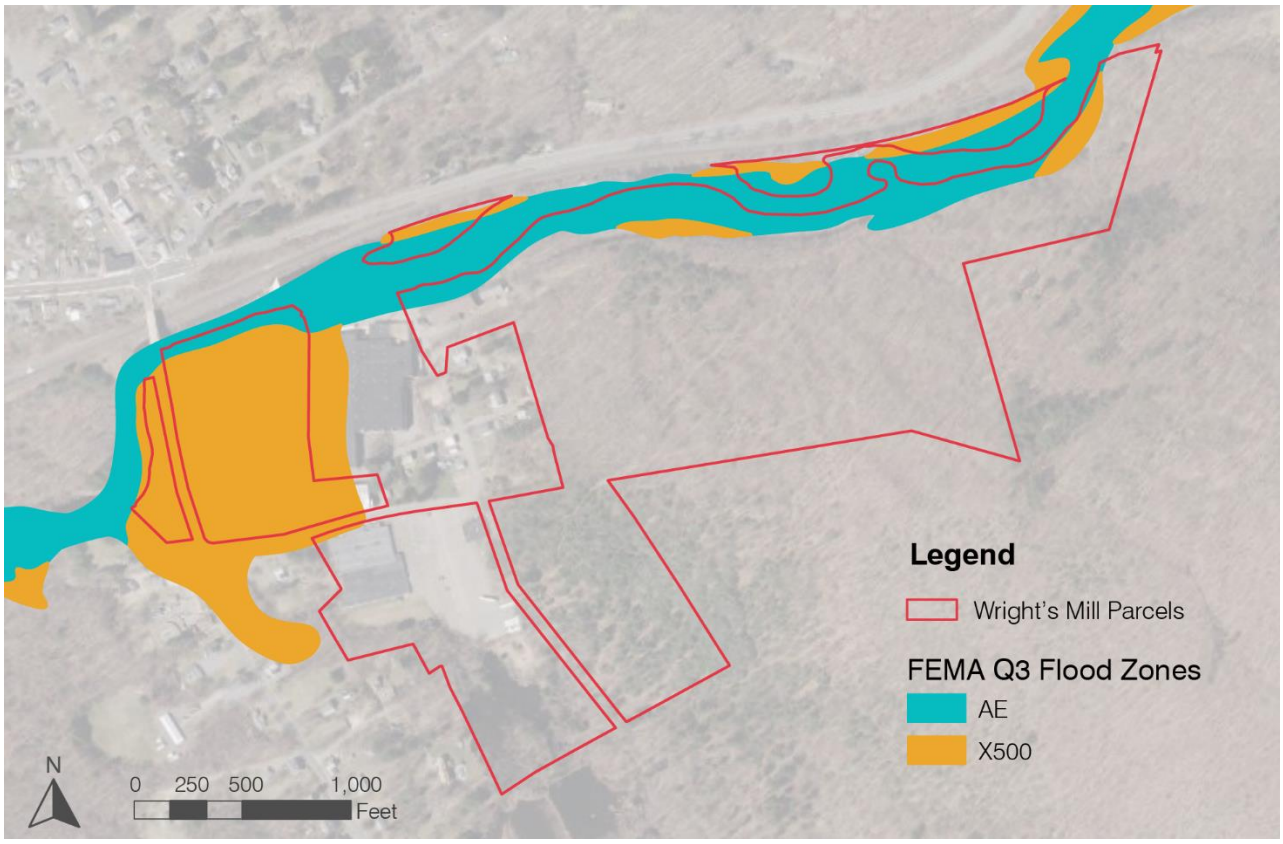


Figure 3-5: Flood Zone Mapping

Source: Weston & Sampson, MassGIS

3.1.5. Hazardous Materials Concerns

Weston & Sampson prepared a Phase I Environmental Site Assessment (ESA) for the Wright's Mill property on behalf of the Town. A map of the limits of the Phase I assessment is shown in Figure 3-6.

A copy of this report is included in Appendix A. The findings are summarized on the following page. The report recommends additional investigation to evaluate the RECs identified in this Phase I ESA.

Figure 3-6: Map of Phase I ESA Subject Property
Source: Weston & Sampson

The earliest identified development of the subject property was as a textile mill, circa the 1880s. The surrounding area has been developed for residential and some commercial use since at least 1889. According to Weston & Sampson's review of Sanborn fire insurance maps, an electronics manufacturing facility and then a chemical corporation used the northeastern portion of the site on the subject property for unknown amounts of time in the 1940s and 1950s. The southern portion of the subject property was developed in the 1960s and 1980s. The subject property appears to be largely unchanged since the 1980s. Below is a summary of the identified recognized environmental conditions, along with historically recognized environmental conditions and business environmental risks.

- **Features of the textile mill included a machine shop, a waste storage area, six large furnaces/boilers, dye houses, and storage.** The facility was noted to be heated via coal and oil. This former industrial use has likely led to undocumented releases. High-risk historical uses at the subject property represent a recognized environmental condition (REC).
- **Several historical releases of oil and/or hazardous materials (OHM) have been identified on and adjoining the subject property.** Applicable release tracking numbers (RTNs) include 1-2013486, 1-2014453, 2-10371, and 2-10529. These releases have achieved the status of no significant risk (NSR) with the Massachusetts Department of Environmental Protection (MassDEP). Releases that have been addressed to the satisfaction of the applicable regulatory authority represent a historically recognized environmental condition (HREC) but not a REC.
- **The local file review and standard environmental records review indicated the potential for perfluoroalkyl and poly-fluoroalkyl substances (PFAS) to be present in groundwater at the subject property.** The potential presence of PFAS at the subject property does not constitute a REC because PFAS are not currently regulated under the Comprehensive Environmental Response, Compensation, and Liability Act CERCLA; however, this does represent a business environmental risk (BER) and should be considered during redevelopment. A Business Environmental Risk (BER) is defined as releases of contaminants not defined as hazardous substances under CERCLA, but for which state or tribal regulations may require cleanup (including 'emerging contaminants'). The presence of PFAS may also require notification and/or management under the Massachusetts Contingency Plan (MCP).
- **Given the age of existing buildings, as well as recorded asbestos abatements conducted at the subject property, it is reasonable to assume that lead-based paint (LBP) and asbestos are present in their intended use.** While they are not within the scope of a Phase I ESA, these materials would require appropriate management under state and federal regulations during any future redevelopment actions undertaken at the subject property, and their presence represents a BER.

The report recommends additional investigation to evaluate the RECs identified in this Phase I ESA. The presence of known contaminants, even if closed under the MCP, may impact development scenarios. Additional investigation is recommended and discussed in the next steps section at the end of the report. Generally, the recommendation is for:

- Hazardous building materials assessment.
- Phase II investigation to identify potential indoor air quality issues.
- Additional investigation on the vacant property to rule out illegal dumping.

3.2. Infrastructure Capacity and General Condition

This section uses local and state data to summarize existing water, wastewater, stormwater, transportation, gas, electric, broadband, and cellular services. Our team has interviewed the staff from the Warren Water District Administrator, and the Sewer Commission to collect their input on the condition and capacity of water and wastewater as well as data, reports, and plans they may have related to these services.

3.2.1. Water

The Wright's Mill Complex is served by the West Warren Water District (Local Hazard Mitigation Team and Central Massachusetts Regional Planning Commission). The West Warren Water District is served by two gravity-packed wells off Route 19, which are connected to a water storage tank that then provides water to users of the water district (West Warren Water District). According to Town staff, there appears to be leakage occurring in the supply lines somewhere in the water district, as the Town is pumping 80,000 -100,000 gallons per day to the water tank, metered users are only using 60,000 gallons per day. A newer 12-inch ductile iron water pipe runs along South Street adjacent to the Wright's Mill site. The site itself is serviced by an undersized, aging, and deteriorating piping susceptible to breaks. The Town has applied for a grant for Pulaski and Cottage Streets that would install a new properly sized water main through the study area (Town of Warren, Utility Conversation). This upgraded water main could be utilized for redevelopment at the Wright's Mill complex, though water availability would need to be addressed. Given the sprinkler needs of any redevelopment, the water system's existing capacity would be the biggest constraint, but the site could be served by a single on-site water tank.

3.2.2. Wastewater

The mill is serviced by 8-inch asbestos cement and 10-inch polyvinyl chloride piping for wastewater. The collection system for the mill also accepts flows from Pulaski Street and Cottage Street. There is a Town-owned and operated pumping station on site. Sanitary sewer flows are pumped from the site, across the Quaboag River via a bridge, to the gravity sewer trunk line, which leads to the Town's sewage treatment plant. This plant is approximately half a mile down the river and has significant excess capacity. The facility has a permitted capacity of 1.2 million gallons per day as it was sized and constructed when the mill was in operation, but typically treats just 0.2 to 0.3 million gallons per day, although flows may increase during heavy rainfall or storm events. (Town of Warren, Utility Conversation).

3.2.3. Stormwater

A visual inspection at the Wright's Mill Complex by Weston & Sampson in June 2024 indicated that there is limited formal drainage on site. Structures are undersized and lack sumps for sediment collection or hoods for trapping oils. Visible catch basin piping may be undersized at 6 and 8 inches in diameter, given the size of the site that is being served by the drainage system. Piped storm drainage outlet locations are unknown but likely discharge to the Quaboag River. Most building roof leaders discharge to the ground surface; however, several are piped underground and if connected to the sanitary sewer system would need to be disconnected and redirected. Massachusetts Department of Environmental Protection (DEP) encourages and sometimes mandates towns to eliminate such connections so that clean water is not delivered to wastewater treatment facilities for unnecessary treatment. According to the mill complex caretaker, flows from some roof drains discharge to the surface and existing grading directs those flows to adjacent private buildings, where stone channels sometimes are overwhelmed. Flooding is an issue on Pulaski Street, as well as in the parking lot between buildings 1 and 14 (Lesley, June Site Visit).

3.2.4. Gas

The mill is served by National Grid for gas service (MassGIS). There is gas access throughout the site. The Wright's Mill is served by recently installed 4- to 6-inch gas plastic mains. In other locations within Warren, National Grid has reported that the gas plastic pipes are brittle and prioritized for replacement (Town of Warren, Utility Conversation).

3.2.5. Electric

The site is also served by National Grid for electric service (MassGIS). Electric service enters the site via overhead wires adjacent to Building 11, but within the complex electric service is assumed to be underground since no overhead wires were observed.

3.2.6. Broadband/Cellular

According to the Massachusetts Broadband Institute, the Wright's Mill complex is served by Xfinity Cable Service with 1200/35 Mbps speeds, while T-Mobile provides licensed fixed wireless service at 2Mbps. (Massachusetts Broadband Institute). Verizon recently received a through the state's Broadband Infrastructure Gap Network Program, to expand high-speed broadband access in several rural communities, including Warren (Massachusetts Broadband Institute).

3.2.7. Utility Tunnels/Steam Tunnels

A utility tunnel crosses Pulaski Street, connecting Building 2 to Building 1 (Lesley, June Site Visit).

3.2.8. Transportation

The following section discusses transportation infrastructure and services available to Wright's Mill and the surrounding areas. Roadway systems as well as the availability of public transportation, and private transportation services are included.

Travel Modes

Census data indicates that Warren residents generally commute to work by personal vehicle or work from home. A large majority (92.7%) commute by car, truck, or van, and 7.3 % work from home. The

mean travel time to work for Warren residents was 37.3 minutes (U.S Census bureau). This aligns with Census commuting data that shows approximately 8.7% of Warren commute to primary jobs[1] in Warren, and 8.2% and 7.1% commute to Worcester and Boston respectively. Smaller percentages of residents, around 3.5%, commute to nearby towns such as Palmer and Sturbridge, likely due to fewer employment opportunities in these areas. These statistics highlight the community's dependence on personal transportation and the significant time invested in daily commutes (U.S. Census Bureau).

Crash Data

From 2014 - 2023, Warren had 588 total vehicle crashes, including five fatalities, nine serious injuries, and 87 minor injuries. In comparison, West Brookfield had just 205 over the same period, while Ware had 1,989, Palmer had 2,015, Brookfield 362 and Brimfield had 729, which appear to be partially a function of population and highway proximity. Warren's crash numbers are in the midrange of the surrounding towns, Two of Warren's crashes occurred at the intersection of Route 67 and South Street, just across the river from the Wright's Mill complex (Massachusetts DOT).

Transportation Infrastructure and Services

South Street is the major road running along Wright's Mill that connects it to Main Street, the commercial heart of West Warren, and the corridor leading to the Town of Warren proper. Concrete sidewalks and pedestrian ramps exist along the east side of South Street and provide a safe pedestrian route to the Main Street sidewalk system and the amenities in the West Warren village.

There are bridges on South Street and Pulaski Street that the Town has identified for repair. The Town has begun construction on repairs to the Pulaski Street Bridge and has begun the design of repairs to the South Street Bridge.

Warren is not currently served by any public transportation systems, and no plans currently exist to introduce public transit systems to Warren, which means there is no way to travel from Warren to Springfield or Worcester without private transportation (e.g., personal vehicle, ride-share, etc.). No coach bus service exists within Warren or Palmer.

The Boston and Albany Railroad mainline, owned by CSX Transportation, runs directly through the villages of Warren and West Warren. These rail lines generally carry freight traffic but also carry Amtrak's Lake Shore Limited route, which runs once a day in each direction between Chicago and Boston, with the closest stop to Warren being in Springfield. The Town's 2006 Master Plan indicates a desire from residents, when surveyed about favored alternative modes of transport, for a commuter rail link (Town of Warren).

The Massachusetts Department of Transportation (MassDOT) has conducted several studies on the feasibility and design options for an East-West Rail Passenger Service. Some of the potential designs would utilize the rail lines that run immediately adjacent to Wright's Mill, but the closest possible stops would be in Palmer, Springfield, and Worcester, with Palmer being a 16-minute drive from the Wright's Mill Complex. Significant infrastructure upgrades and maintenance protocols would be required to utilize the tracks for daily passenger rail. Several alternatives for corridor type and track alignment exist, including running service along the existing CSX corridor and tracks, using the CSX corridor with new separate tracks, or a separate corridor running along the I-90 Right of Way, that would only serve

[1] The U.S. Census Bureau defines a "primary job" for an individual is defined as the job that earned the individual the most money.

downtown stations. The options utilizing the existing CSX corridor would run along the CSX tracks that run adjacent to the Wright's Mill complex. Total capital costs in 2020 dollars are estimated to range from $2.4 billion to $4.6 billion, depending on the alternative chosen. To proceed, MassDOT needs to continue discussions with CSX to determine whether use of their right-of-way is feasible, conduct further analyses of economic and community impacts, establish a governance entity for operating rail service in Western Massachusetts, and identify funding sources (Massachusetts DOT).

3.3. Historic Resources

The Wright's Mill complex is a historic industrial site that illuminates the history of manufacturing in Central Massachusetts that stretches from the early 1800s to the 2000s. The buildings are a large and generally well-maintained complex of 19th-century mill buildings, that have been kept in good condition (Massachusetts Department of Conservation & Recreation and Central Massachusetts Regional Planning Commission).

Figure 3-7: View of West Warren, 1879

Source: O.H. Bailey & Co via Warren Reconnaissance Report

The site was first used for industrial purposes in 1812 when scythe manufacturing began on the site. The mill complex would shift towards textile manufacturing in the 19th century and by 1889, Warren's major four mills, owned by Bliss & Fabyan of Boston are described as including 732 looms, and 44 houses with 119 tenements (Massachusetts Historical Commission). The Warren Cotton Mills company opened nearby in 1844 and built Mill #1 on the site of current Building 5 in 1854.

The oldest building in the current complex is Building 13, which different sources record as built in 1861, 1862, or 1866. This is the earliest known factory building still standing in Warren and has the appearance of smaller New England mills from the early to mid-19th century. Similarly significant is Building 5, which was built in 1880, replacing an earlier mill on its site. The building was built in the Romanesque Revival style and has three stair towers, as well as pilasters and panel treatments that aren't seen in mill buildings built later when the design of factories became driven by insurance requirements for fireproof construction. An image of the site as of 1870 is shown in the bottom right of Figure 3-7.

Thorndike Mills bought the company in 1898 but went bankrupt during the Depression in 1929. The William E. Wright Company bought the property in 1934 and continued manufacturing textiles on the site. During World War II, the campus manufactured parachutes, as well as military equipment (Central Massachusetts Regional Planning Commission). In the early 2000s, the site produced trimmings such as ribbon, trim, thread, and zippers, but the William E. Wright company shifted operations to Antioch, Tennessee in 2008 (O'Rourke; Semon).

The mill complex itself, as well as several of its buildings, are listed on the Massachusetts Historic Commission (MHC)'s Inventory of Historic and Archaeological Assets of the Commonwealth (Massachusetts Historical Commission). MACRIS data is compiled from a variety of records and files maintained by the Massachusetts Historical Commission (MHC), including but not limited to, the Inventory of Historic Assets of the Commonwealth, National Register of Historic Places nominations,

State Register of Historic Places listings, and local historic district study reports. The Wright's Mill sites do not currently have any official designations on the National or State Register of Historic Places, though this was a recommended action as early as 2007 when the Town's resources were documented as part of the Massachusetts Heritage Landscape Inventory Program. Although not currently listed on the National or State Register, the complex may be eligible for inclusion due to its historical significance, architectural integrity, and potential to contribute to the understanding of 19th-century industrial development. The designation remains an option to consider, as it would open up subsidies in the form of federal and state tax credits for redevelopment. National Register designation on its own does not impose any regulations because the Town has not adopted a local historic district ordinance or demolition delay bylaw, and National Register status itself does not inherently regulate private property owners. Federal funding or permitting for redevelopment would require compliance with the Section 106 process, and seeking historic tax credits would introduce additional requirements related to design and materials following the Secretary of the Interior's Standards.

Table 3.2 documents the historic resources at Wright's Mill listed on MHC's MACRIS database, as well as the corresponding building names as described in this report.

Table 3.2: MHC Resources at Wright's Mill

MHC ID	Historic Resource Name	Current Building Identifier
WRR.C	Warren Cotton Mills Area	Not applicable
WRR.102	Warren Cotton Mills Business Office	Building 15
WRR.103	Warren Cotton Mill Weaving Mill	Building 3
WRR.104	Mill #1	Building 5
WRR.105	Warren Cotton Mills Dye House	Buildings 7 & 8
WRR.107	Warren Cotton Mill #2	Building 13

Source: MACRIS, Massachusetts Historical Commission, Weston & Sampson

3.4. Renewable Energy Feasibility

Weston & Sampson assessed opportunities for renewable energy at the site. The team assessed the conceptual feasibility of three renewable energy technologies—solar photovoltaic (PV), geothermal, and hydroelectric energy generation at the Wright's Mill complex. Implementation of any of these three renewable technologies is technically feasible based on the existing building information. There are varying degrees of economic viability for each renewable energy option, and understanding these is essential to determining the most feasible approach for integration into the redevelopment plan. This analysis also reviewed several incentive programs for conversion to renewable energy.

3.4.1. Solar

The Town of Warren is located within National Grid's electric service territory, where National Grid is obligated to interconnect solar PV systems following standards and tariffs approved by the commonwealth's Department of Public Utilities. There have been numerous programs implemented since 2007 to incentivize and support the installation and adoption of solar PV in Massachusetts. The current program is the Solar Massachusetts Renewable Target (SMART) Program and is regulated through the Massachusetts Department of Energy Resources (DOER). The solar PV market is considered mature in Massachusetts with over 54,000 installations approved under the SMART program. However, there is an opportunity for additional solar within the Town of Warren. As of April 25, 2024, there was an available capacity of 160,790 kilowatts. Also, according to the Massachusetts System of Assurance of Net Metering Eligibility, the Town has not used any of its 10-megawatt public entity net metering cap (MassACA).

3.4.2. Geothermal or Ground Source Heat Pumps

A geothermal or ground source heat pump (GSHP) utilizes the constant temperature of the ground below the frost line or water body, to provide heat, or to discharge heat. The groundwater loop temperature is expected to be on the order of 50 degrees Fahrenheit year-round. Because the GSHP process uses heat and cooling from the ground or a water body, it is considered a renewable form of heating and cooling. A heat exchange system connected to the river surface water is relatively simple and can achieve heating and cooling needs without drilling geothermal wells. The flow of water from the Quaboag River could serve as a heat source and sink for a geothermal heat exchange system. This technology is not anticipated to significantly impact the temperature of the Quaboag River.

3.4.3. Hydroelectric

There is historical use of hydroelectric generation associated with the existing flood protection structure. Based on the 1964 As-Built Drawings from the Army Corp of Engineers, there is an existing intake structure along the concrete wall at Building 7 that feeds into the original waterwheel in Building 1, with a tailrace that discharges downstream, back to the Quaboag River, beneath Building 11. The Massachusetts Department of Public Utilities accepts small hydroelectric program applications for net metering through MassACA (The Massachusetts System of Assurance of Net Metering Eligibility). Approximately 17.8 megawatts are available in National Grid service territories, which includes Wright's Mill.

3.5. Potential Zoning Constraints

This section discusses existing zoning. Buildings at the Wright's Mill Complex are sited across four different parcels within the Mill Conversion Overlay District (MCOD), with the Village District as the underlying zone. A zoning overlay district is implemented generally with the underlying zone's regulations in place while imposing additional regulations or allowing additional flexibility. In this case, the MCOD supersedes the underlying Village District and excludes certain Special Permits. Following Warren's Zoning Bylaw Section 13, a special permit and site plan approval will be required by the Planning Board for redevelopment or conversion of uses at the existing mill (Town of Warren). According to the Zoning Bylaw Section 13, "within the MCOD, all regulations of the underlying district(s) remain in effect, except where these regulations provide an alternative to such requirements" (Town of Warren). Land may be used for a Mill Conversion Project (MCP), following the regulations of the MCOD, or use

allowed in the underlying district, following the regulations of that underlying district. Where the MCOD is silent on a zoning regulation, the requirements of the underlying district apply.

3.5.1. Permitted Uses

A range of uses are allowed under the Mill Conversion Overlay District, as are uses in the Village District. Uses that are permitted under the MCOD are excluded from special use permits.

Table 3.3: Permitted Uses by District

Type of Use	MCOD	Village District- As of Right	Village District- Special Use Permit
Residential	- Multifamily Residential - Assisted living facilities - Nursing homes - Senior residential facilities - Bed and breakfast establishments	- Residential single, two, and multi-family dwellings up to 12 units - Renting of rooms to less than three persons - Offices of physician, dentist, attorney, insurance broker or other profession - Home occupations - Use for up to three rooms for bed and breakfast	- Uses accessory to residential uses, including the boarding of horses
Commercial	Commercial uses, including but not limited to: - Retail sales - Banks - Convenience stores - Financial services - Theaters - Health/fitness clubs - Indoor recreation - Indoor flea markets - Dental and medical services - Restaurants - Fast food restaurants - Taverns - Bakeries - Delicatessens		- Riding stable or boarding of horses - Drive-in or fast food - Commercial indoor recreation - Commercial outdoor recreation (not including drive-in movies) - Hotel - Motel - Inn - Drinking establishments without seated food services
	Personal service establishments including but not limited to: - Barber shops - Beauty shops - Tanning salons - Nail salons - Shoe repair shops - Massage therapy	- Retail store - Consumer service establishment - Funeral home - Restaurant - Business or professional office - Bank	

Table 3.3: Permitted Uses by District			
Type of Use	**MCOD**	**Village District- As of Right**	**Village District- Special Use Permit**
	- Dry cleaners and tailors - Hotels, inns and conference facilities - Business and professional offices - Drive-thru windows for fast food restaurants, donut shops, banks, etc.	- Crafts, teaching and selling	
Industrial	- Light industry - Processing - Assembly - Wholesale trade - Warehousing - Research and development - Hydroelectric generating units	- An increase in present industrial use - Renewable energy R&D facility - Renewable manufacturing facility	- Warehouse and storage facility - Manufacturing or industrial use
Arts	- Artist studio/residence - photographer - Potter - Sculptor - Dance studio - Music school - Art gallery - Live performance stages - and similar artistic and cultural endeavors		
	- Museums - Educational uses - Charitable or philanthropic organizations - Municipal uses - Childcare facilities - Similar institutions	- Nursery school - Public building - Nursing home	
Agricultural		- Agricultural uses and roadside stands	
Automotive			- Service station or car wash - Repair garage - Salesroom for motor vehicles

Source: Warren, MA Zoning Bylaw

3.5.2. Dimensional Requirements

In the MCOD, dimensional requirements are flexible. Structural alterations and repairs are allowed by right. The dimensional requirements of the Village District will apply to any new structures or buildings, and the architectural style of such buildings is subject to planning board approval.

Per the Zoning Bylaw Section 13.43, multifamily residential density may not exceed one unit per 15,000 square feet of lot area. No more than 20% of dwelling units in an MCP are allowed to be three bedrooms or larger. The minimum gross floor area for a dwelling unit is 800 square feet. The floor area renovated for residential use may not exceed the area occupied by non-residential uses by more than 50,000 square feet unless due to vacancies caused by non-residential tenants leaving the complex (Town of Warren).

In the Village District, the dimensional requirements are as follows:

Table 3.4: Village District Dimensional Requirements

	Min Lot Size	Min Lot Frontage	Max Height	Front Setback	Side & Rear Setback
Single Family Dwelling	10,000	75	40	20	15
2-4 Family Dwelling	6,000	75	40	20	15
Multifamily (5+) Dwelling	6,000	100	40	25	15
All other	15,000	100	40	30	NA

Source: Warren, MA Zoning Bylaw

3.5.3. Open Space

In the MCOD, at least 25% of the undeveloped land on the property must be protected from development through a permanent conservation or agricultural preservation restriction, before the first application. The Wright's Mill site includes a large area of undeveloped land (Town of Warren). Considering "the property" as the grouping of all the parcels, preservation of the existing undeveloped land would satisfy this requirement.

3.5.4. Parking Requirements

Adequate parking is required in the MCOD. Parking lots must have interior landscaping of at least 5%, as well as a 10-foot landscaping buffer on their perimeter (Town of Warren).

3.5.5. Utilities

Utilities must be underground except for exceptional circumstances in the MCOD (Town of Warren). The majority of existing utilities are underground, with the exception of electrical service that enters the site off of Pulaski Street adjacent to Building 11 and runs south to a substation between Buildings 5, 10, 11, and 12.

3.5.6. Stormwater

According to Zoning Bylaw Section 13.7 for Mill Conversion Projects, there must be "no negative impact upon the environment," including upon site stormwater drainage. This would entail controlling surface runoff to minimize impacts on neighboring properties and streets and to prevent soil erosion and sedimentation of surface waters (Town of Warren).

The Massachusetts Stormwater Management Handbook mandates that industrial, commercial, institutional, office, residential, and transportation projects—including activities such as site preparation, construction, redevelopment, and any associated point source stormwater discharges—comply with its established standards and performance guidelines (MassDEP). These Stormwater Management Standards include the following:

1. **No new stormwater conveyances** (e.g. outfalls) may discharge untreated stormwater directly to or cause erosion in wetlands or waters of the Commonwealth.
2. **Stormwater management systems** shall be designed so that post-development peak discharge rates do not exceed pre-development peak discharge rates.
3. **Loss of annual recharge to groundwater** shall be eliminated or minimized with infiltration measures including environmentally sensitive site design, low-impact development techniques, stormwater best management practices, and good operation and maintenance. At a minimum, the annual recharge from the post-development site shall approximate the annual recharge from pre-development conditions based on soil type.
4. **Stormwater management systems** shall be designed to remove 80% of the average annual post-construction load of Total Suspended Solids (TSS).
5. **For land uses with higher potential pollutant loads,** source control and pollution prevention shall be implemented following the Massachusetts Stormwater Handbook to eliminate or reduce the discharge of stormwater runoff from such land uses to the maximum extent practicable.
6. **Stormwater discharges** within the Zone II or Interim Wellhead Protection Area of a public water supply, and stormwater discharges near or to any other critical area, require the use of the specific source control and pollution prevention measures and the specific structural stormwater best management practices determined by MassDEP.
7. **A redevelopment project** is required to meet the following Stormwater Management Standards only to the maximum extent practicable: Standard 2, Standard 3, and the pretreatment and structural best management practice requirements of Standards 4, 5, and 6. Existing stormwater discharges shall comply with Standard 1 only to the maximum extent practicable.
8. **A plan to control construction-related impacts** including erosion, sedimentation, and other pollutant sources during construction and land disturbance activities (construction period erosion, sedimentation, and pollution prevention plan) shall be developed and implemented.
9. **A long-term operation and maintenance plan** shall be developed and implemented to ensure that stormwater management systems function as designed.

10. **All illicit discharges** to the stormwater management system are prohibited.

The Standards must be adhered to the maximum extent practicable, instead of completely, by multifamily housing development with four or fewer units that have the potential to affect a critical area and multifamily housing development with five to nine units that do not have the potential to affect a critical area. Critical areas are defined as "Outstanding Resource Waters, Special Resource Waters, recharge areas for public water supplies, bathing beaches, cold-water fisheries, and shellfish growing areas" (MassDEP).

There are existing stormwater issues between Buildings 1 and 14, where there has repeatedly been flooding in the large, paved parking area between the two buildings.

3.6. Socioeconomic Conditions

This section discusses the current socioeconomic and market conditions in the Town with a particular focus on the vicinity of the study area. These will include:

- The property.
- The "Patch," i.e., the cluster of nearby homes of approximately 20 residential units.
- Local businesses in Warren.
- Worcester and Springfield business markets.

3.6.1. Property Market Summary

Wright's Mill is in a unique market position for redevelopment, given its extensive size; connectivity between Springfield and Worcester; and flexible zoning under the Mill Conversion Overlay District (MCOD) for multifamily residential, commercial, light industry, and arts uses. As of August 2024, the Wright's Mill Complex is on the market. A summary of the features of the combined parcels currently on the market are listed in Table 3.5.

Table 3.5: Wright's Mill Marketing Attributes

Total Gross Floor Area	592,000 square feet
Campus Size	99.58 acres
Number of Buildings	15
Stories	1 - 5
Year Built	Varies across buildings c. 1860 - 1960
Current Use Occupancy	<1% for industrial storage
Location	➢ Midway between Worcester and Springfield ➢ Route 67 ➢ 12 minutes from Mass Pike Palmer Interchange ➢ Adjacent to Boston Subdivision rail line

Source: Boniorni, Paul. "Wright's Mill Complex." February 23, 2024

3.6.2. Market Position

Warren is located midway between Springfield and Worcester and the Wright's Mill complex could capture demand from these major metropolitan areas. Access to Springfield is somewhat better given the site's proximity to the Palmer Route 67 exit on the Massachusetts Turnpike via Old Warren Road. Wright's Mill's MCOD zoning and the extensive campus offer redevelopment flexibility that could include residential, light manufacturing, warehouse, office, multi-tenant retail, or institutional uses.

3.6.3. Market Status of Wright's Mill Campus

The property has been listed with SR Commercial Realty of Springfield since February 2024. Paul Bongiorni of SR Commercial, the commercial realtor who is the contact agent for the property, was interviewed as part of this study.

3.6.4. Town Socioeconomic Conditions

Warren has a population of 4,985 according to 2022 5-year ACS data, with a median age of 37.3. Warren has the lowest median age, and the lowest median income compared to the surrounding towns as shown in Table 3.6. Warren's median income, $64,085, is significantly lower than both Worcester County and Massachusetts' ($88,254 and $95,505 respectively). As discussed in the transportation section, Warren workers have a median travel time to work of 37.5 minutes, 25% higher than Massachusetts and Worcester County.

Perhaps related to the lower median age in Warren is the high fertility rate in the community, which at 8.1% is 1.5 times higher than Worcester County and twice the fertility rate in Massachusetts (U.S Census bureau). Compared to surrounding towns, Warren has the lowest old-age dependency ratio, reflecting the lower numbers of elderly residents. However, its higher proportion of children is reflected in the higher child dependency ratio. This signifies the attractiveness of the Town to young families and makes the case for redevelopment of Wright's Mill into residential and commercial uses that can cater to them.

As of March 2024, the unemployment rate in Warren is the third highest among the surrounding towns at 4.6% (Bureau of Labor Statistics).

Table 3.6: Warren Region Socioeconomic Statistics

Statistic	Warren	Brimfield	Brookfield	Palmer	Ware	West Brookfield
Total population	4,895	3,699	3,443	12,422	10,162	3,823
Median age in years	37.3	45.5	50.6	47	42.9	53.9
Median household income in 2022 dollars	64,085	88,438	71,122	73,568	66,250	89,112
Age dependency ratio[1] Old-age dependency ratio[2] Child dependency ratio[3]	50.6 18.2 32.4	76.7 49.6 27.1	69.8 40.1 29.7	56.6 28.3 28.3	63.9 29.2 34.7	76.7 49.6 27.1
Percent of 25-year-old+ population with a high school degree or higher	92.5%	96.5%	95.5%	86.5%	91.3%	92.9%

Percent of the 25-year-old+ population with Bachelor's or Higher	29.0%	41.5%	26.0%	24.6%	26.4%	29.6%
Total labor force (March 2024)	2,524	2,286	1,947	6,373	5,414	2,129
Unemployment rate (March 2024)	4.6	3.9	4.0	5.2	4.7	4.4

[1]The age-dependency ratio is the ratio of the combined under-18 and 65-over populations to the 18-to-64 population.

[2]The old-age dependency ratio is the ratio of the 65-over population to the 18-to-64 population.

[3]The child dependency ratio is the ratio of the under-18 population to the 18-to-64 population.

Source: U.S. Census Bureau American Community Survey 2022 5-Year Estimates, Bureau of Labor Statistics Local Area Unemployment Statistics Program (2024)

3.6.5. Neighborhood Socioeconomic Conditions – The Patch and West Warren Village

The neighborhood immediately surrounding the mill, locally called the Patch, includes a mix of single- and multi-family structures, many of which were originally housing for workers at Wright's Mill. The caretaker of Wright's Mill, William Lesley, noted that the neighborhood is made up of both renters and owners (Lesley). The historic village of West Warren is located north of the site across the Quaboag River from the historic village of West Warren, also consists of single- and multi-family structures, as well as a few small retailers and restaurants. West Warren was home to tenements and boarding houses for mill workers and remains in residential use with a mix of owners and renters. (Massachusetts DCR, Central Massachusetts Regional Planning Commission and North Quabbin Regional Landscape Partnership). In addition to residences, West Warren includes a ballfield at Dean Park, the Town's Council on Aging, a post office, and a Catholic Church.

3.6.6. Local Business Market

Warren's top 25 employers are shown in Table 3.7. The Warren School Department is the largest employer in the Town (Massachusetts Department of Economic Research). The largest private sector employer in the Town is Warren Pumps, a brand of CIRCOR Naval Solutions, which manufactures pumps that are used in chemical, energy, water, and wastewater marine and naval applications. (CIRCOR).

Table 3.7: Top 25 Employers

Company	Number of Employees	NAICS[1] Code
Quaboag Regional High School	50 - 99	6111 (Schools)
Quaboag Regional School District	50 - 99	6111 (Schools)
Warren Elementary School	50 - 99	6111 (Schools)
CIRCOR Naval Solutions LLC	20 - 49	3339 (Machinery Manufacturing)
Lizak Bus SVC Inc.	20 - 49	4854 (School Bus Transportation)
Warren Community Elementary	20 - 49	6111 (Schools)
Warren Fire Department	20 - 49	9221 (Public Safety)

Table 3.7: Top 25 Employers		
Company	**Number of Employees**	**NAICS[1] Code**
Warren Police Department	20 - 49	9221 (Public Safety)
Amazon Counter	10 - 19	5418 (Advertising Agency)
Breezeland Orchards Inc.	10 - 19	1113 (Fruit Farming)
Copart Salvage Auto Auctions	10 - 19	4231 (MV Parts & Suppl)
Dunkin'	10 - 19	7225 (Restaurant)
Fijol R.J. Inc.	10 - 19	2361 (Resi Bldg. Cons)
Rybak Engineering Inc.	10 - 19	5416 (Tech consulting)
Stacy Exposition Svc. Inc.	10 - 19	5322 (Appliance rental)
Town of Warren	10 - 19	9221 (Public Safety)
Dippin Donuts	5 - 9	7225 (Restaurant)
Edward H. Spencer Inc.	5 - 9	4411 (Auto Dealer)
Fountain Sons Fuel Co. Inc.	5 – 9	2111
Highway Department	5 - 9	2373
Intercity Lines Inc.	5 - 9	8111 (Auto Repair)
MS DS SUNSHINE CLEANING SVC	5 - 9	5617
Therrien Quality Home Improvement	5 - 9	2361 (Res. Bldg. Cons.)
Warren Roofers Inc.	5 - 9	2381 (Building Contractor)
Warren Water District Pumping Station	5 - 9	2213 (Water, sewage)
[1] NAICS means North American Industry Classification System		

Source: Massachusetts Department of Economic Research, Largest 25 Employers in Warren

3.6.7. Worcester Business Market

Understanding the Worcester business market is crucial to understanding the possibilities for economic growth in Warren because Worcester is the largest municipality in Worcester County and just under an hour's drive from West Warren. As Wright's Mill could be developed into a commercial and residential center for West Warren, businesses would benefit from tapping into the existing labor force and industries in Worcester and Springfield. This section explains employment trends in Worcester by industry, the largest companies in Worcester, market trends, and growth industries.

Employment Trends

Over the last six months, Worcester has seen decreases in the number of workers employed by the manufacturing sector but increases in the number of workers employed in education, health services, and government, as summarized in Table 3.8.

Table 3.8: Worcester Employment Trends		
Trend	**Industry**	**Percent Change Last Six Months**
Employment Declines	Manufacturing	-1.4%
Employment Increases	Education and Health Services	+5.5%
	Government	+2.6%

Source: United States Department of Labor, Bureau of Labor Statistics, November 2023-April 2024

Top Employers

Worcester's largest employers include medical, manufacturing, and educational entities. The employers with 1,000 employees or more are listed below. The University of Massachusetts employs the highest number of people, more than 10,000, followed by MSC Industrial Supply Co. at 5,000 to 10,000 employees. The remaining employers listed have between 1,000 to 5,000 employees (Massachusetts Department of Economic Research).

- University of Massachusetts (UMass)
- MSC Industrial Supply Co.
- Community Healthlink Inc.
- Fallon Health
- Hanover Insurance Group Inc.
- St. Vincent Hospital
- St. Gobain Ceramic Materials
- VNA Care Network
- Walmart Supercenter

Market Trends

According to the Worcester Regional Chamber of Commerce, between 2010 and 2020 Worcester grew faster in population than any other "major city in New England" (14% growth), and the Worcester region, Central Massachusetts, "outpaced the state average in new business incorporations" (14% growth) (Worcester Regional Chamber of Commerce). The growth may be attributed to several factors, including lower cost of living and business costs relative to Boston, excellent highway and rail access, and the concentration of colleges and universities (Central Massachusetts Regional Planning Commission).

Activity has been strong in the "innovation economy" with growth in industrial sectors such as advanced manufacturing, robotics, biomanufacturing, computer sciences, and other technology. The presence of two major medical centers and higher education centers has also led to growth in the healthcare and education sectors. These centers are the leading sources of employment in Worcester County, as shown in Figure 3-8 (Central Massachusetts Regional Planning Commission).

Potential Growth Industries

Growth is expected to continue in the research and development of computer systems design as well as the biotech field. Key investments have been made by the private sector, public sector, and institutional partners to grow these uses including the UMass Chan Medical School, Massachusetts Biomedical Initiative, and Worcester Polytechnic Institute at Gateway Park. These initiatives are intended to provide incubator space and to host early-stage science and engineering companies.

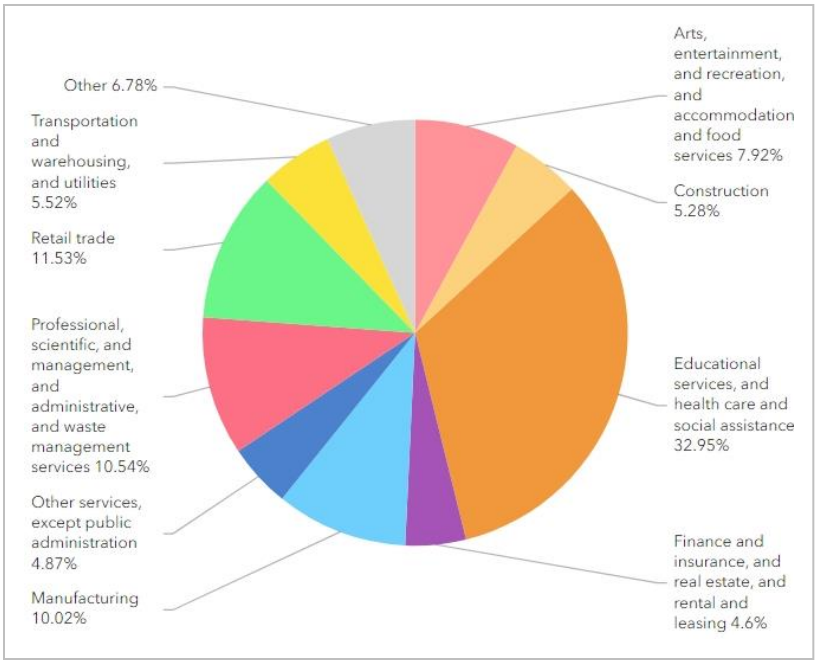


Figure 3-8: Largest Employment Sectors in Worcester County

Source: Excerpt from 2023-2028 Southern Central Massachusetts Economic Development Strategy (Draft), Central Massachusetts Regional Planning Commission

The Governor Healey Administration recently proposed a capital investment of $1 billion each for life science and climate technology businesses and research (Massachusetts Executive Office of Economic Development). The outcome of that request is unknown at this time, but the Worcester area will likely be well positioned to benefit from that investment should it be funded.

3.6.8. Springfield Business Market

As discussed earlier, West Warren is closer to Springfield than Worcester, located at just a 35-minute drive from the Wright's Mill complex. Springfield's economy also holds relevance for possible strategies for integrating work at the mill into regional economies.

Employment Trends

Like Worcester, Springfield's manufacturing sector has shrunk since 2023, although at a greater intensity. Instead, Springfield's growth industry has been in the professional and business services sector. These trends are summarized in Table 3.9.

Table 3.9: Springfield Employment Trends November 2023-April 2024

Trend	Industry	Percent Change Last Six Months
Employment Declines	Manufacturing	-3.5%
Employment Increases	Professional and business services	+1.2%

Source: United States Department of Labor, Bureau of Labor Statistics, November 2023-April 2024

Top Employers

Springfield's largest employers include manufacturing, financial, food distribution, and medical employers. The employers listed below are all among the largest employers, with 1,000 to 5,000 employees each (Massachusetts Department of Economic Research).

- American Postal Workers Union
- Baystate Health
- General Dynamics
- Massachusetts Mutual Life Insurance
- MGM Springfield Casino
- Smith & Wesson
- Valet Park of America
- Weldon Outpatient Rehabilitation

Market Trends

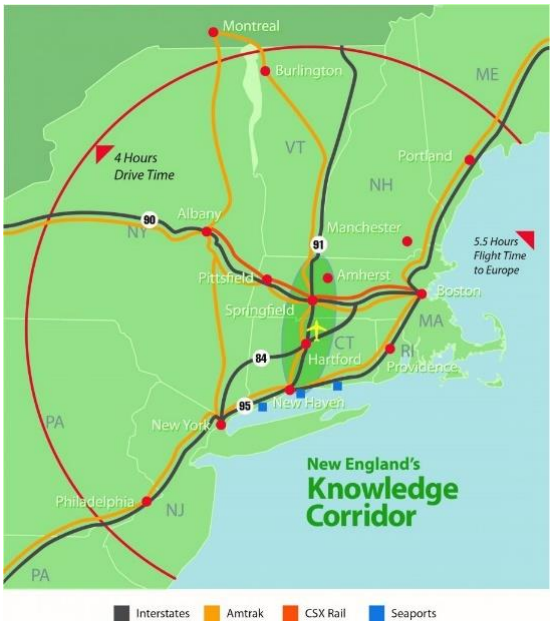


Figure 3-9: Excerpt from "History of the Interstate Knowledge Corridor Partnership"

Source: New England's Knowledge Corridor

One of the centerpieces of the economic development strategy for the City of Springfield is to build upon being part of the New England Knowledge Corridor (NEKC). The "knowledge corridor" runs from New Haven north along I-91 towards Amherst after passing through Springfield and Hartford and their surrounding areas as well as many smaller college and university towns within the region. The NEKC has a population of approximately 3 million people, a workforce of 1.24 million, and includes 215,000 college students and 64,000 businesses. The NEKC provides an opportunity for the communities within it to work collaboratively through an interstate partnership of regional economic development, planning, tourism, and educational institutions (New England's Knowledge Corridor).

Potential Growth Industries

Springfield is emerging as a hub of innovation and has a growing focus on cultural and economic drivers. Potential catalysts for new businesses in the Springfield area include:

Springfield Innovation Center

Business accelerator run by Valley Venture Mentors (VVM) to assist entrepreneurs in turning start-up businesses into thriving scalable businesses.

Make-It Springfield

Maker Space collaboration between MassDevelopment and UMASS Design Center that includes design studios and workshops.

Cultural Growth

In addition to the MGM Casino and its ancillary hospitality uses, Springfield has developed a critical mass of cultural offerings including the Springfield Museums (art, science, etc.), the Basketball Hall of Fame, and the Mass Mutual Performing Arts Center, among several others. Springfield is focusing on this growth as a source of jobs and tourism and as a means of attracting residential growth.

3.6.9. Regional Market Demand by Sector

The regional market demand for multifamily, light manufacturing, warehousing, and office sectors is as follows:

Residential

Multifamily Rental Market

The multifamily rental market in Worcester is considered one of the most competitive rental markets in the nation according to an April 2024 analysis by Forbes Advisor. Worcester ranked number three of the top 25 most competitive rental markets based upon its low vacancy rate (1.7%), third-highest increase in rents this year, scarcity of available rentals, and high median rents ($1,995) (Pal).

The multi-family rental market in Springfield is more affordable but still strong. Zillow Rental Manager indicates a median monthly rent of $1,695 for Springfield which represents a $195 increase since last year. This is well below the median rent of $1,995 for Worcester and $2,139 nationally (Zillow).

Multifamily Development Outlook

Concern has been expressed in recent months about a slowdown in residential multifamily construction. Although rents remain high and vacancy rates low, the increasing cost of construction and financing has impacted the financial feasibility of multifamily development. A December 2023 article in the Worcester Business Journal cited these factors as the reason for developers pausing or scaling back projects (Casey). On a national level, a few sources, including a January 2024 "Multifamily Market Outlook" by Fannie Mae, predicted an increase in vacancy trends and a softening in rent levels. Certain markets, including the Boston market, were called out as likely exceptions to that trend, but the Worcester market was cited as one with lower expected employment growth for 2024 (<1%), which may affect multifamily demand in the near term, notwithstanding current rental demand (Fannie Mae). No comparable data is available for Springfield, but it should be noted that the U.S. Bureau of Labor Statistics (BLS) data show a Springfield unemployment rate of 3.5%, which was a reduction from a February figure of 4.3%. BLS data for the same period show Worcester unemployment at 3.2% and marks a decline as well (Bureau of Labor Statistics).

Light Manufacturing and Warehousing

Industry sources indicate that the strong demand regionally and nationally for office and warehouse space from 2020 – 2022, which resulted in an unprecedented increase in industrial rents and a boom in industrial construction and leasing, has stabilized or decreased slightly (Ibrahim). In the Greater Boston region, the supply of space which was produced during the past three years is being gradually absorbed with significantly less activity expected in new construction in the next two to three years (Cushman & Wakefield). Rents and vacancy rates are still well above pre-COVID levels and are projected to remain so. Although the market for this space appears stable there is some concern regarding oversupply in submarkets outside of I-495 and west and south of Boston. Manufacturing expansion is still occurring in biomanufacturing and emerging fields such as climate tech and frontier tech, including material science, nanoscale manufacturing, robotics, artificial intelligence, etc. (Driscoll, After Historic Boom, Warehouse Development in Greater Boston Falls by 80%, 2024).

Office

Demand for office space in Greater Boston suburbs has continued to decline, with office buildings experiencing high levels of vacancy, at rates above 20% in 2024. This is the first time in 20 years that the region's vacancy rates have reached that level. This adheres to nationwide trends of reduced office space demand and more work-from-home opportunities since the COVID-19 pandemic. Employment levels in office-use and life sciences sectors are flat. There were some promising signs within the Downtown Boston market with major transactions involving Class A office buildings suggesting some movement in the capital markets. (Driscoll).

Throughout the New England region, including smaller cities, office space demand declined in the first quarter of 2024, and that decline is expected to continue through 2024. Interest rate cuts, lowering of construction costs, and absorption of new office products may result in an uptick in demand in 2025. The trend of companies encouraging in-office work may also be a factor (Cushman & Wakefield).

Market Analysis Conclusions

Favorable market trends overall in the residential and light manufacturing sectors make multifamily development a higher priority for Wright's Mill, in addition to the select development of light manufacturing buildings, dependent on the company. On the other hand, distribution-related warehouses are limited in demand and office space demand has generally been declining since the COVID-19 pandemic.

Residential

There appears to be continued strong demand for multifamily residential space based upon market conditions in both the Springfield and Worcester markets. The additional amenities associated with the Wright's Mill location including the riverfront, historic architecture, potential for mixed-use activities such as restaurants, shops, and live-work space, as well as the proximity to open space increase its desirability for residential use.

Manufacturing and Warehouse

Although the market for these uses has cooled off, there does seem to be a demand for more specialized light manufacturing uses, as evidenced by the growth at CIRCOR Naval Solutions, discussed in Section 3.6.6. The location and access do not seem to lend themselves to distribution-related warehouse uses and the demand for space for such uses appears to be limited at this time.

Office

Traditional office space appears to be in low demand for the foreseeable future. Given the growth occurring in the health and education sectors in both the Springfield and Worcester areas, there may be potential for office space in a related field.

3.7. Building Condition

This section summarizes the existing condition of the campus buildings. The project team toured the Wright's Mill complex in Spring 2024. Included below is a summary of the structural conditions and a summary of architectural concerns as they relate to future development opportunities, followed by a summary of each of the buildings.

3.7.1. Structural Condition and Approach to Analysis

Most of the Wright's Mill buildings have been generally well-maintained and have benefitted through the diligent efforts of a long-time caretaker who lives on site. Most of the 15 buildings (not including the Hardwick structures, which are not part of this plan) appear to be in sound structural condition. There are, however, a few structures that show signs of damage and are candidates for demolition or may require substantial investment to reposition them.

- Building 13 is a five-story structure and is in the worst shape. It is the oldest building in the complex. Many of the windows are missing and there is water infiltration which is compromising its structural integrity.
- In the center of the campus, the one-story building 4N, which historically served as a loading dock for Building 4S, exhibits signs of sagging on the exterior.
- Building 10 (Boiler House) was not seen on the interior so its condition is unknown. The smokestack appears to be in decent condition.
- The two-story connector between Buildings 7 and 8 shows signs of neglect. Its demolition would enable a view and/or access to the Quaboag River.
- Three overhead enclosed pedestrian bridges connect buildings within the campus. Buildings 5 and 6 are linked by a second-story bridge and Building 3 is connected to Buildings 5S and 4S. These bridges have low clearance for emergency vehicles and may not be necessary for contemporary demands.

The roadways, parking areas, and drive aisles around the complex are in fair-to-poor condition. Some improvements to the drive aisles may be necessary if specific buildings are to be rehabilitated. The Wright's Mill complex contains above-ground electrical power lines, especially near the center of the campus. In general, it is very expensive to lower power lines into underground conduits.

3.7.2. Architectural Concerns: Historic, Egress, and Next Steps for Analysis

Mills and former industrial/manufacturing properties are usually quite large and re-occupancy of them frequently requires public-sector resources. State and Federal Historic Tax Credits, New Market Tax Credits, Low-Income Housing Tax Credits, Tax Increment Financing, and other sources are frequently needed to facilitate economic revitalization. Crafting an economic development strategy for the historic

buildings will require prioritizing public investments. Fortunately, the complex has only one owner so negotiations between private-sector interests is not an inhibitor to the site's transformation. Complexities and complications surrounding different property owners with different ambitions and time frames frequently stymies the redevelopment of historic manufacturing sites.

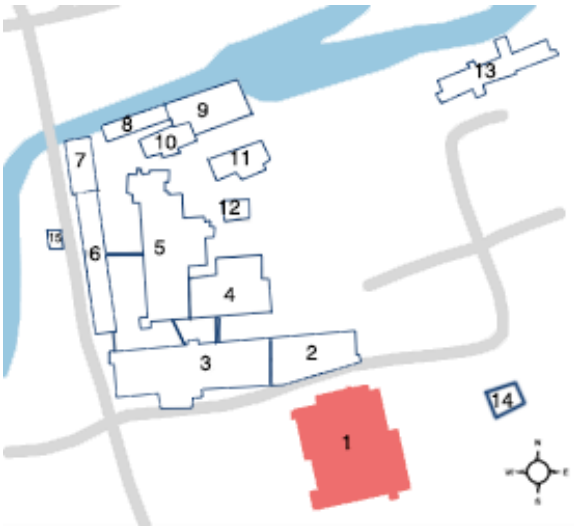
The complex is advantaged by a loop road that encompasses the property. The right-of-way allows access to buildings from a variety of directions which facilitates egress and distributes parking. Should different buildings be redeveloped at different times and by different tenants, having a variety of ways to get to them with varied entry points is a positive attribute. While many of the structures are interconnected and one can walk between them in a covered environment, others are not. Although the connectivity provides a climate-controlled link, in some cases a building's repositioning will be made more viable if it is not encumbered by such a connection. Separation can periodically be an advantage as a particular building's reuse doesn't necessarily depend upon the condition of its neighbor. Moreover, in many cases, covered connections between buildings are simply not necessary as there is no contemporary programmatic imperatives to warrant them. The pedestrian bridges in the Wright's Mill complex are relatively low off the ground, inhibit views, and compromise egress for emergency vehicles at the ground level. Demolition of some or all of these should be considered to facilitate the property's repositioning.

One strategy in driving the revitalization of former industrial complexes is to populate them with residents who will occupy office spaces and patronize the retail and food and beverage opportunities if they are provided. Having a modest residential component is often a critical component for a revitalization effort and reasonable steps should be taken to ensure that some buildings can be redeveloped into housing. Building 5's interior dimension of approximately 75 feet makes it a good candidate for residential redevelopment. It has three large existing stair towers and a freight elevator that could be repurposed for passengers, as well as several one-story appendages that work well for ground-level amenity spaces such as lobbies, informal gathering spaces, and exercise rooms.

Likely, the most viable approach to reusing the site is to seek out a mix of uses. A mixed-use approach is particularly important in towns or cities with more limited, existing market demand. Such a strategy will begin by repositioning the areas as an interesting destination. This does not mean developing a market plan for a vast amount of space all at once but rather beginning with reasonable "chunks" that activate the property and will lead to new interest in the remaining space. In essence, one seeks to build value through a series of viable developments that create both traffic and interest. Often, this requires collaboration between public and private interests working in partnership with complementary and mutually reinforcing goals. Therefore, the economic focus should be on a phased development strategy that specifically targets the property and leverages its unique assets. Such an approach will seek out those possibilities that can build value and generate a more positive image for the area over time.

3.7.3. Individual Building Profiles

This section includes a summary of each building. The summary will include a photograph, key findings, and the location of the building within the campus. All photos were taken by the Weston and Sampson or Gamble Associate teams during site visits, unless otherwise cited.



Building 1

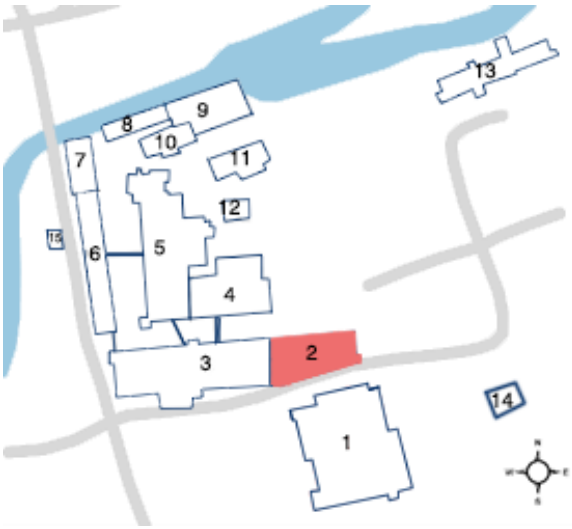
Stories	**One story**
Size	**54,200 square feet**
Year Built	**~1969**
Historical Uses	• Commercial/ Manufacturing/ Industrial
Key findings	• Steel construction, with high loading bays accessible to parking. • The absence of natural light suggests non-residential / commercial or manufacturing use.

Building 1 N/S Exterior

Building 1N Interior

Building 1S Interior

Building 1S Interior

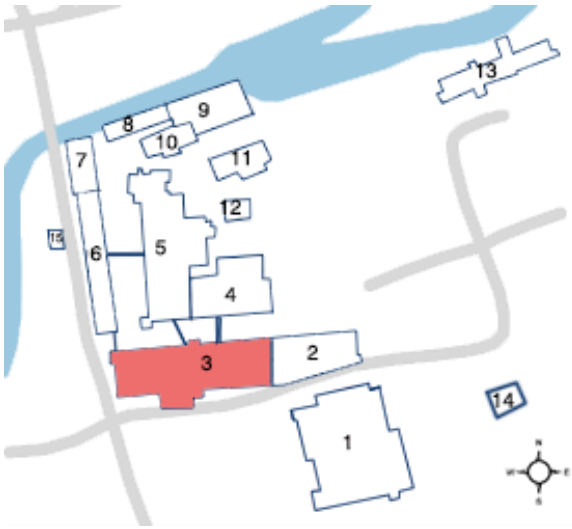


Building 2

Size	**One story** **48,000 square feet**
Year Built	**~1960s**
Historical Uses	• Used for finished goods, storage, bias tape, and seam binding.
Key findings	• Non-historic (CMU) addition to Building 3 - connected on interior.

Building 2 Interior

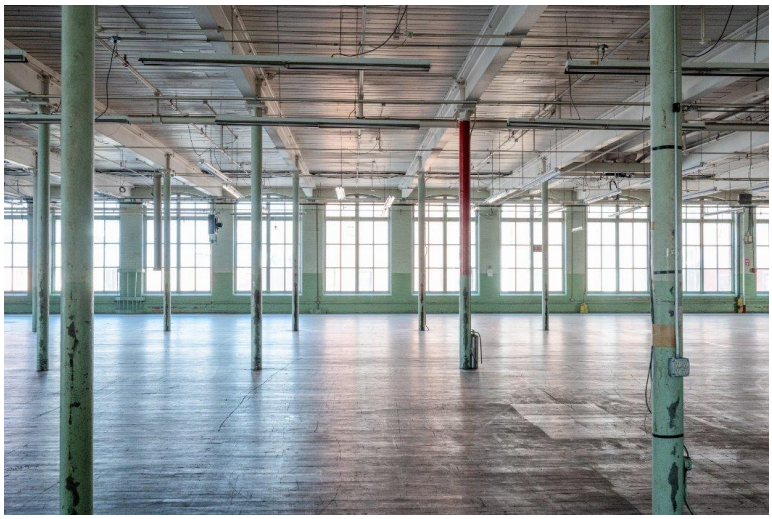
Building 2 Exterior



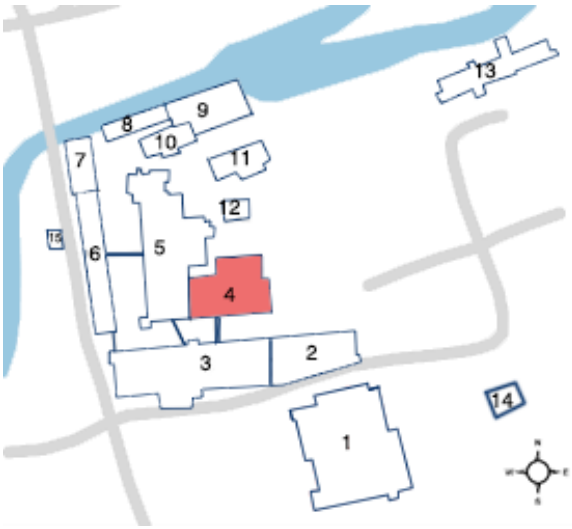
Building 3

Size	**Three stories** **122,300 square feet**
Year Built	**1912**
Historical Uses	• Shipping, packing, tape making, office, printing, textile processing, and storage.
Key findings	• Ideal to reinforce the sense of a gateway into the campus from South Street. • Former Administration at entry to site. • Too wide for residential unless central skylit atrium created.

Building 3 Exterior

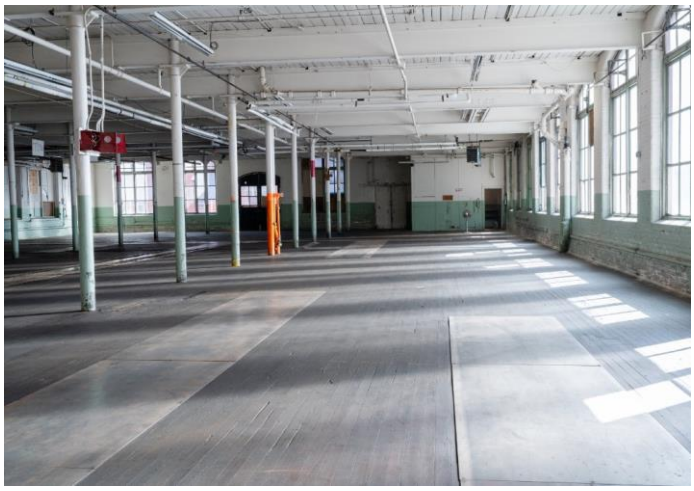


Building 3 Interior



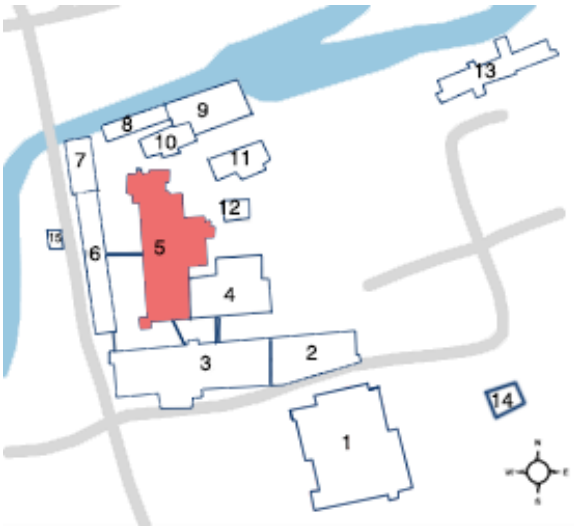
Building 4

Size	**Three Stories** **59,100 square feet**
Year Built	**1918**
Historical Uses	• Processing of goods, receiving, and storage.
Key findings	• Has key features for residential conversion given visibility, and parking. • Dimensions of 85'x220' though slightly too wide for residential but possible. • Includes small addition for receiving.



Building 4N/S Interior

Building 4 Exterior



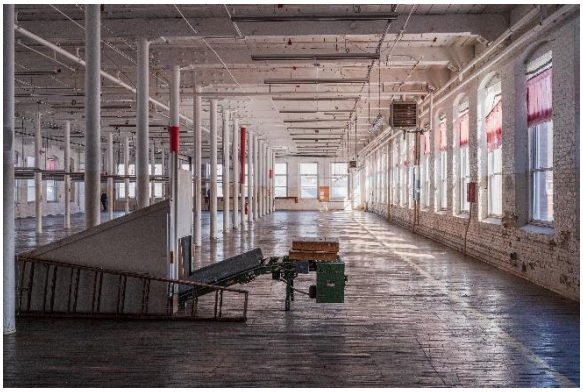
Building 5

Size	**Four Stories** **88,400 square feet**
Year Built	**1880**
Historical Uses	• Manufacture of cotton cloth, ribbon.
Key findings	• 75' width ideal for conversion to hotel or residential. Ground floor additions work well for entries and amenity spaces.

Building 5 Exterior and Locator Map

Building 5 Interior

Former café on the ground floor of Building 5



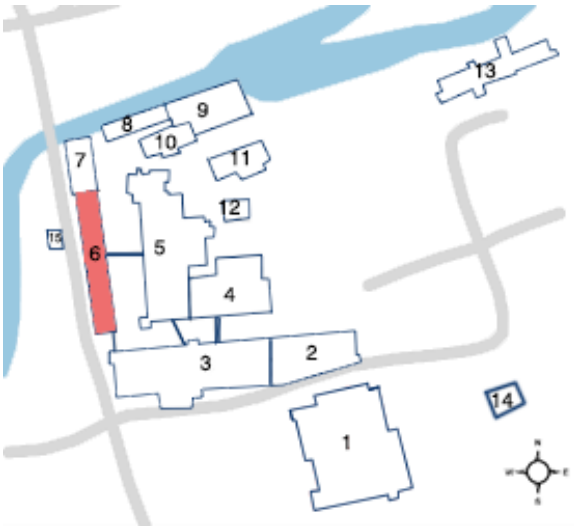
Upper floor of Building 5

Elevated walkway between Buildings 6 and 5

Machine shop on eastern 1st floor of Building 5

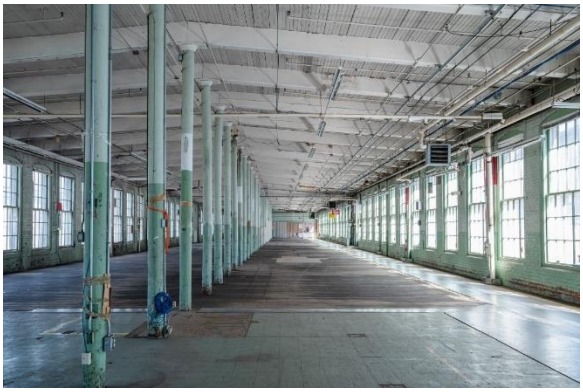
Building 5 seen from the north

Repair Shop in Building 5



Building 6

Size	**Two Stories** **31,300 square feet**
Year Built	**Unknown**
Historical Uses	• Manufacture of cotton cloth, ribbon.
Key findings	• Strengthen the South Street edge that has high visibility from the road.

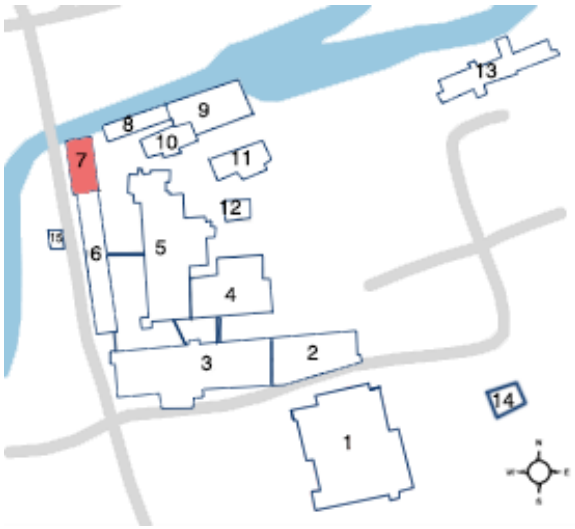


Building 6 Interior and Locator Map

Building 6 Exterior

Building 6 exterior from South Street

Project team Building 6



Building 7

Size

Five Stories

43,500 square feet

Year Built

Unknown

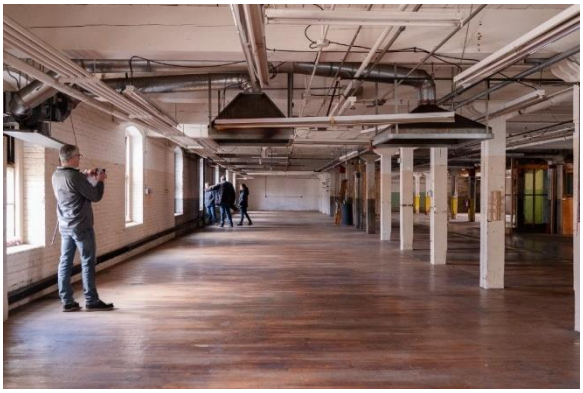
Historical Uses

- Strengthen the South Street edge that has high visibility from the road and the interior of the campus.

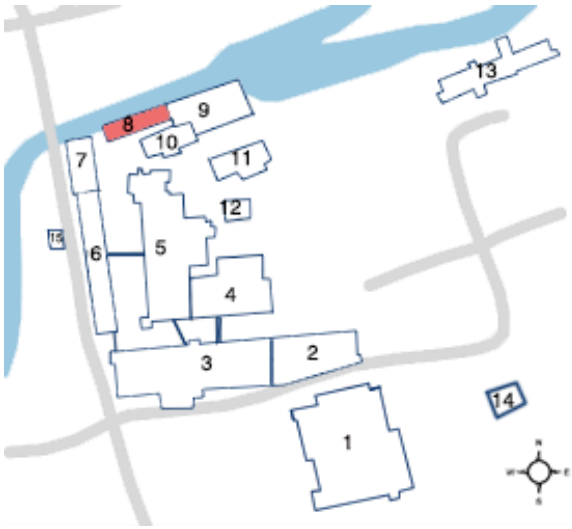
Key findings

- Strengthen the South Street edge that has high visibility from the road and the interior of the campus.

Building 7 Interior and Locator Map



Building 7 Interior



Building 8

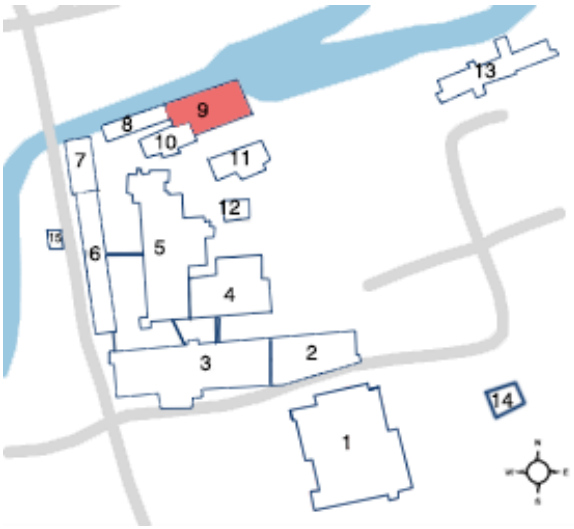
Size	**Three Stories** **14,500 square feet**
Year Built	**1857-1870**
Historical Uses	• Dye house.
Key findings	• Leverage high-volume spaces overlooking the river.

Building 8 interior and Locator Map

Building 8 Exterior

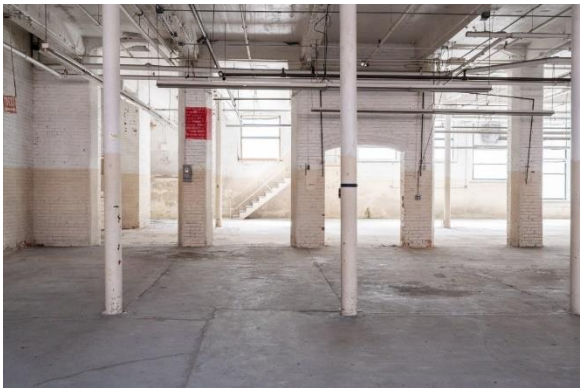
View of the Quaboag from Building 8

Bathroom on upper floor of Building 8 with view of Quaboag

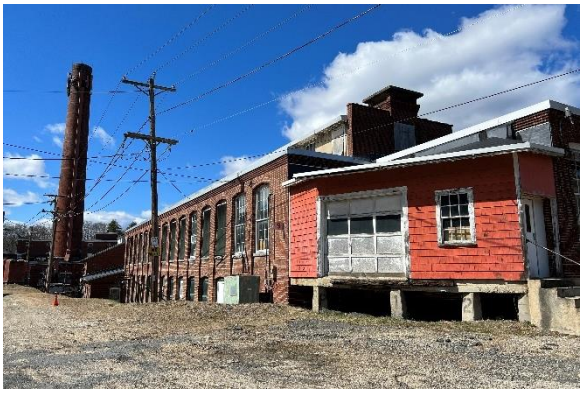


Building 9

Size	**One Story** **25,900 square feet**
Year Built	**1870-1879**
Historical Uses	• Dye House, print shop, knitting and goods storage.
Key findings	• Take advantage of buildings that have multiple entry points to enhance access to lower levels.



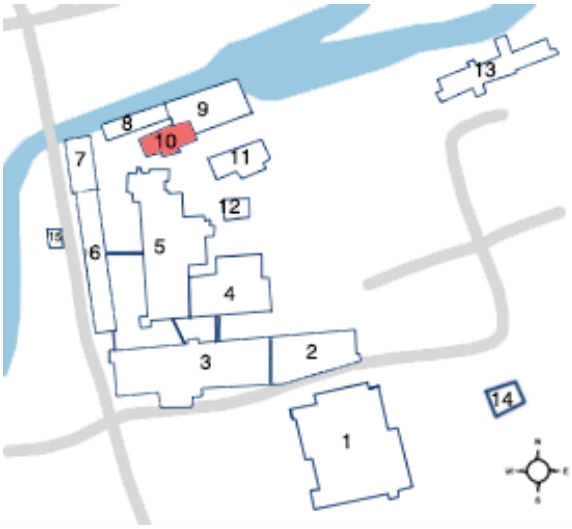
Building 9 Interior basement



9N/S Interior and Exterior

View of Quaboag from Building 9

Interior upper floor of Building 9



Building 10

Size

Two Stories

3,600 Square Feet

Year Built

Unknown

Historical Uses

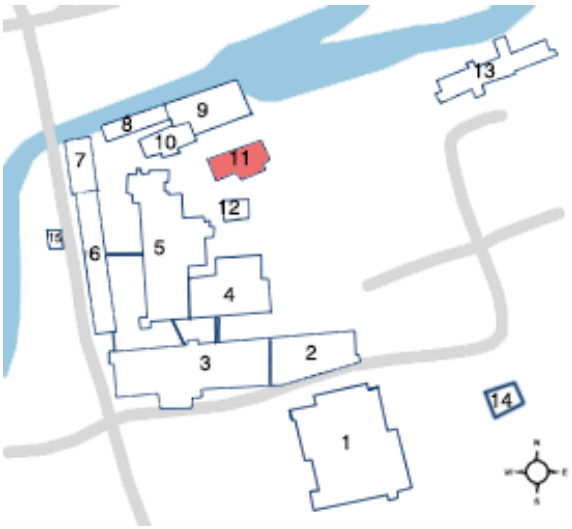
- Maintenance, boiler, hazardous materials storage.

Key findings

- Focus on the spaces between buildings to reinforce a campus character and distribute parking demands.

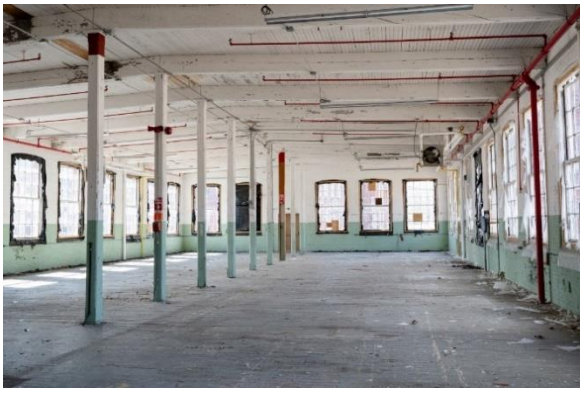
Building 10 Exterior

Building 10 Exterior



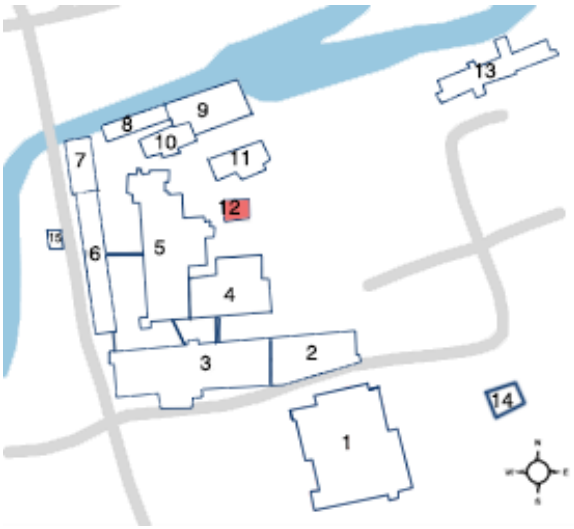
Building 11

Size	**Two Stories** **14,200 Square Feet**
Year Built	**Unknown**
Historical Uses	• Manufacturing, storage.
Key findings	• Capitalize on smaller buildings that are not connected to the primary complex and can have their own identity and address.



Building 11 Interior

Building 11 Exterior



Building 12

Size

One Story

2,800 Square Feet

Year Built

Unknown

Historical Uses

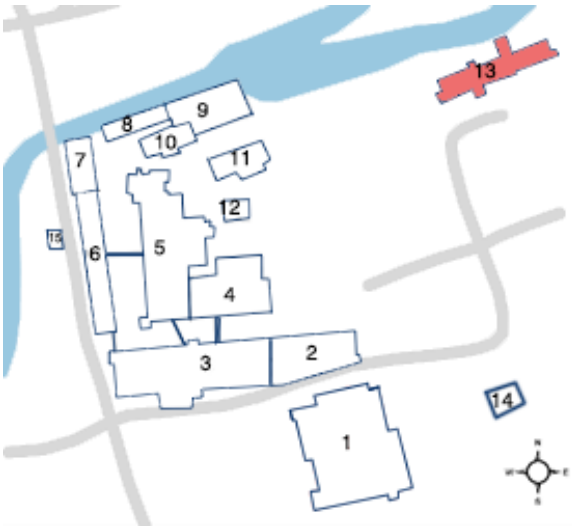
- Repair Garage.

Key findings

- Consider short-term activation in the middle of the property that can reposition buildings in compelling, contemporary ways.

Building 12 Exterior and Locator Map

Building 12 Interior



Building 13

Size

Three and Five Stories

55,600 Square Feet

Year Built

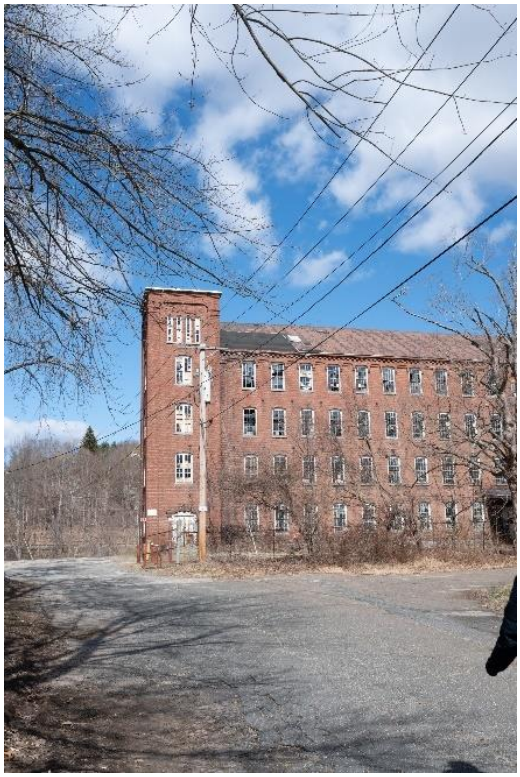
~1860

Historical Uses

- Cotton cloth manufacturing, hydro-electric power generation.

Key findings

- Stabilization: the most historic building along the river is in the most deteriorated condition and is vulnerable to further deterioration.



Building 13 Exterior

Flywheel formerly connected to water turbine in Building 13

Building 13 Historical Photo and Locator Map

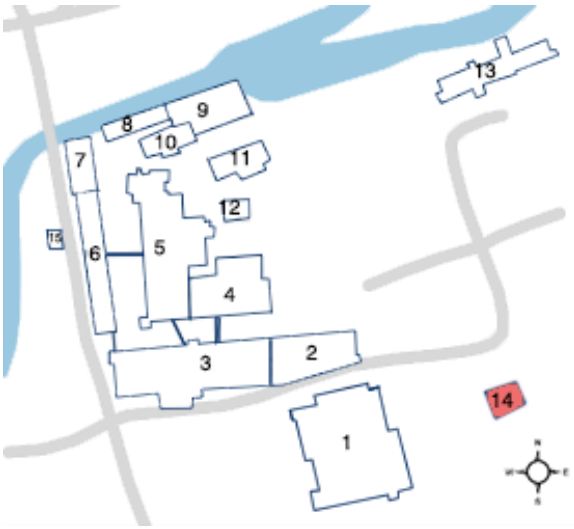
Interior of Building 13

Historical Photo fo Building 13

Source: MACRIS

Interior of Building 13

Industrial water turbine formerly used to power Building 13



Building 14

Size

One Story

4,100 Square Feet

Year Built

1984

Historical Uses

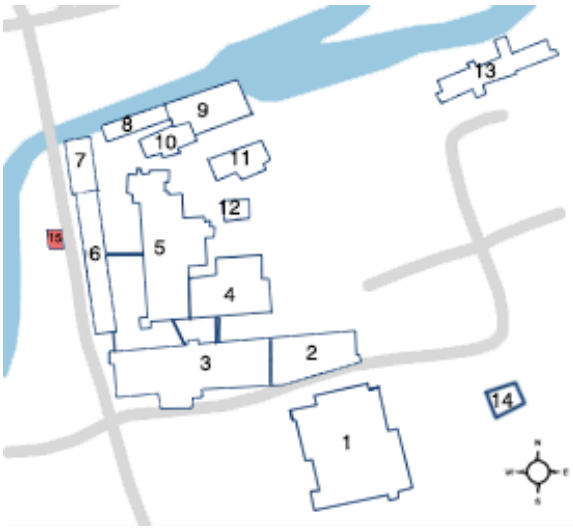
- Administration and product demonstration.

Key findings

- Take advantage of existing loading docks and buildings along the periphery for industrial manufacturing and distribution.

Building 14 Exterior

Building 14 exterior and parking lot from Pulaski Street



Building 15

Size	**Two Stories** **2,000 Square feet**
Year Built	**~1912-1918**
Historical Uses	• Residential, offices.
Key findings	• Embrace smaller structures that are in good shape and can incorporate a variety of uses.

Building 15 Exterior

Building 15 Interior

Building 15 from the South

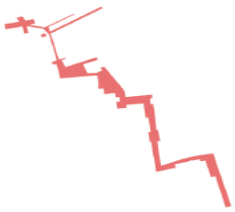
4.0 REDEVELOPMENT CONCEPTS

Using the information assembled in this report as well as input from the Town and residents, the consultant team created three redevelopment concepts. These concepts are intended to provide a visual representation of future redevelopment opportunities and a way to assess the potential costs and benefits of different redevelopment strategies. The team endeavored to take advantage of the site's strengths and to address its constraints. Wright's Mill is a historic mill campus with architecturally interesting buildings that are in generally good condition, and its riverfront views and access. One potential constraint to redevelopment is the site's remote location. Wright's Mill is relatively remote, without convenient highway access. However, there are some regional factors, specifically the site's location between two of New England's largest cities —Worcester and Springfield—as well as nearby regionally important commercial and tourism uses—the Brimfield Antiques Market and Sturbridge Village—that may be opportunities to leverage.

The approaches to redevelopment, therefore, considered these factors. The Community Stitch concept envisions uses that create a destination that fits within the context of the rural tourism that is already part of the region's economy. Campus Quad works to take advantage of the nearby cities and the presence of universities and other research organizations. The final concept, Neighborhood Expansion, focuses on the local community and emphasizes additional residential development.

Regardless of the program or specific land use, there are alternative strategies for the site's transformation that inform answers to the questions posited above. These reuse scenarios have been advanced to posit alternative futures and envision different degrees of preservation, stabilization, adaptive reuse, and new construction on the site. The reuse plans are intentionally diverse to stimulate comparison and dialogue, and each concept highlights unique market and spatial opportunities of the site.

Despite being presented as three standalone concepts, the final preferred plan for the mill may combine land uses and site design schemes from different concepts.

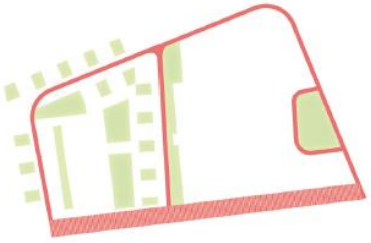


Concept 1: Community Stitch

A mixed-use destination integrating outdoor recreation, sustainable manufacturing, and hospitality, with commercial and residential spaces linked to trails and the Quaboag River.

Concept 2: Campus Quad

A development combining specialized manufacturing, vocational training, and educational facilities with residential and commercial areas, incorporating sustainable features like hydropower from the daylighted canal.



Concept 3: Neighborhood Expansion

A housing-focused development featuring duplexes, market-rate apartments, and assisted living, supported by retail, self-storage, and covered parking to meet diverse living needs.

4.1. Community Stitch

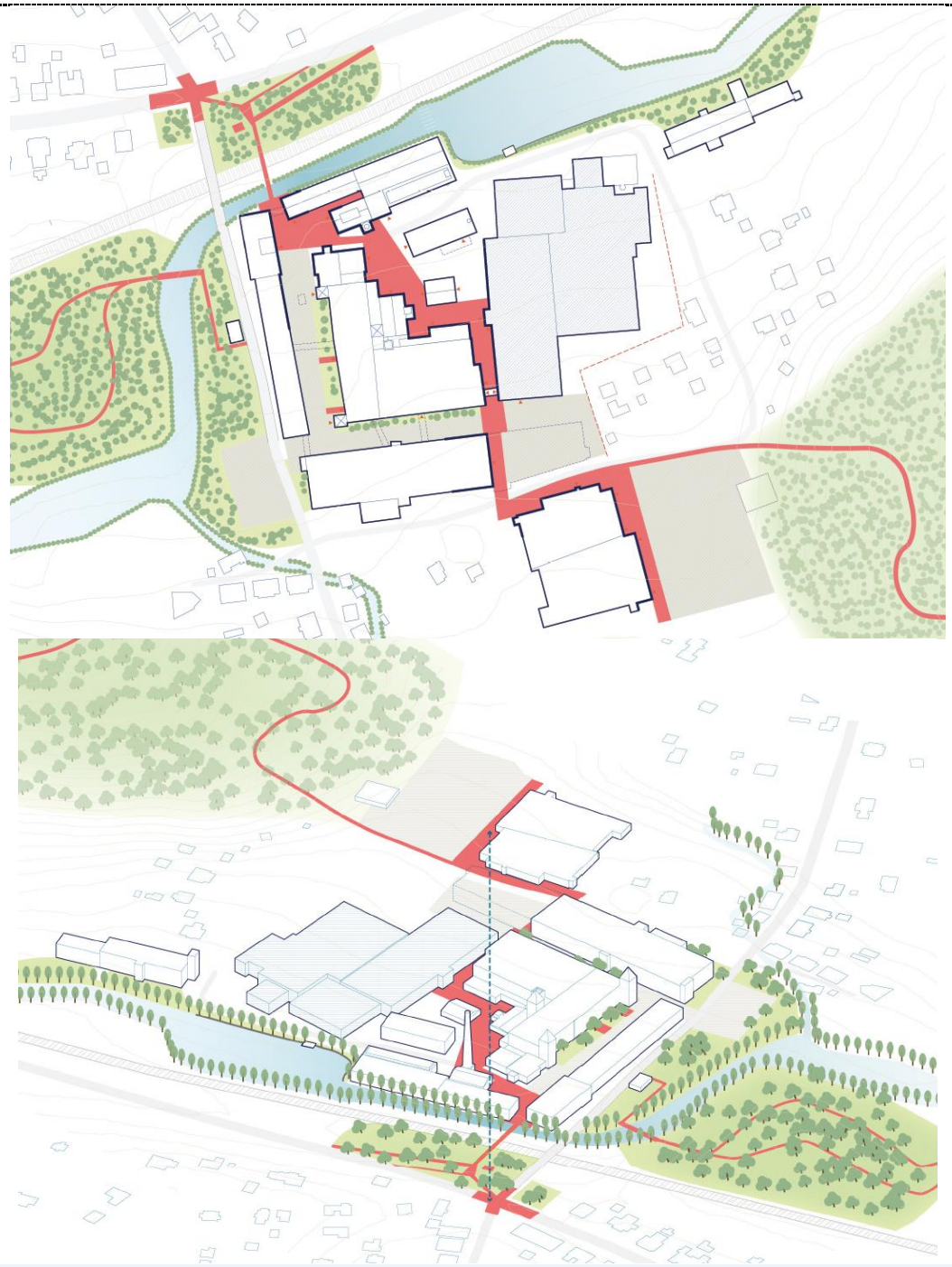
Land Use Concept	**Mixed-use, ecotourism destination with rural charm, highlighting outdoor activities and surrounding parkland**
Key Campus Features	**Kayaking, biking, hiking, zip-lining, adventure parks, farm to table restaurants, cottages, and luxury hotel linked together by the public realm**
Potential Market	**Luxury (older, retreat-focused), Accessible (younger, adventure-driven)**
Potential Partners	**United States Department of Agriculture**
Selective Demolition	**Building 2 and Building 7/8 connector** **90% of the historic campus buildings remain**

4.1.1. Urban Design Approach

The name of this concept reflects the site's history in fabric manufacturing as well as the plan to "stitch " the entire site together through a network of green spaces and paths. Wright's Mill complex developed through successive industrial expansions driven by factory operations, resulting in an unplanned arrangement of buildings without a central park, plaza, or landscaped gathering space. In response to this, the "Community Stitch" concept creates a continuous pedestrian connection from West Warren to proposed walking trails on Mark's Mountain, linking the campus with surrounding assets. This axis begins at the intersection of Main Street and North/South Street, where small commercial spaces form the village center of West Warren. The current gravel parking lot on Main Street is re-envisioned as a pocket park, serving as a new community gathering space overlooking the river and falls.

A new pedestrian walkway over the Quaboag River and railroad tracks connects to pathways on the campus. between the buildings along a north-south axis, eventually extending to outdoor trails. The current site layout forces pedestrians to walk nearly a quarter mile before entering the complex from West Warren. A new direct pathway shortens this significantly, making access quicker and more convenient. The pedestrian bridge connects directly to the edge of the campus, landing in a newly opened space created by removing the building connector between Buildings 7 and 8. This change improves access and sightlines, while also making room for a stepped plaza leading down to the water.

A network of public spaces allows pedestrians to walk from the bridge to a plaza beside Building 12 at the center of the site. Although less than 3,000 square feet, this former garage sits in an important spot and can be repurposed for new commercial use. The center of campus has sufficient surface parking with vehicular access from three different directions. The "stitch" continues south to an existing walkway between Building 4 and the Harwick Mill. This alignment continues south to meet with Buildings 1N and 1S. The undeveloped land at the base of Mark's Mountain to the south and east is envisioned for a trail network, providing outdoor recreational opportunities.



The images above highlight the urban design for Concept 1: Community Stitch. The red tones highlight the unique public realm aspects of the design, which include pedestrian access stretching from the West Warren village center, across a new pedestrian bridge that connects to open space in the heart of the campus, and eventually allows access on foot to new trails on Mark's Mountain.

4.1.2. Use Concept

Community Stitch concept leverages the site's industrial history and its prime location along the edge of pristine natural spaces, such as trails and the Quaboag River, to create a vibrant, mixed-use campus. Approximately 40% of the campus is dedicated to industrial uses, including green manufacturing, and artisanal manufacturing, which build upon the site's industrial legacy while embracing innovative, sustainable production. These industrial spaces are strategically connected to about 30% of the campus devoted to commercial uses, such as outdoor adventure retail, a food hall, and a microbrewery/cidery, all of which offer recreational opportunities and support the area's hospitality sector. The remaining 20% features residential spaces, including 75 to 80 market-rate units and live/work studios, designed to blend seamlessly with both the commercial and industrial areas, while offering residents proximity to natural surroundings. The final 10% of the site includes service buildings, storage spaces, and a history center/café, tying into the community's cultural heritage. This concept not only revitalizes the site's industrial roots but also harmonizes with its natural setting, enhancing the campus's appeal by providing access to outdoor recreation, including trails and views of the Quaboag River, making it a place that supports innovation, nature, and community life.

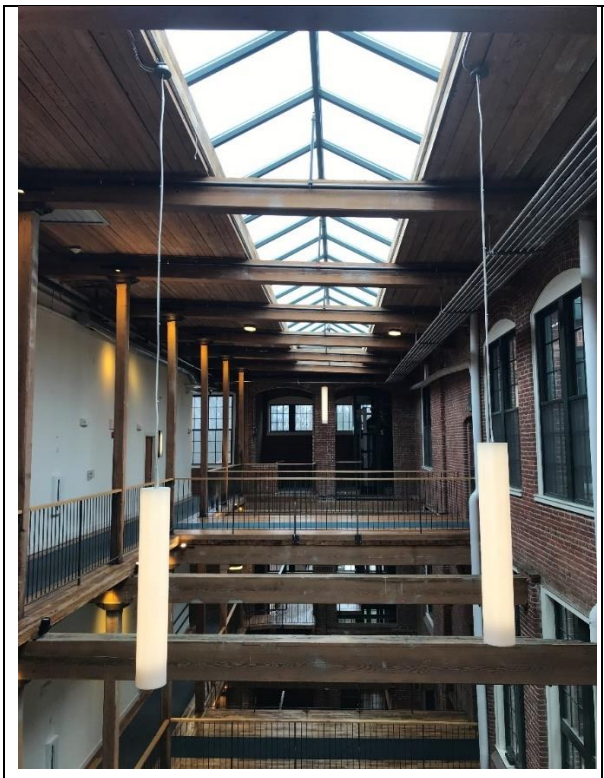


Figure 4-1: Example of Skylight Interior Courtyard

Source: Gamble Associates

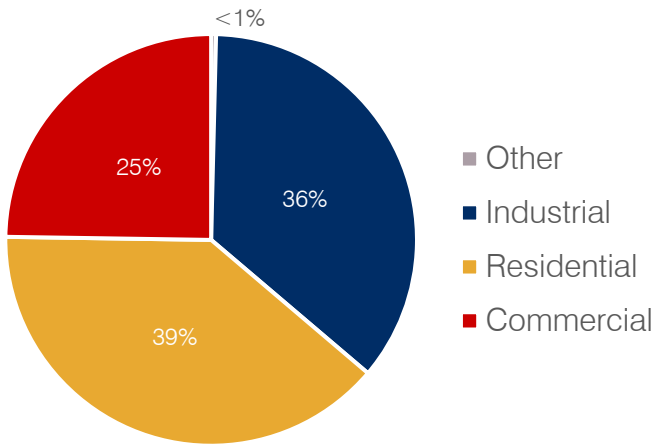


Figure 4-2: Concept 1 Community Stitch Summary of Uses by Percent of Total Gross Floor Area

4.2. Campus Quad

Land Use Concept	**Manufacturing and innovation hub**
Key Campus Features	**Central campus green and daylit canal raceway**
Potential Market	**Regional Universities, Local Vocational High Schools, Live-work spaces, daycare, internships, R&D, public safety training, blue/green economy**
Potential Partners	**Industry, Warren Pumps, Worcester Polytechnic Institute, Westfield State University**
Selective Demolition	**Buildings 6, 11, 12, 13, and single-story service Buildings for 4 and 5** **75% of the historic campus buildings remain**

4.2.1. Urban Design Approach

The Campus Quad provides an iconic, lush gathering space in the middle of the site. The heavily planted park removes over two acres of dirt, gravel, asphalt, and concrete and replaces it with a resilient green, reducing impervious surfaces and transforming what was once asphalt and concrete into a central green space for gathering and activity. Parking for the site moves from the center to the edges.

The new Quad introduces shade, diminishing the heat island effect and creating an opportunity for stormwater capture. The large lawn and its complementary plaza spaces are enabled by the demolition of the modest receiving sheds for Buildings 4 and 5. The one-story, metal-shed Building 12 and the two-story brick Building 11 are also removed to create a larger green. Both structures could possibly remain if reprogrammed in ways that activate the public realm. The heavily planted lawn is defined by a shared access drive on its perimeter. The drive enables access to the historic buildings for emergency vehicles.

In addition to introducing a new central green space, the project will uncover a historic feature: a former raceway canal that has flowed beneath the site for centuries. Once integral to powering the mill, the canal's reemergence will now function as a linear, visible waterway, connecting the site's industrial past, while adding a new, vibrant outdoor space. The raceway canal's excavation creates opportunities to improve drainage. The canal can also serve as an educational feature about to highlight past industry on the site as well as sustainable site design. In addition, the raceway could also be used for small scale hydroelectric power generation. Building 6 is removed to provide more surface parking for the property and to increase visibility of Building 5.

Concept 2: Campus Quad's urban design envisions a central campus quad that helps manage stormwater and creates a new lush gathering space in a formerly hardscaped space. The campus quad and walking paths along the river are highlighted in red.

4.2.2. Use Concept

Concept 2, "Campus Quad," is designed as a dynamic hub for learning, creating, and making, integrating light industrial, specialized manufacturing, and educational uses. Approximately 40% of the campus is dedicated to innovation hubs and specialized manufacturing spaces, fostering vocational and technical training, public safety training, and advanced industrial practices. These areas create a strong connection between education and industry. Around 30% of the site is proposed for use as educational space, including classrooms, a library, daycare, and Vocational-Technical training centers, supporting hands-on learning and professional development. Residential and mixed-use spaces could also function as conference or hotel spaces, comprising about 20% of the development, promoting a live-work environment where residents engage with the surrounding educational and industrial activities. The remaining 10% is proposed for use as commercial space to support the daily needs of the campus. With sustainable infrastructure such as a hydropower system from the daylighted canal and a data center in Building 1, the campus is designed to foster innovation.

Figure 4-3: Excavated Mill Raceway in Piqua, OH

Source: Gamble Associates, 2024

Figure 4-4: Concept 2 Campus Quad Summary of Uses by Percent of Gross Floor Area

4.3. Neighborhood Expansion

Land Use Concept	**Village-like, mostly residential in mill buildings with new infill of one and two-family homes on vacated land with neighborhood amenities in the two preserved historic buildings**
Key Campus Features	**Two iconic buildings preserved for residential or mixed-use, with vacated land repurposed for housing, green spaces, and amenities that integrate with the surrounding neighborhood.**
Potential Market	**Local workforce, first-time homebuyers, young families, and retirees seeking smaller, affordable homes near community amenities.**
Potential Partners	**Private residential developers, local builders for small-scale construction, senior housing developers, mixed-use residential developers, nonprofit housing organizations, healthcare-focused real estate groups, and community investment firms.**
Selective Demolition	**Buildings 2,4, 6, 7, 8, 9, 10, 11, 12, 13, 14.** **35-40% of the historic campus buildings remain**

4.3.1. Urban Design Approach

This design scenario explores how redevelopment could focus on creating a range of housing options, especially smaller-scale housing that integrates into the existing neighborhood. By introducing extensive new construction and the demolition of more than half of the buildings on the site, the design reduces the challenge of adaptively reusing the entire campus, to focus on only the most iconic and marketable buildings. It also helps the community understand the potential costs of extensive demolition and remediation compared to a focus on adaptively reusing buildings in the other options.

In this design, only a few of the existing structures are adaptively reused. With its three iconic stair towers and high visibility from Main Street, Building 5 is the site's signature architectural feature. The building's dimensions lend itself well to residential or hotel conversion. Building 3, located at the property's entrance, is envisioned for commercial conversion. These two structures total approximately 250,000 square feet or just over one-third of the campus and bracket new development. The remaining buildings are demolished.

A new loop road builds off the existing rights-of-way on the campus perimeter and provides addresses for new residential development. The road subdivides the site in a way that will allow for phased construction on a scale sympathetic to the historic "Patch," which is comprised of one- and two-family homes.

Concept 3 focuses on creating a residential community with a variety of neighborhood public spaces, rather than expansive public spaces.

4.3.2. Use Concept

Concept 3 envisions the site as primarily residential with a focus on creating a diverse community through a variety of housing options that could address rising housing costs in Worcester County and Western Massachusetts by meeting market demand. Central to this redevelopment approach are 39 new duplexes, each offering contemporary living spaces with dedicated parking. In addition to the duplexes, the plan includes market-rate housing with an interior courtyard and assisted living/elderly housing, forming a continuum of residential spaces to meet the needs of different demographics.

To complement the residential development, the plan incorporates supportive uses such as food and convenience retail, which will serve the daily needs of residents, as well as self-storage, ensuring convenience and functionality. Covered parking further supports the residential nature of the development, providing easy access and essential services. This combination of housing types and complementary uses creates a balanced, thriving community where residential life is at the forefront, supported by convenient services.

Figure 4-5: Contemporary Residential Infill, Somerville, MA

Source: Gamble Associates

Figure 4-6: Concept 3 Neighborhood Expansion Summary of Uses

4.4. Vacant Land Opportunities

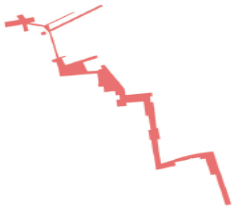
The largest parcel in this study includes a large area of vacant, wooded land to the east of the mill complex. This study has focused on redevelopment planning within the mill complex, as this area contains existing buildings, and is served by infrastructure. The study did include the vacant area in the assessment of existing site conditions. In general, costs to develop on the vacant land would be high given this part of the site's steep slopes and soil related to the location of Mark's Mountain, which has an elevation of approximately 1000 feet above sea level and is approximately 400 feet higher than downtown Warren. The steep slopes and general presence of rocky ledge add costs to redevelopment.

This area has been identified as a potential amenity to the various redevelopment concepts. Walking trails are used informally, but the presence of Mark's Mountain does present an opportunity for additional passive recreation as it provides some topographic interest as well as views of the river. The MOCD requires a set aside of the total land area for agriculture and conservation. As this vacant area has significant costs to develop, it could provide that necessary conservation area to support the remainder of the development. The Town may also determine that its value to the community is significant enough to work with the owner, through fee acquisition or conversation easement, to protect and expand this recreation resource.

5.0 COMPARATIVE ASSESSMENT OF REDEVELOPMENT CONCEPTS

5.1. Key Differences

The three Wright's Mill redevelopment concepts offer distinct features and themes. Community Stitch creates a mixed-use ecotourism destination with outdoor recreation, dining, and accommodations, preserving 90% of historic buildings. Campus Quad focuses on a manufacturing and innovation hub with green space, educational facilities, and live-work opportunities, retaining 75% of the site's structures. Neighborhood Expansion prioritizes residential development, demolishing most buildings to add new housing and amenities, and preserving only 35-40% of historic structures. Each concept balances preservation and new uses to support community and economic goals.



Concept 1: Communiy Stitch

Concept 2: Campus Quad

Concept 3: Neighborhood Expansion

Concept 1, Community Stitch, introduces a mix of uses with about one-third industrial, nearly 40% residential, and just under one-quarter commercial. Concept 2, Campus Quad, focuses on innovation, dedicating close to half the site to industrial uses, around one-third to residential, and 16% to education. Concept 3, Neighborhood Expansion, prioritizes housing, with four-fifths of the site for residential, 11% for storage, and roughly 9% for commercial.

Concept 1, Community Stitch, totals approximately 522,000 square feet, with residential uses making up the largest share at approximately 204,000 square feet, followed by 187,000 square feet for industrial and 129,300 square feet for commercial. Concept 2, Campus Quad, slightly reduces the overall square footage to 518,2000, prioritizing industrial at 227,000 square feet, residential at 144,000 square feet, and educational uses at 84,000 square feet. Concept 3, Neighborhood Expansion, reflects a significant reduction in overall gross floor area to 273,000 square feet, focusing heavily on residential at 219,000 square feet, with much lower allocations of 30,000 square feet for storage and 24,000 square feet for commercial. Figure 5-1 summarizes the total floor area by use.

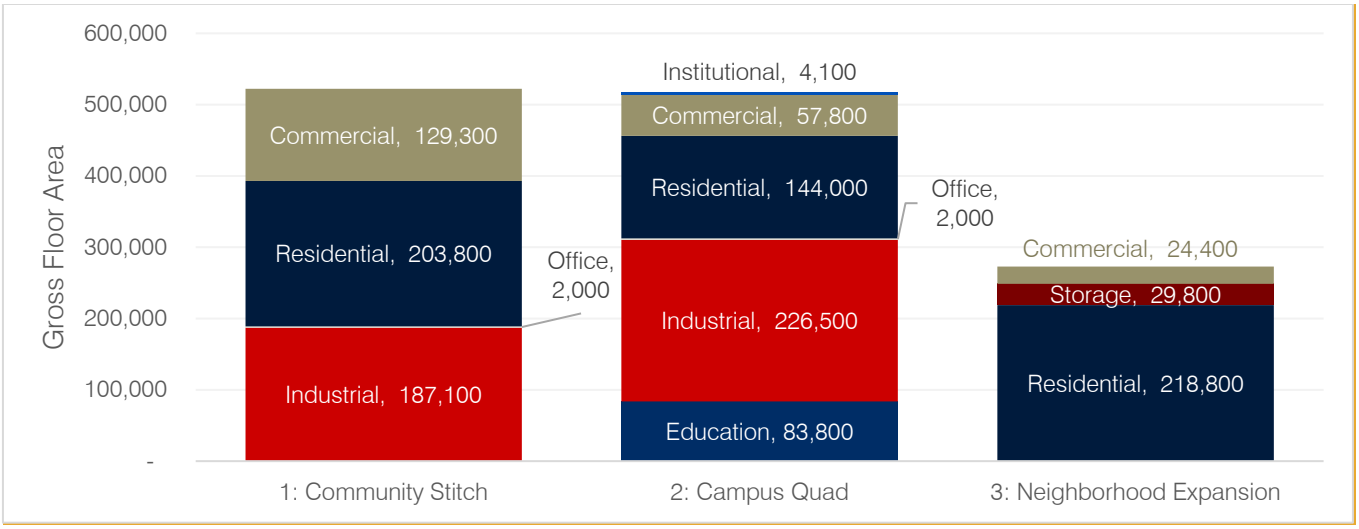


Figure 5-1: Total Gross Floor Area per Use

The total residential units vary across the three concepts. Concept 1, Community Stitch, provides 167 units, balancing housing with other uses. Concept 2, Campus Quad, offers fewer units at 115, reflecting its focus on industrial and educational uses. In contrast, Concept 3, Neighborhood Expansion, prioritizes residential development, delivering the highest number of units at 239.

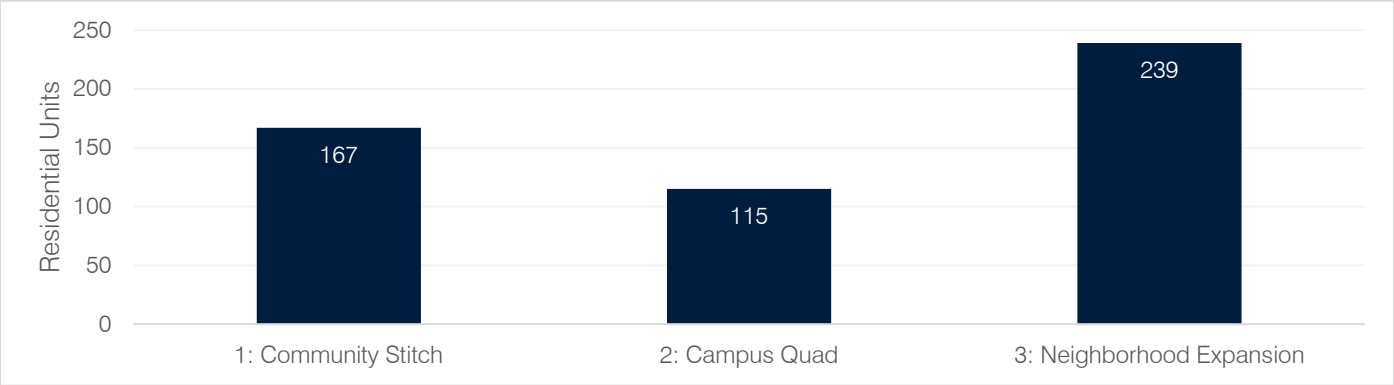
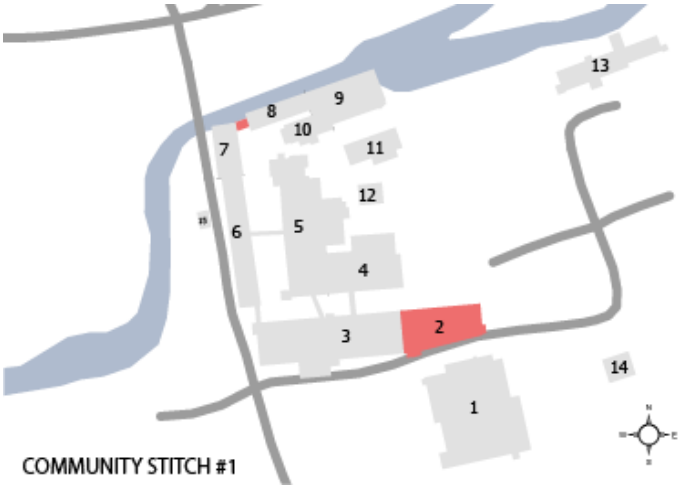


Figure 5-2: Total Residential Units per Use

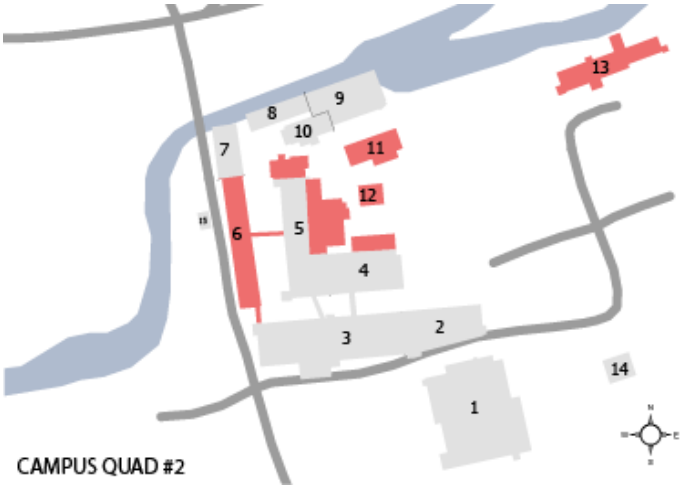
Concept 1, Community Stitch, emphasizes preservation by retaining most historic buildings, with only minimal demolition to support adaptive reuse. Concept 2, Campus Quad, strikes a balance by removing select structures to create a central green and enhance site connectivity, while still preserving key elements. Concept 3, Neighborhood Expansion, takes the most transformative approach, demolishing most buildings to prioritize residential development, leaving only a few iconic structures to anchor the new neighborhood.

Demolition Comparison



Renovated buildings

Demolished buildings



5.2. Infrastructure Upgrades and Required Public Improvements

The existing conditions section describes the current site conditions. The on-site water, wastewater, and stormwater systems will have to be updated to support redevelopment. In addition, additional water capacity is needed to serve future uses. Examining redevelopment at any scale against the existing conditions analysis reveals the need for infrastructure upgrades on-site. In addition, increased water capacity will be required to support redevelopment uses, though additional sewer capacity is not needed due to the available surplus.

5.2.1. Infrastructure Upgrades

Cost estimates developed by Weston & Sampson for required infrastructure upgrades are detailed in Appendix B, and a summary is provided in Table 5.1 using 2025 dollars. The cost estimates for redevelopment options are based on conceptual layouts for sanitary sewer and storm drainage, developed using LiDAR data from NOAA. Due to existing unknowns, these layouts should be considered preliminary. Stormwater drainage is presumed to outlet along the tailrace between Buildings 1 and 15, though its condition and permitting requirements remain unclear. Utility crossings over the headrace and tailrace appear feasible based on ACOE drawings, but the fate of the headrace in redevelopment is uncertain.

As noted in the existing conditions, there is limited formal drainage on site. Structures are undersized and lack sumps for sediment collection or hoods for trapping oils. The size of the site allows for the space required for above and below-ground stormwater treatment. The next steps should include a formal investigation of the existing stormwater infrastructure.

Stormwater detention is assumed to be necessary, with a placeholder estimate included. Drainage improvements for the Neighborhood Expansion layout present challenges due to the flat terrain in the Pulaski Street/Cottage Street area, requiring further analysis. Prior assessments suggest limited catch basin infiltration in the area. The proposed storm drainage improvements include precast concrete drainage structures, HDPE drainage pipes, on-site retention/infiltration, and a stormwater treatment system. A contingency is included in the estimate due to existing uncertainties.

Sanitary sewer estimates include assumptions about the number of building connections and domestic and fire service connections needed. For the Neighborhood Expansion layout, each new structure is presumed to require a connection. The sanitary sewer improvements include precast concrete sanitary sewer manholes, 8-inch PVC sewer mains, and individual building connections.

Water system improvements are also required to support redevelopment. The proposed upgrades include 8-inch and 12-inch ductile iron pipes for water distribution, water service connections, and 6-inch fire service connections. The town's overall water capacity may not fully meet the sprinkler needs of a redevelopment option, though the site could be served by a single on-site water tank.

Future infrastructure costs for the Community Stitch and Campus Quad are relatively similar. The Neighborhood Expansion concept does require more significant infrastructure investment. For all redevelopment concepts, the developer may need to assess the need for, and potentially fund, traffic improvements to improve intersection capacity at the Main Street and South Street intersection.

Table 5.1: Opinion of Probable Cost for Infrastructure Improvements			
	Community Stitch	**Campus Quad**	**Neighborhood Expansion**
Water Main Improvements	$960,000	$920,000	$1,870,000
Sanitary Sewer Improvements	$690,000	$650,000	$1,550,000
Storm Drain Improvements	$1,020,000	$980,000	$1,640,000
Total	$2,670,000	$2,550,000	$5,060,000

Source: Weston & Sampson

5.2.2. Public Improvements

In addition to on-site infrastructure costs to be borne by the developer, unlocking the development potential at Wright's Mill may require public improvements to support the scale of redevelopment.

Water capacity has been identified as a potential obstacle to redevelopment at Wright's Mill. Some level of investment will be necessary to support a full redevelopment. According to Town staff, there appears to be leakage occurring in the supply lines somewhere in the water district, estimated at 20,000 – 40,000 gallons per day. The site itself is serviced by undersized, aging, and deteriorating piping, which is susceptible to breaks. The Town has applied for a grant for Pulaski and Cottage Streets that would install a new properly sized water main through the study area (Town of Warren, Utility Conversation). This upgraded water main could be utilized for redevelopment at the Wright's Mill complex.

Wastewater capacity has not been identified as an issue for wastewater treatment at the Town's wastewater treatment plan. However, the local collection system for the mill will require upgrades. Also, the capacity of the on-site pump station will have to be confirmed. A consideration for future redevelopment will be to maintain the existing pump station, including access for maintenance.

Mill redevelopment will eventually impact the level of service at the intersection of Main Street and South Street. A traffic study will help the Town understand at what point this type of public infrastructure improvement may be necessary. Typical traffic studies cost between $5,000-10,000.

5.3. Anticipated Benefits

5.3.1. Economic Benefits

The Weston & Sampson team evaluated the full potential economic impacts of redevelopment for the three concepts, examining a wide range of factors. This analysis estimated costs and economic impacts using industry-standard data sources. Cost estimates consider both basic infrastructure upgrades, such as plumbing, and fire safety, and specialized improvements for different uses, like artisanal manufacturing, and live-work spaces. Economic impact projections use multipliers from the U.S. Bureau of Economic Analysis to estimate job creation and statewide financial benefits from construction and ongoing operations. Tax revenue estimates account for sales, income, and business taxes based on projected spending and employment.

The impacts are summarized in the table below and address job creation and tax benefits associated with construction spending and economic activity occurring after occupancy. Please note that local property tax benefits, which may be significant, are not included in this analysis as detailed projections of tax rates associated with land use categories would have been required to complete such an analysis. The projected local benefits may, therefore, be considered a conservative projection. These projections may also be conservative as the costs do not include soft costs, environmental remediation costs, or infrastructure costs which are not possible to estimate at this time. The importance of these projected benefits extends beyond their inherent values of job creation and spending as public funding agencies will look to economic impact projections in assessing applications for grants and other public incentives. The results from the analysis are included in Appendix C.

Generally, the economic impact of Concepts 1 and 2 are similar, and the economic impact of Concept 3 is lower. This is expected given the land use ratios of the concepts, where Concepts 1 and 2 include more of a mix of uses versus Concept 3's residential focus. In comparing the relative economic benefits associated with the three development options it is important to keep certain limitations of this model in mind. As noted above, costs such as remediation and infrastructure have not been included. Also, the local tax benefits have not been included, nor does it account for the relative fiscal impacts such as potential increased costs for schools, public safety, and infrastructure which is beyond the scope of this study. Another factor to consider is that public funding agencies place great emphasis on job creation and tax benefits, but public funding is often limited to public improvements such as infrastructure. One of the most beneficial incentives potentially available to private sector developers for this redevelopment is the historic tax credit and the degree of building demolition will play a greater role in successfully obtaining these credits.

Table 5.2: Potential Economic Benefits Comparison[1]			
Metric	**Community Stitch**	**Campus Quad**	**Neighborhood Expansion**
Full-Time Employees (FTE)	438	751	133
Total Annual Earnings	$23,099,050	$48,405,000	$6,645,000
Statewide Economic Impact	$64,677,340	$135,534,000	$18,606,000
State Personal Income Taxes	$1,154,952.50	$2,420,250	$332,250
Increased Sales Taxes	$721,845.31	$1,512,656	$207,656
Business Taxes	$1,847,924.00	$3,872,400	$531,600
Social Security Taxes	$1,432,141.10	$3,001,110	$411,990

[1] Estimates have been rounded to the nearest thousand due to the conceptual nature of these estimates, though the full report includes raw estimates.

Source: Leshinsky Finance

5.3.2. Potential Catalytic Effects

The economic impact analysis referenced above and attached to this report documents the projected job creation and tax benefits associated with the redevelopment of Wright's Mills. In addition to these beneficial impacts associated with redevelopment, there are several other positive effects generated by investment in a dormant property (Simon CRE).

1. **Infrastructure and Public Access Improvements** Although several public infrastructure improvements have been identified that are targeted to the redevelopment of Wright's Mills, these improvements to water, sewer, stormwater, and roadways will also benefit the abutting businesses and residences by increasing access and development potential beyond the property boundaries. The proposed pedestrian connections to the neighborhood may result in spillover economic activity from the redevelopment site and will offer the opportunity for residents and patrons of abutting businesses to enjoy the amenities provided on the site.
2. **Increased Property Appreciation** The redevelopment of the mill property will almost assuredly increase its property value. Significant private investment in a dormant property

is also likely to increase the value of nearby properties. This impact may be more marked if the redevelopment results in a destination development attracting residents and visitors from outside the area.

3. **Environmental Protection and Enhancement** Redevelopment will also address any existing environmental issues that may be present because of past industrial use. If any remediation is required, the broader environment including the river will benefit and natural assets such as the river and open space will be able to be used for recreation and enhancements to the site and the area.

   Redevelopment of a built-up location such as Wright's Mills also provides an opportunity for growth to take place without affecting the Town's rural and scenic character.

4. **Historic and Cultural Heritage Benefits** The Wright's Mill property is in good condition and has been well maintained by its owners. Redevelopment offers the opportunity to build upon this stewardship to preserve its historic features and highlight its history and significance to the community. Designation of the mill complex and potentially other properties as a historic district is a precursor to accessing Historic Tax Credits. This designation is often an opportunity to create a tangible representation of the Town's history and a source of civic pride.

5. **Positive Community Messaging** Successful redevelopment of this property also conveys that the Town of Warren takes a proactive approach to the redevelopment of a critical but challenging property. Warren can define itself as a highly engaged community that is willing to work in partnership with the private sector, consider multiple approaches to redevelopment, and appreciate the assets of the property and the obstacles and opportunities associated with redevelopment. This positive reputation may also extend to other development sites in the Town and efforts to attract investment.

5.4. Required Permitting

Permitting will be required for certain aspects of each redevelopment concept. Permits needed will likely include permits from local, state, and federal jurisdictions. This section outlines anticipated permits and approvals based on the redevelopment's scope, location, and anticipated impacts.

5.4.1. Zoning Approvals

The project will likely require a special permit under the Mill Conversion Overlay District, as well as site plan approval given the scale of potential redevelopment. Details about zoning approval are included in Section 5.5.

5.4.2. Construction Permits

The project will require building permits for any significant renovations or new construction as well as demolition permit(s) for the structures to be razed. Any new or modified connections to municipal sewer will require a Municipal Sewer Tie-In Permit from the Warren Sewer Department. New connections for water infrastructure will require an application to the West Warren Water District.

5.4.3. Road Permits

For any work involving excavation or obstruction of local roads, a road opening permit will be required from the Warren Department of Public Works.

In Massachusetts, a State DOT Construction Access Permit and Curb Cut Permit are required when a project impacts state-owned roads or highways. This includes creating new access points, modifying existing driveways, or conducting any work within the state's right-of-way, such as excavation, staging, or utility connections. A project requiring improvements to State Route 67 at the intersection of South Street would require these permits due to the modifications within the state-owned right-of-way. Improvements to State Route 67 may be required if a project of a certain scale significantly impacts traffic patterns, increases vehicular volume, or necessitates modifications to intersections, such as the one at South Street.

5.4.4. Environmental Permits

Notice of Intent under Massachusetts Wetlands Protection Act

Because of the proximity of the Quaboag River, a project involving the renovation or demolition of buildings along the Quaboag will require a Notice of Intent submittal to the Warren Conservation Commission. The Conservation Commission reviews the application for compliance with the Wetlands Protection Act. There is no local wetlands ordinance in Warren. The absence of a standalone local wetlands ordinance in Warren means the Conservation Commission reviews redevelopment applications solely for compliance with the Massachusetts Wetlands Protection Act. In addition, the developer must also file the NOI with the MassDEP, which provides oversight and technical support on complex projects and may offer additional guidance/recommendations beyond what is required locally (Massachusetts Department of Environmental Protection).

MEPA

At the state level, a potential redevelopment may trigger a review under the Massachusetts Environmental Policy Act (MEPA). Potential redevelopment will likely trigger a review at the Environmental Notification Form (ENF). There are many MEPA thresholds listed in 301 CMR 11.00: MEPA Regulations that redevelopments could potentially trigger, but the most likely ENF triggers for the project include the alteration of 500 or more feet of bank along an inland bank, the alteration of 5,000 or more square feet of bordering vegetated wetlands and the demolition of historic structures listed in the Inventory of Historic and Areological Assets of the Commonwealth. It is possible but not likely that a potential redevelopment might trigger the more in-depth Environmental Impact Report (EIR)process if the project significantly impacts wetlands, the Quaboag River, or its floodplain, generates 100,000 or more gallons per day of wastewater or water use or adds more than 1,000 daily vehicle trips or 150 parking spaces, for example (Massachusetts Enivironmental Policy Act Office).

MCP

MassDEP will play a key role in reviewing and approving plans related to hazardous materials, solid waste disposal, and wetlands impacts. Given the age of the structures on site, it is anticipated that asbestos, lead paint, and other hazardous materials may be present. Redevelopment will require compliance with state regulations on the removal and disposal of these materials, including the submission of an asbestos work plan for MassDEP approval. Any demolition or excavation work may

also require coordination under the Massachusetts Contingency Plan (MCP) for managing contaminated sites.

Chapter 91 Permit

Because the Quaboag River is a navigable non-tidal river, any work on river abutting buildings, or that includes modification of the dam or existing spillway may be subject to Chapter 91 permitting or licensing (MassDEP). Buildings 7, 8, 9 and 13 abut the river.

Coast Guard Permits

Because the Quaboag River is likely to be regulated as navigable, if the project includes the construction of a bridge/causeway over the Quaboag River (as proposed in the Community Stitch redevelopment concept) would likely require a U.S. Coast Guard Bridge Permit (United States Coast Guard).

National Pollutant Discharge Elimination System (NPDES) Permit

Any proposed new discharge of water from a point source (e.g., pipes, ditches, or outfalls) into the Quaboag River would require an NPDES permit. Discharges might include stormwater runoff, industrial effluent, or wastewater. If Wright's Mill operates any industrial processes or activities that generate wastewater or stormwater runoff, an NPDES permit would likely be required (United States Environmental Protection Agency). If redevelopment designs are not able to achieve sufficient groundwater infiltration or stormwater storage, stormwater may need to be discharged to the Quaboag and additional outfalls may be necessary. In addition, if project construction would include disturbance of soils greater than 1 acre, an NPDES construction permit would also be required.

US Army Corps of Engineers – Section 10, Section 404 Permits

If any portion of redevelopment requires placing a structure in or under the navigable waters of the Quaboag, the project will require a Section 10 permit under the Rivers and Harbors Act. A Section 404 Permit will be required if the project will involve discharge of dredged or fill material and is likely needed for redevelopment. Activities subject to Section 404 may include the construction, modification, or replacement of outfall pipes discharging into the river, as well as the demolition or rehabilitation of buildings abutting the river, which could involve placing fill for structural stabilization or erosion control. Bank stabilization measures, such as riprap or revetments, may also be necessary to protect the riverbank during or after redevelopment. Site development activities could include filling land for recreational, industrial, or commercial uses, as well as constructing or improving infrastructure like roads, utility lines, or stormwater treatment systems near the water's edge (US Army Corps of Engineers).

NEPA

Redevelopment of the Wright's Mill involving building rehabilitation or demolition would likely trigger a NEPA review process, due to both the likely need for federal permits and the anticipated use of federal funding, which is the case in all three redevelopment scenarios. Because of the cost of redevelopment, it is likely that any of the redevelopment options would require subsidy to make the projects feasible. The use of federal funding for infrastructure improvements, housing development funding, environmental remediation, or other components would necessitate compliance with NEPA. For the Wright's Mill redevelopment, it is most likely that HUD would take the role of lead federal agency, with USACE as a cooperating agency, unless the Section 404 permit involves substantial environmental impacts that elevate its importance relative to HUD funding.

5.4.5. Historic Resources and Section 106 Compliance

Both MEPA and NEPA processes would be likely to trigger consultation with the Massachusetts Historical Commission (MHC) for the Wright's Mill. Under MEPA, projects involving structures listed in or eligible for the State Register of Historic Places, such as historic mill buildings, require a review of potential impacts on historic and archaeological resources. Similarly, NEPA incorporates Section 106 of the National Historic Preservation Act (NHPA), which mandates federal agencies to evaluate the effects of federally funded or permitted projects on historic properties. Because all three redevelopment alternatives would involve demolition, a Project Notification Form (PNF) would likely need to be submitted to the Massachusetts Historical Commission (MHC). After the PNF is submitted, the MHC will review the proposed project to determine whether it affects properties listed in or eligible for the State Register of Historic Places. If the MHC identifies potential impacts, they will typically require the preparation of additional documentation, such as a historic resource survey or detailed project plan, to evaluate the significance of the resources and the extent of the impact. If it is determined that the project will have an adverse effect on historic resources, the next steps involve consulting with the MHC to develop mitigation measures. This may include creating a Memorandum of Agreement (MOA) outlining agreed-upon actions to minimize harm, such as archival documentation, preservation of specific elements, or public interpretation of the site's history. The MHC works closely with the project team to balance preservation goals with project objectives, ensuring compliance with state preservation laws while allowing redevelopment to move forward (Massachusetts Historical Commission).

5.4.6. Railroad Permits

If a bridge/causeway is to be constructed over the CSX rail line, as in Option 2, a railroad access permit would be required, as CSX owns the right-of-way and must approve any work impacting its property. MassDOT would also play a role in the process, providing input and ensuring compliance with state transportation regulations. Additionally, federal stakeholders, including the Federal Railroad Administration (FRA), the Federal Transit Administration (FTA), and state-level stakeholders including the MassDOT Rail and Transit Division would likely be involved in discussions to address safety, operational considerations, and federal compliance requirements. Early coordination with CSX and these agencies would be essential to navigate the permitting process and address any potential impacts on rail operations (CSX).

5.4.7. Permitting Comparison

Major Permitting Considerations

All three redevelopment scenarios for Wright's Mill share several permitting requirements across local, state, and federal jurisdictions. Key permits required for any scenario include compliance with the Massachusetts Contingency Plan (MCP) to address hazardous materials such as asbestos and lead paint, building and demolition permits for renovation or structural removal, and a Notice of Intent under the Massachusetts Wetlands Protection Act for work near the Quaboag River. All scenarios may also require Chapter 91 licensing for modifications to riverbanks and National Pollutant Discharge Elimination System (NPDES) permitting stormwater discharge into the river. Section 106 consultation with the Massachusetts Historical Commission (MHC) will also be necessary to evaluate and mitigate impacts on historic resources, especially for structures eligible for or listed in the State Register of Historic Places. This consultation will likely be triggered by federal permitting, such as Section 404 approvals or a U.S.

Coast Guard Bridge Permit, or by federal funding. While MEPA does not directly trigger Section 106, MEPA review requires consultation with MHC to address potential impacts on historic and archaeological resources as part of the state environmental permitting process.

Certain designs introduce added permitting complexity. The scenario involving bridge construction over the Quaboag River may require a U.S. Coast Guard Bridge Permit and Section 10 and Section 404 approvals under the Rivers and Harbors Act for in-water work or fill placement. Scenarios involving extensive demolition, especially of historic mill buildings, will require more detailed MCP plans to manage hazardous material remediation and additional coordination with MassDEP. These scenarios could also elevate the Section 106 review process under MEPA and NEPA, requiring mitigation measures such as archival documentation or preservation of specific elements. If large-scale demolition alters site conditions near wetlands or riverbanks, it may also trigger a higher-level MEPA review, such as an Environmental Impact Report (EIR).

Designs that significantly increase daily or peak-hour traffic, such as large-scale residential or mixed-use developments, may necessitate roadway modifications. For instance, projects generating 500 or more new vehicle trips per day or 100 or more during peak travel hours could require upgrades to State Route 67 or intersection improvements at South Street. Additionally, introducing new access points or loop roads would require MassDOT permits and may necessitate traffic impact studies to ensure safety and capacity compliance.

A matrix of the relevant permitting thresholds and timelines is included in Appendix D.

5.5. Zoning Analysis

A review of the Wright's Mill Complex's existing zoning indicates that existing zoning supports a wide range of uses, including multifamily residential, live/workspaces, commercial, industrial, and creative arts activities. The dimensional requirements in the MCOD are flexible, with the Village District's regulations applying to new structures and buildings, subject to Planning Board approval. However, to determine whether any zoning updates are required for the proposed redevelopment alternatives, we have evaluated each option to ensure they comply with the zoning framework (Town of Warren, MA).

5.5.1. Option 1: Community Stitch

The proposed redevelopment in Option 1 envisions a community-based, mixed-use environment, connecting various programs and uses, including residential, commercial, and industrial activities. The existing MCOD zoning allows for a combination of uses, including multifamily residential, green manufacturing, artisanal manufacturing, and microbreweries, which are aligned with the vision of this alternative. However, based on the proposed uses, including 75 to 80 new residential units and live/work studios, a detailed review of density and parking requirements will be needed to ensure compliance with the MCOD's stipulation on unit density (1 unit per 15,000 square feet) and parking standards. Additionally, site plan approvals from the Planning Board will be required for the residential conversion and any structural modifications.

5.5.2. Option 2: Campus Quad

Option 2 proposes a learning and innovation hub, integrating educational, industrial, and residential spaces within the mill complex. The MCOD zoning permits such uses as innovation hubs and

educational institutions. The addition of market-rate residential units in Building 5 (80 units) and live/work studios aligns with the current zoning framework. However, specific adjustments may be needed to accommodate new residential density and ensure that parking and utility requirements are met. The proposed demolitions and daylighting of the mill race will need careful consideration of stormwater management and environmental protections, as outlined in Section 13.7 of the Zoning Bylaw. Additionally, ensuring the historical preservation of key buildings within the MCOD will be important, as the overlay district requires maintaining significant portions of the property as undeveloped land or under agricultural preservation.

5.5.3. Option 3: Neighborhood Expansion

Option 3 focuses on creating a residential community with a mix of housing types, including market-rate, workforce housing, and assisted living. The MCOD zoning permits a wide range of residential uses, but this alternative involves substantial demolition of the historic campus. The proposed duplexes (78 units) and assisted living facilities (70 units) are compatible with the zoning but will require specific review to confirm compliance with density restrictions, stormwater management, and open space preservation requirements. Given the scope of demolition, detailed coordination with historical preservation guidelines and possible zoning variances will be necessary. Additionally, the introduction of food/convenience retail and service spaces will need to meet the commercial use provisions outlined in the MCOD.

Option 3 proposes a significant redevelopment of the Wright's Mill Complex, focused on creating a mixed residential community that includes market-rate, workforce, and assisted living units. The phasing and zoning approval strategy for the development may dictate whether the MCOD applies to all phases or just some phases of the project. The demolition of buildings to make way for duplexes would be a permitted use as of right under the Village District, and those uses would not be subject to the MCOD special permit process if duplexes were proposed in an isolated submission. Because the overall redevelopment concept is for a cohesive residential neighborhood, it is unclear whether the site plans could be decoupled into phases that are separately governed by different zoning provisions.

The commercial and multifamily uses proposed under Option 3 would be permitted under the MCOD. However, the level of demolition in the overall concept raises concerns about whether those site plans conflict with the purpose and intent of the MCOD. The MCOD was specifically established to preserve the architectural and historical character of mill properties, and the extent of demolition proposed in Option 3 may challenge that goal.

The MCOD's purpose emphasizes the preservation of the mill's architectural features and the overall character of the Town. One of the key criteria for the approval of a Mill Conversion Project (MCP) is whether the project "preserves town character and mill features." While the proposed uses for the demolished areas—such as residential and commercial spaces—are permitted by right under the zoning, the substantial demolition of the historic mill campus may be seen as inconsistent with the preservation goals of the district. The Planning Board will need to evaluate whether the level of demolition undermines the intent of the MCOD and if the redevelopment plan continues to preserve the mill's key architectural and historical features.

The MCOD encourages adaptive reuse over complete demolition, and the Planning Board will likely require justification for how the project still meets the preservation objectives of the district, despite the

proposed demolition. It will be important to clarify how the proposed changes align with the MCOD's preservation mandate, as significant demolition could be viewed as contrary to the district's goals.

The portion of Option 3 that consists of duplexes (78 units) would be permitted as of right under the Village Zoning, subject to meeting the applicable dimensional requirements, such as lot size, frontage, and setbacks. However, the creation of this many duplexes could trigger subdivision regulations if the acreage involved exceeds 5 acres or involves the subdivision of land into lots for sale. Subdivision regulations generally apply when new lots are created, but if the development remains a single parcel and no lot creation occurs, subdivision approval would not be necessary.

Despite the potential for zoning approval that can proceed with demolition, that demolition to make way for duplexes would likely trigger a Section 404 permit due to the proximity of demolished buildings to the Quaboag, and the overall project would be subject to Section 106 and consultation with MHC and the local historic commission. If the Section 106 process determines a project will have an adverse effect on a historic property or district, the MHC can recommend alternatives or mitigation measures to avoid or minimize harm. In some cases, if the adverse effect cannot be mitigated, the project may be stopped or altered.

5.5.4. Zoning Conclusions

Redeveloping the Wright's Mill Complex, with its 15 buildings and 600,000 square feet of space, presents significant challenges that will likely require a phased approach to ensure the project is manageable and financially feasible.

Because of the need for flexible project phasing, the recommendation is for the project to be considered as a master plan. The Town has the opportunity, through this study, to identify the type of redevelopment that will be most beneficial. With that understanding, Warren can work to ensure that local regulations will support and encourage that type of reuse, compared to others.

The section of the MCOD that limits the amount of residential use allowed at any one time may provide some obstacles to the mix of uses and project phasing. This section mandates that no more than 50% of the gross floor area of buildings on the site may be used for residential purposes and that the floor area renovated for residential use cannot exceed non-residential uses by more than 50,000 square feet, except when vacancies cause non-residential tenants to leave the premises mutation. Under this mandate, phasing the project to emphasize residential uses early on may not be feasible. Residential projects cannot even receive site plan approval until prior residential MCPs attain seventy-five percent (75%) occupancy, as determined by the Building Inspector, before an applicant may submit another residential MCP special permit/site plan approval application. Such restrictions could complicate the financial viability of the project and delay the redevelopment of residential units. Residential uses could not be used as a first phase campus activation to support future commercial or institutional uses. Multiphase residential projects would struggle with financing if they cannot submit special permit/site plan applications until prior buildings reach 75% occupancy. Typically, zoning approvals are required to show shovel readiness to be competitive for funding and can take years and multiple applications before approval.

5.6. Key Features for Redevelopment Identified in the Design Process

Through the analysis of existing conditions and the development of various redevelopment concepts, several potential features have been identified that could be integrated into any design approach. These features would enhance the site's sustainability, community connection, and overall value, setting the project apart. The following list highlights these adaptable components, which can be incorporated into any redevelopment plan.

- **Rooftop Solar** – Based on the existing conditions, and conditional upon additional, roof-mounted solar may be a way to increase the site's sustainability and reduce utility costs.
- **Uncovered Raceway Canal** – The renovation of this historic feature could create a site amenity for the campus.
- **Development of Recreation Resources on the Vacant Land** – The formal use and expansion of passive recreation opportunities on this vacant land will provide an amenity for the mill redevelopment and the Town of Warren.
- **Highlighting Significant Architectural Features** – Lighting or otherwise highlighting the vertical architectural features will provide a visible indication of the redevelopment potential and success. This can be an early intervention to create interest in the site.
- **Interpretive Information on Mill's History** – Displaying and interpreting some of the mill's artifacts in public areas around the campus can engage residents and provide historical and cultural interest to future users.

6.0 POTENTIAL FUNDING SOURCES

The redevelopment of Wright's Mill could benefit from a range of public funding and financing tools, including state and federal programs successfully leveraged by comparable projects. These programs vary in eligibility, with some designed for private developers and others reserved for public entities. Options may include tax incentives, grant programs, low-interest loans, and infrastructure financing mechanisms. Identifying the most suitable tools will depend on the project's structure, funding needs, and partnerships.

6.1. MassDevelopment Programs

MassDevelopment offers several programs that could be used to support the Wright's Mill redevelopment.

Programs related to understanding and addressing environmental contamination include (MassDevelopment):

Brownfields Site Assessment Program

Interest-free financing of up to $250,000 per site is available for environmental testing. Conducted by a Massachusetts Licensed Site Professional, a site assessment documents the extent, if any, of environmental contamination and develops a remediation plan if needed.

Brownfields Redevelopment Fund

This program finances the environmental assessment and remediation of brownfield sites. Eligible applicants include municipalities and their agencies and certain nonprofit organizations. Generally, this funding source requires undertaking a project with a demonstrable public benefit, an identified development opportunity, and a committed developer in place. Awards of up to $250,000 in site assessment funding, and up to $750,000 in remediation funding are available.

Brownfields Remediation Loan Program

The Brownfields Remediation Loan Program provides loans of up to $750,000 per site are available for environmental clean-up required for redevelopment. Financing terms are determined on a case-by-case basis to provide flexibility to the project.

MassDevelopment also has several programs to support general redevelopment activities.

Site Readiness Program

Eligible activities include site assembly, site assessment, predevelopment permitting, and other predevelopment and marketing activities. This program funds projects that enhance a site's readiness for commercial, industrial, or mixed-use development. Eligible applicants include municipalities, municipal agencies or authorities, economic development and industrial corporations, economic development authorities, and non-profit entities. Awards are $50,000 to $500,000 but the grants must be repaid from any lease or sales proceeds unless redevelopment fails to occur within 30 years, or the proceeds are less than the grant amount. Selection criteria include the scale of development, jobs created, and the amount of private investment (MassDevelopment).

Underutilized Properties Program-Community One-Stop Guidelines

This program provides funding for "projects that will improve, rehabilitate or redevelop blighted, abandoned, vacant or underutilized properties to achieve the public purposes of eliminating blight, increasing housing production, supporting economic development projects, increasing the number of commercial buildings accessible to persons with disabilities." Awards range from $50,000 to $1,000,000. Eligible applicants include both public and private entities. Awards are outright grants to municipalities and non-profits and recoverable grants to for-profits. Funds may be used for pre-development activities as well as capital improvement costs. Public purpose and project readiness are key among the selection criteria (MassDevelopment).

Real Estate Services Program

This program provides real estate services technical assistance to communities. Some example projects conducted under this program include the development of District Redevelopment Strategies, Corridor Studies, and District Improvement Financing (DIF) (MassDevelopment). As discussed below, DIF may be a financial tool to consider, and this technical assistance may help initiate that process.

Loans and Guarantees

MassDevelopment provides direct loans and partners with banks to provide loan participation and loan guarantees to manufacturers, commercial/industrial businesses, developers, and nonprofit organizations. Loans are available for all stages of a project, from predevelopment needs to permanent real estate financing (MassDevelopment). These include:

- Predevelopment Loans.
- Commercial Real Estate Loans and loan participations are available for facility acquisition, renovation, construction, and permanent financing by businesses, developers, and nonprofits.
- Green Loans and Commercial Real Estate Improvement.
- Mortgage Insurance Guarantees.
- Real Estate Tax Credit Bridge Loan

6.2. Executive Office of Economic Development (EOED) Programs

MassWorks Infrastructure Program

This Executive Office of Economic Development (EOED) program issues public infrastructure grants to municipalities for the design, construction, building, land acquisition, rehabilitation, repair, and other improvements to publicly owned infrastructure. Eligible applicants are limited to municipalities for public infrastructure, but the criteria emphasize projected economic outcomes of the project including housing production, employment creation, and square footage of commercial and industrial space generated (Massachusestts Executive Office of Economic Development).

Rural Development Fund (RDF)

This is a competitive grant program that provides financial support for economic development and community development activities in rural communities. Warren is one of the eligible communities.

Allowable uses of the funding include planning and zoning activities, site preparation, building pre-development and improvements, and infrastructure design and construction. Funding is expected to be in the $50,000 to $500,000 range with a cap of $100,000 for planning and zoning projects (Massachusetts Executive Offie of Economic Development).

Community Development Block Grants (CDBG)

The CDBG program is a grant program with funding that originates from the US Department of Housing and Urban Development (HUD) and is administered by the State. The funding may be used for activities benefitting low- and moderate-income populations and addressing or mitigating blight. In 2024 the Town of Warren was one of six communities to receive a shared total of $4.4 million in CDBG grant funds through the assistance of the Central Massachusetts Regional Planning Commission (CMRPC). The funds will be used for various purposes including designing and building neighborhood, housing-related, or park-related infrastructure. Design and improvements to infrastructure related to blight, low-moderate income housing, and economic development are eligible uses of CDBG funds and may be available to the Wright's Mills project (U.S. Department of Housing and Urban Development; Central Massachusetts Regional Planning Commission).

Chapter 43D - Expedited Local Permitting

Chapter 43D of the Massachusetts General Laws enables municipalities to designate Priority Development Areas (PDAs) and fast-track the permitting process for developments within these areas. Municipalities can apply to have specific sites designated as PDAs based on local planning goals, infrastructure capacity, and community needs. Once an area is designated, the municipality is required to streamline the permitting process, aiming for a decision within 180 days. This expedited timeline reduces delays and provides developers with a more predictable path forward. A significant benefit of Chapter 43D is that it also grants priority access to funding through programs like MassWorks, which supports infrastructure improvements needed to accommodate new development (Executive Office of Economic Development).

6.3. Executive Office of Housing and Livable Communities Programs

Community Planning Grant Program

This program provides funding for a variety of community planning activities including community plans, zoning revisions, and planning for housing. The maximum award is $150,000 and applicants are encouraged to provide a 10% match. The award criteria place an emphasis on planning for housing. There is a 15% set aside of funds for rural communities. (Massachusetts Executive Office of Liveable Communities)

Low-Income Housing Tax Credits (LIHTC)

The Low-Income Housing Tax Credit Program (LIHTC) provides a means for developers to raise capital for the construction or rehabilitation of housing for low-income persons. Both for-profit and nonprofit developers can qualify for the credit. At least 20% of the units must be reserved for people with incomes at/or below 50% of the area median income adjusted for family size, or at least 40% of the units must be made affordable for persons with incomes at/or below 60% of the area median income adjusted for family size. This is a competitive program with limits on funding availability and priority given to projects

that are ready to proceed with progress shown by the applicant on any previous LIHTC-funded projects. The Healy Administration has emphasized the need for geographic distribution of funding and investment in rural areas of the Commonwealth (Massachusetts Executive Office of Housing and Livable Communities).

6.4. Historic Tax Credits

Massachusetts Historic Tax Credit (MHRTC)

Massachusetts Historic Tax Credits provide up to a 20% state tax credit for qualified rehabilitation expenditures on income-producing historic properties. The credit may be coupled with the Federal Rehabilitation Tax Credit. The credits can be sold to a third-party investor for funds, which are often reinvested in the project as an effective tool for leveraging private investment. In 2024, the Massachusetts legislature increased the MHTC funding cap to $110 million until 2030.

In order to qualify for a MHRTC, the project must be certified as individually listed on the National Register of Historic Places, as a contributing structure within a National Historic District, or deemed eligible by the MHC for such a listing. The rehabilitation must also be certified as consistent with US Department of the Interior standards. The services of a historic preservation consultant are generally recommended for this process (Massachusetts Department of Revenue; Massachusetts Historical Commission; Preservation Massachusetts).

Federal Historic Tax Credit

A 20% Tax Credit on federal taxes is also available to revitalize certified historic structures and is administered through the National Park Service (NPS). Certification requirements are generally the same as the MHRTC and the state tax credits may be combined with federal credits. Coordination of this process with the State process is essential and the use of a historic preservation consultant is strongly recommended (United States Internal Revenue Service; United States National Parks Service).

6.5. U.S. Economic Development Administration Programs

Public Works and Economic Adjustment Assistance Programs

Funding is available for public works projects including design, engineering, or construction of infrastructure improvements in support of economic development. Private entities are not eligible. EDA investment rate ranges from 50% to 80% depending upon income and unemployment levels. Currently, the Town of Warren is eligible for a 70% EDA investment rate based upon unemployment levels. The selection criteria emphasize alignment with EDA investment priorities, high-quality job creation, and retention, leveraging, and project readiness and feasibility. The project must be also consistent with the local Comprehensive Economic Development Strategy (CEDS).

Southern New England Regional Commission

In December 2024, as part of the Water Resources Development Act and the reauthorization of the EDA, Congress created the Southern New England Regional Commission, a new agency that is similar to the Northern Border Regional Commission (NRBC) and the Appalachian Regional Commission. The Commission is intended to serve Massachusetts, Rhode Island, and portions of Connecticut and is

empowered to make grants to fund infrastructure improvements that support economic development as well as grants for other economic development activities. Although the level of funding and requirements for receiving such funding are not known at this time, by way of comparison, the NRBC has more money for a less than four-state area than the EDA Philadelphia Regional Office which serves 16 states and territories. This is a potential funding source to consider in the future (Amo; S.900 - Southern New England Regional Commission Act).

6.6. Other Resources

Environmental Protection Agency (EPA) Brownfields Grants

The EPA provides grants for the assessment and remediation of contaminated properties. Cleanup grants are made available to the government or non-profit owners of contaminated properties at a maximum initial request of $500,000, which may be subsequently increased to $1,000,000 or $2,000,000 with additional applications based on need for additional investigation as the work progresses. A 20% match is required, and a Phase II environmental assessment must be underway or completed (United States Environmental Protection Agency).

New Markets Tax Credits

The New Market Tax Credits Program (NMTC) is a program that incentivizes economic development using tax credits. Rural communities are one of the target areas of the program with over 30% of the NMTC investments in 2022 going to rural areas. According to a 2021 Study by the Urban Institute, between 2001-2017 retail and manufacturing and food processing projects received the most NMTC investment. The average Qualified Low Income Community Investment (QLICI) funding per project was $8.8 million with great variation among project types. The study shows that the NMTC is an effective financial leveraging tool with non-QLICI funding ranging from 65% to 20% of the total project funding (CDFI Fund; New Markets Tax Credit Coalition).

Massachusetts Preservation Projects Fund (MPPF)

Preservation Massachusetts provides grants for the restoration of properties listed on the Massachusetts Register of Historic Places. It is a 50/50 matching grant program. However, only active 501(c)3 organizations are eligible to apply and only for properties which they own (Preservation Massachusetts).

Massachusetts Cultural Council Cultural Facilities Fund

This is a grant program available to cultural facilities, municipalities which own cultural facilities and institutions of higher education for feasibility and technical assistance grants (up to $35,000) and capital improvement grants (up to $200,000). The applicant must own or lease the facility. The FY 2026 funding round has not been announced at this time (Mass Cultural Council).

Municipal- District Improvement Financing (DIF)

Requires designation of a DIF Development District by the Town from which incremental tax revenues are calculated and DIF revenues generated. The uses must be public projects or programs. DIFs may be used with any combination of public and private financing but a public purpose must be identified (MassDevelopment and Camoin Associates).

Class I Renewable Energy Certificates

If the redevelopment includes a hydroelectric power station, could qualify to generate Class I Renewable Energy Certificates (RECs) under the state's renewable energy program. Class I RECs are tradable credits earned for every megawatt-hour of renewable electricity produced. These RECs can be sold to utilities and other entities required to meet renewable energy mandates, creating an ongoing revenue stream for the hydro station. However, to generate and sell Class I RECs, the facility must receive a Statement of Qualification from the appropriate state regulatory agency and must actively operate while reporting its energy production. In this context, the ability to sell RECs is considered a form of "funding" because it provides a recurring source of income (Massachusetts Department of Energy Resources).

Commonwealth Hydropower Program

The Commonwealth Hydropower Program offered by the Massachusetts Clean Energy Center (MassCEC) provides financial support for projects that improve and expand hydropower capacity in Massachusetts. The program focuses on modernizing small, existing hydropower facilities, supporting feasibility studies, construction, relicensing, and other upgrades to increase energy output and minimize environmental impacts.

Funding awards can reach up to $300,000 per project, with eligibility open to hydropower facility owners, developers, and operators. The program aims to advance renewable energy goals while preserving the environmental and historical integrity of hydropower sites (Massachusetts Clean Energy Center).

7.0 NEXT STEPS

This section summarizes the recommended approach to redevelopment, beginning with a discussion of the financing strategy, and the phasing considerations. A section on other relevant mill redevelopment is included, as examples of the type of approach that could be successful at the Wright's Mill. Finally, this section discusses the recommended strategy in terms of design, future uses, phasing, and financing, with a very specific list of next steps.

7.1. Financing Strategy

Financing Considerations

According to Paul Bongiorni of SR Commercial Realty, the commercial broker representing the property owner, at present there is no strong interest in the acquisition of the Wright's Mills property. At various times interest has been expressed for uses that included data centers, self-storage, and senior housing. Mr. Bongiorni has stated that prospective purchasers have expressed concerns regarding the size of the facility and the distance of the location from metropolitan markets such as Worcester and Springfield. He has noted that the good condition of the property and its relatively low cost is a strong asset and its large size acts as both an asset and a liability by offering many options for re-use but increasing the amount of required investment for redevelopment.

The economic analysis done by Weston & Sampson, as discussed in Section 5.3.1, estimated private costs, at full build, could reach as high as $100 million. This amount does not include soft costs, tenant improvements such as fit-outs or equipment, or infrastructure costs such as upgrades to sewer, water, or stormwater.

Predevelopment Activities to Access Funding

Several funding sources have been identified, the majority of which are restricted to public entities for public improvements. This study provides baseline information regarding the improvements that could be made to increase the development potential of the Wright's Mills property. Specifically, upgrades to water and sewer service. The Town, with the assistance of the CMRPC, should consider applying for grant assistance to advance the design of public infrastructure. Programs that may be of particular use include Mass Development's Site Readiness, Mass Works Infrastructure, CDBG, and the Rural Development Fund. Advancing the design of the infrastructure will position Warren to compete for funding for implementation.

The Town may also increase the marketability of the Wright's Mills property by preparing district plans that position the private developer to access funding. Designation of the Wright's Mills campus and possibly abutting areas as a National Historic District will facilitate the use of Historic Tax Credits by potential developers. Team members have had informal discussions with a historic preservation consultant who expressed great optimism regarding the prospects of a successful designation. The consultant noted that the designation process initiated by the Town may be reviewed more expeditiously by the State and is very likely to generate development interest in the property. National Register designation would enable access to federal and state historic tax credits but would not impose restrictions on property owners who do not seek that funding or require federal permits.

The Town may also consider the designation of a DIF Development District (as discussed in Section 6.6) to allow the option of DIF Financing for infrastructure improvements. As noted above, Mass Development's Financial Services program may be able to provide technical assistance to help in this effort. The designation of a DIF Development District does not obligate the Town to provide such financing nor will it impact its credit rating. Such a proactive step towards establishing a mechanism for private-public financing of infrastructure may be seen as another indication of the Town's interest in redevelopment.

7.2. Phasing and Timeline Considerations

As discussed elsewhere in the report, given the size and the number of buildings associated with the Wright's Mills campus, phasing of redevelopment is a sensible approach. Starting "small" can allow the overall project to begin to realize revenue and demonstrate site activity and revitalization. These factors can help move the rest of the project forward. From a permitting and construction perspective, phasing of development is a necessity, and projects of this magnitude are typically developed over several years. How this phasing is arranged may vary depending on the land uses, as illustrated in the options discussed in the report. The phases may be grouped by function or land use, condition of buildings, or location on the site or in relation to access and infrastructure.

Public-private partnerships can help to develop an approach to phasing the project. Working with the Town and State can help to understand and possibly expedite permitting processes. Public partners can assist with grant funding and financing for the needed infrastructure investments. Public partners may also be able to work with the owners to manage the risks related to allowing a more phased and slower redevelopment approach. Potential tools include local tax abatement and potential acquisition and management by public or non-profit entities.

A public-private partnership for redevelopment involves collaboration between a government entity and a private developer to achieve shared goals, such as revitalizing properties or addressing community needs. The public entity may contribute resources like funding, land, or incentives, while the private developer invests capital and expertise to execute the project, ensuring a balance between public benefits and private returns.

Regardless of how the phasing is determined, financing realities will likely dictate a phased approach. Very few developers have the financial capacity or the desire to take on the financing of a $100 million project in one investment. The carrying costs associated with the debt on such an investment and the limited number of financial institutions willing or able to take on this scale of financing make it unlikely that this project will be developed in a single phase. Typically, banks limit the size of the debt on a project to approximately $20 million or syndicate with other banks, adding complexity to the financing process. Accessing tax credits or alternative financing through sources such as Mass Development may enable a developer to take on larger scale phases, but construction in phases is the most likely approach. A phased approach also allows developers to stabilize the project and cover carrying costs such as debt while waiting to commence subsequent phases.

A developer may consider an income-producing use with a low capital investment in the first phase to allow for income to cover maintenance, debt, and potential soft costs associated with the development of subsequent phases.

7.3. Precedent Projects

Redeveloping historic mill properties is a proven strategy for preserving cultural heritage, stimulating local economies, and revitalizing communities. For Wright's Mill in Warren, Massachusetts, several precedent projects provide useful examples that Warren and potential developers can look to for inspiration.

7.3.1. Mill Redevelopments

The first successful mill redevelopments in Massachusetts began in the eastern Massachusetts cities of Lawrence and Lowell, where historic textile mills were converted into housing, offices, and mixed-use spaces starting in the 1970s and 1980s. These efforts demonstrated how abandoned industrial buildings could be preserved and repurposed, setting the stage for similar projects throughout the state. Redeveloping mill sites in Massachusetts presents several challenges, including environmental contamination, structural deterioration, and the complexities of adhering to modern building codes and zoning regulations (Central Massachusetts Regional Planning Commission). Additionally, securing sufficient funding for such extensive projects often proves difficult. At the same time, the redevelopment potential of Wright's Mill is supported by rising residential rental rates in Western Massachusetts and Central Massachusetts. As discussed in the existing conditions analysis, markets like Worcester and Springfield are experiencing high demand and limited supply. Worcester ranks as one of the nation's most competitive rental markets with a 1.7% vacancy rate and a median rent of $1,995, while Springfield's rental market, though more affordable, continues to grow with a median rent of $1,695. These trends highlight the feasibility of transforming Wright's Mill into multifamily housing, particularly given its unique location midway between these two metropolitan areas, its flexible Mill Conversion Overlay District zoning, and its riverfront setting. Additionally, the surrounding neighborhood, known as "The Patch," provides an opportunity to integrate new housing with existing single- and multi-family residences while attracting commuters and young families from the broader region.

Eagle Mill Redevelopment in Lee, Massachusetts

The Eagle Mill complex, originally established in 1808 along the Housatonic River, operated as a paper mill for over 200 years before closing in 2008. As of 2024, the project is under construction. he. The first phase involves transforming the two primary historic mill buildings into 56 new affordable apartment homes. Subsequent phases include constructing two new apartment buildings, adding 66 additional apartments, and building six condominium townhouses, bringing the total to at least 135 new housing units. The project also plans to incorporate 14,000 square feet of retail and office space. The project is utilizing MassHousing financing, as well as state and federal tax credits (Izikson).

Ludlow Mills Redevelopment in Ludlow, Massachusetts

The Ludlow Mills complex, spanning 170 acres along the Chicopee River, is one of New England's largest brownfield redevelopment projects. The project sponsor was Westmass Area Development Corporation, a private, not-for-profit development corporation. The project has involved multiple phases and a variety of uses, including senior housing, hospital rehabilitation, a riverwalk, and road repairs. A wide range of partners, both public and private have supported the project, including the EPA, HealthSouth, Winn Development, Massachusetts Department of Environmental Protection, Mass

Development, Mass DOT, U.S. Economic Development Administration, and the Town of Ludlow. Two residential phases have been completed as of late 2024, with the restoration of two different mill buildings adding a total of 170 units of mixed-income housing for adults aged 55 and older, leveraging a combination of funding sources anchored by low-income housing tax credits. This initiative has transformed the site into a mix of housing, a hospital, and greenspace. Future phases include a $50 million mixed-use development expected to create 2,000 jobs and attract $300 million in private investment. A small but significant design detail has been that one of the mill's iconic clock towers has been restored as part of the redevelopment, leveraging an Underutilized Properties Program Grant (United States Environmental Protection Agency; WinnCompanies).

Lockwood Mill, Waterville, Maine

Waterville, Maine, is a city of about 16,000 people, located in central Maine, 20 miles south of Augusta and 70 miles north of Portland. The city is undergoing significant revitalization, particularly in its downtown area, driven by housing demand and regional growth.

The $40 million Lockwood Mills project, led by North River Co., is redeveloping the former Lockwood Mill building. into 65 residential units. Before the residential work began, extensive abatement and remediation efforts were undertaken to address environmental concerns. The first units are expected to be available in early 2025, with the project being completed in phases, with more units set to be ready by 2026.

Financing for the project includes Low-Income Housing Tax Credits, federal and state Historic Tax Credits, and a $1 million grant from the federal American Rescue Plan Act. In addition to residential units, a small commercial space will also be included. This redevelopment is part of a broader effort to increase housing supply in Waterville, with over 300 housing units planned or underway across the city. These initiatives aim to meet growing housing demand and support the revitalization of downtown Waterville.

7.3.2. Other Precedents

Retreat Farm Barn Renovation in Brattleboro, Vermont

The Retreat Farm in Brattleboro, Vermont, spans 500 acres of conserved forests, farmlands, trails, and waterways, forming a key cultural and natural asset near downtown. The Retreat Farm in Brattleboro, Vermont, has a rich history dating back to its establishment in 1837 as a model farm for the Brattleboro Retreat, a mental health institution. The farm provided food and served as a therapeutic workplace for patients. The campus includes nine historic barns centered around Farmhouse Square. As part of a larger revitalization effort, the nonprofit Retreat Farm renovated one of these barns, the North Barn to serve as a community and event space, accommodating up to 600 people and hosting seated banquets for 240. The project also included converting the former Grafton Village Cheese factory into a "food enterprise center" in partnership with local farms. The Farm Market provides booths for rent for local vendors and is a draw for tourists and community members. The project sponsors see the projects as part of a larger effort to preserve southern Vermont's agricultural heritage (Nelson).

The project has leveraged funding from the Northern Borders Regional Commission, a loan from USDA Rural Development as well as grant funding from the state of Vermont, in addition to donations (Audette).

Hydropower Projects by Connecticut Green Bank

Connecticut Green Bank has supported innovative projects repurposing historic mill sites for small-scale hydropower generation (Connecticut Green Bank). Two examples include:

- Cargill Falls Mill in Putnam, Connecticut: This project refurbished a historic powerhouse and dam alongside energy efficiency retrofits for a mixed-use property, successfully integrating renewable energy into a historic site.
- Hanover Pond in Meriden, Connecticut: An Archimedes Screw Turbine was installed at a historic mill site, generating approximately 920,000 kWh of electricity annually for the city. These projects showcase the potential for combining renewable energy solutions with mill redevelopment, contributing to sustainability and economic viability.

Byron Weston Mill Dam Hydropower Restoration

Crane & Co. and its project partners led a hydroelectric energy renewal project at Byron Weston Mill in Dalton, Massachusetts, to restore and modernize the mill's historic hydropower infrastructure. Originally built in 1917 to support the Crane family's papermaking operations, the hydropower station was decommissioned in the 1950's. The project addressed aging equipment and inefficiencies that limited the site's energy production potential, ensuring it could operate reliably and sustainably in the future. The restoration project included upgrades to enhance renewable energy production by replacing the turbine and updating critical components. The project was completed in 2013 (Low Impact Hydropower Institute; Canadian Hydro; GZA).

A key element of the project was the restoration of the site's historic McCormick Hercules wheel turbine. While no longer in use, the turbine is now displayed at Crane Museum of Papermaking, preserving an important piece of the mill's industrial heritage. The updated facility, known as Byron Weston No. 2 Hydroelectric Project, features a vertical Francis turbine capable of generating up to 250 kilowatts of renewable electricity. Powered by East Branch of the Housatonic River, the system operates efficiently within flows ranging from 20 to 105 cubic feet per second. This project highlights how historic sites can advance clean energy goals while retaining their cultural and historical significance.

Funding for the project was provided in part by Massachusetts Technology Collaborative (now Massachusetts Clean Energy Center) through a feasibility grant, which supported the evaluation and planning needed to modernize the hydropower system.

East Point Housing Development, East Providence

The East Point housing development in East Providence transforms a 30-acre former industrial site into a residential community offering a mix of market-rate and affordable housing options. The project will deliver 392 residential units across various types, including apartments, duplexes, and single-family homes, addressing housing demand at different price points. The development is being executed in two phases. The first phase includes constructing 240 units along the "coastal" area of the site near the Seekonk River, offering scenic waterfront access. The second phase will add 152 units in the "inland/pond" section near Roger Williams Avenue, adjacent to Omega Pond (Rego).

By repurposing this industrial land, the East Point project meets the growing need for housing in East Providence while promoting sustainable urban development. The project underscores the potential of

redeveloping former industrial areas to provide much-needed housing, revitalize communities, and preserve valuable environmental and waterfront resources.

A United Kingdom Approach: Mill Demolitions for Housing

Mill demolitions for relatively small-scale and more affordable housing developments are a more common approach in the UK compared to the United States. For example in the Town of Burnley, the Perseverance Mill site was cleared to make way for 200 homes, while in Leeds a former textile mill will make way for terraced blocks of townhomes creating 102 homes (Burnley mill to be demolished to make way for new homes; Mort). Similarly, in Farnworth, the historic Century Mill is being replaced by a development of 106 single-family homes and duplexes (Gee). These relatively modest-scale projects highlight a trend in the UK to address local housing shortages through low-density residential developments, often prioritizing new construction over the preservation of industrial heritage.

7.4. Summary of Key Findings

The analysis of existing conditions, infrastructure needs, and financial impacts has resulted in some key findings for the Wright's Mill Master Plan. The site has several unique characteristics. The buildings are in good condition and the overall campus remains cohesive. Proximity to the river also provides an opportunity for recreation and visual amenities. However, Wright's Mill's remote location has affected developer interest.

The overall strategy should consider leveraging the opportunities and addressing the challenges. The proposed design approach endeavors to highlight the campus' historic features. The Community Stitch concept included uses that could pair with local regionally important tourism activities – specifically the Brimfield Antiques market and Sturbridge Village. The Campus Quad concept was envisioned with the educational and research facilities in Worcester and Springfield in mind.

The costs of redevelopment and economic impacts from the Community Stitch and Campus Quad are similar. Both concepts include a mix of commercial and industrial with residential. The Neighborhood Expansion concept had greater infrastructure costs and less predicted economic benefit compared to the other two options. Considering the additional impact that the demolition of a significant percentage of the buildings could have, as described below, the Neighborhood Expansion concept is not the preferred approach. Instead, the other two concepts can inform an overall strategy for redevelopment.

The appropriate mix of uses and appropriate phasing can help improve redevelopment outcomes. The financial analysis indicated that more industrial and commercial uses result in higher tax revenue and employment. However, there are some additional considerations related to residential development that can position the project for success. The market for residential uses is strong, with Worcester having a competitive market. Residential uses can support commercial uses on site, and within Town. During the September public meeting, attendees noted that local retail and service businesses have struggled since the closure of the manufacturing use at Wright's Mill. Activating the mill with residents could help to sustain some of these local businesses. The most successful approach will leverage the benefits of residential redevelopment towards industrial and commercial uses.

In addition to the appropriate mix of uses, project phasing is also critical. The analysis identified that Buildings 4 and 5 would be cost-effective for residential redevelopment. Beginning the overall project

with residential redevelopment in this building could provide an initial project investment, produce revenue, and result in site activity that would also benefit the Town of Warren.

Some selective demolition will be important but must be carefully considered. Historic tax credits are one of the few tools available for private developers. To maximize this funding source, decisions related to demolition should consider potential impacts on tax credit eligibility. In addition to potentially making the entire project ineligible for this important funding source, demolition has a cost, which may be high because of the presence of contaminated materials. Redevelopment would also include new construction, potentially making demolition a less cost-effective approach.

In addition to the historic tax credits, additional funding sources include funding for brownfield remediation and infrastructure improvements. These funding opportunities require some initial assessment work, to make the project eligible for construction funding. Moving quickly to begin these efforts is critical to laying the groundwork for a successful project. Specifically, the following next steps could be initiated:

1. **Assessment and design of the specific infrastructure needs.**
2. **A hazardous building materials assessment and site investigation to identify if there are potential concerns about indoor air quality.**
3. **Designation of Wright's Mill on the National Register of Historic Places, to enable eligibility for historic tax credits.**

MassDevelopment has several programs that could assist the Town with the next phase of analysis and outreach.

As a redevelopment partner, the Town can take steps to fund and facilitate infrastructure improvements and to lay out a transparent and predictable permitting pathway that helps to manage risk for potential development. In addition, the Town can use the results of this analysis to develop a permitting plan that considers the project as a master plan, including a plan for phased redevelopment. Site infrastructure like parking and stormwater should designed and permitted as part of the overall master plan. The Town can utilize its local regulations and pursue state programs that enable expedited permitting. Warren can also work with its regional planning commission and state partners to create a sub-committee to monitor progress at the Wright's Mill. Using the recommendations from this study, the Town can take steps to support the project, and the sub-committee can help monitor progress.

7.4.1. Summary of Recommended Approach

To be completed after final public meeting.

7.4.2. Next Steps

To be completed after final public meeting.

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