

Willow Park

21st Annual Greater Boston Affordable Housing Development Competition
April 05, 2021

A Letter from the Watertown Housing Authority

April 4th, 2021

To: Willow Park Redevelopment Team

From: Michael A. Lara, Executive Director, Watertown Housing Authority

It is with great enthusiasm that I submit this letter of support for the “Willow Park” redevelopment project for the Affordable Housing Competition through the Federal Home Loan Bank of Boston.

Watertown is centrally located, and the community is taking action to address the housing crisis in Massachusetts. The Watertown Housing Partnership and the Town’s Department of Community Development and Planning have formed a comprehensive housing plan to increase affordable housing. The Plan set six goals for the next five years which included increasing affordable housing opportunities for low and lower-income households, as well as seniors and individuals with disabilities. The Town Council voted to approve the Plan in March 2021. The need for affordable units in Greater Boston is highlighted by the State’s centralized public housing waitlist of over 200,000 unique applicants for the less than 45,000 state public housing units in existence.

Watertown Housing Authority was formed in 1948 and is currently the only organization in the Town dedicated to providing low-income residents with safe and affordable housing. The Authority is comprised of 589 public housing units, the majority of which are funded by state taxpayers. Based on recent capital needs assessment across the State, public housing authorities are receiving less than 10 cents on the dollar to modernize and maintain their properties.

Creative design, planning, and financing are the key to solving the dilemma of state public housing in Massachusetts. The goal of this project was to redevelop Willow Park, 60 state-aided family public housing units in East Watertown, while maintaining local control and implementing smart design. The project submissions showcase the students’ passion to develop a site that blends with the local community and creates additional affordable units.

Watertown Housing Authority hopes to play an active role in the development of new affordable housing units in the area. We are in the planning stages of developing new supportive housing residential units in East Watertown and have secured financing to create new accessible units for seniors with disabilities in West Watertown. There was always a possibility Watertown redeveloped Willow Park, this competition submission may provide the outline necessary to make the project a reality.

Sincerely,

Michael Lara
Executive Director

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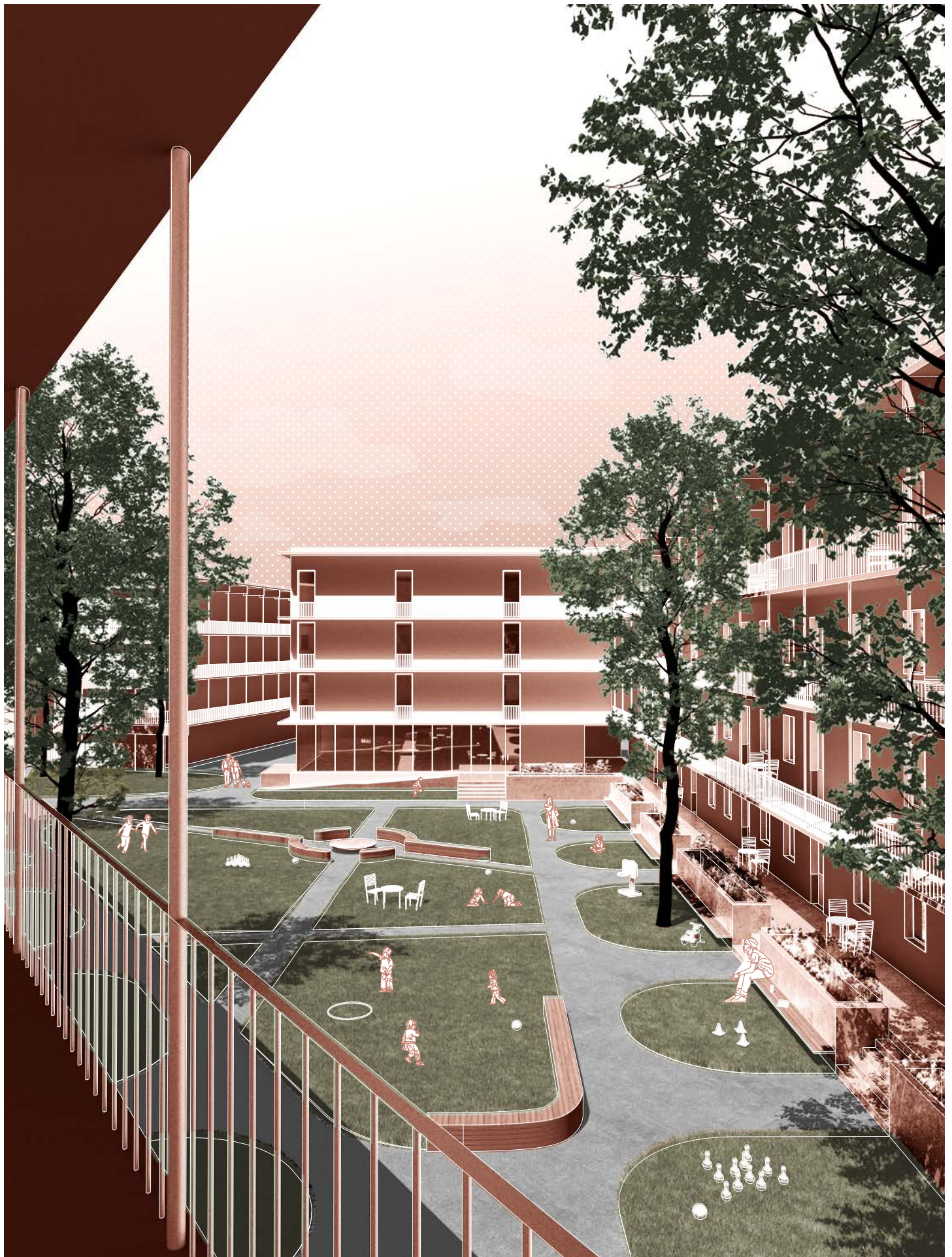
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Introduction

Project Overview

As a part of Greater Boston, much like the rest of the country, Watertown, Massachusetts is facing an affordable housing crisis. Issues around the high cost of living and limited affordable housing options have been an ongoing challenge for Watertown residents. And now, as the COVID-19 pandemic continues into 2021, the need for stable housing for residents throughout the state of Massachusetts, especially those with a low income, has also hit epidemic numbers. There are over 166,000 public housing applicants for only 43,000 state-aided public housing units in the Commonwealth. Massachusetts needs more affordable housing units, and the Watertown Housing Authority can help fill this gap.

The Watertown Housing Authority (“WHA”) has an excellent history of maintaining and modernizing its housing portfolio of 589 public housing units with limited resources. While their Willow Park development is the next in line to undergo major modernization, the capital needs could become insurmountable without an innovative solution to design and development. By partnering with our team through the Federal Home Loan Bank Affordable Housing Design Competition, WHA can turn their vision for safe, dignified, and beautiful housing into a wonderful reality.

Willow Park is a family public housing development in East Watertown, a diverse neighborhood and tight-knit community that is bordered by Cambridge, Boston, and Belmont. The goal of the Willow Park redevelopment is to demolish and rebuild the entire site, including all 6 buildings and 60 units. Through our partnership, WHA has envisioned a new site that will replace all 60 public housing units while also creating 61 new affordable and workforce housing units for a total of 121 units, by increasing the density of the property. The project will be completed in two phases.

Willow Park is currently subsidized through a contract with the Department of Housing and Community Development (“DHCD”). Like all Local Housing Authorities, WHA is receiving only 10 cents on the dollar for their capital needs. That figure is based on an independent assessment of state-aided public housing properties across the entire Commonwealth. The Willow Park redevelopment provides a unique opportunity to use strategic financing to support WHA achieve their goals. Through creative design and development, Willow Park will address the ever changing needs of Watertown families by providing supportive, healthy, and dignified homes.

Willow Park at a Glance

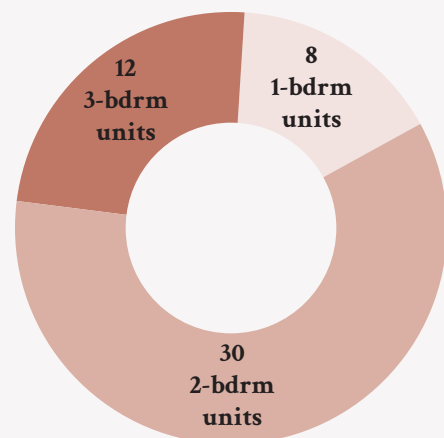
Project Phases

Phase I 50 units	Phase II 71 units
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Phase I (Focus of Proposal)

84%

Deeply affordable units



Master Plan

7,000 sf

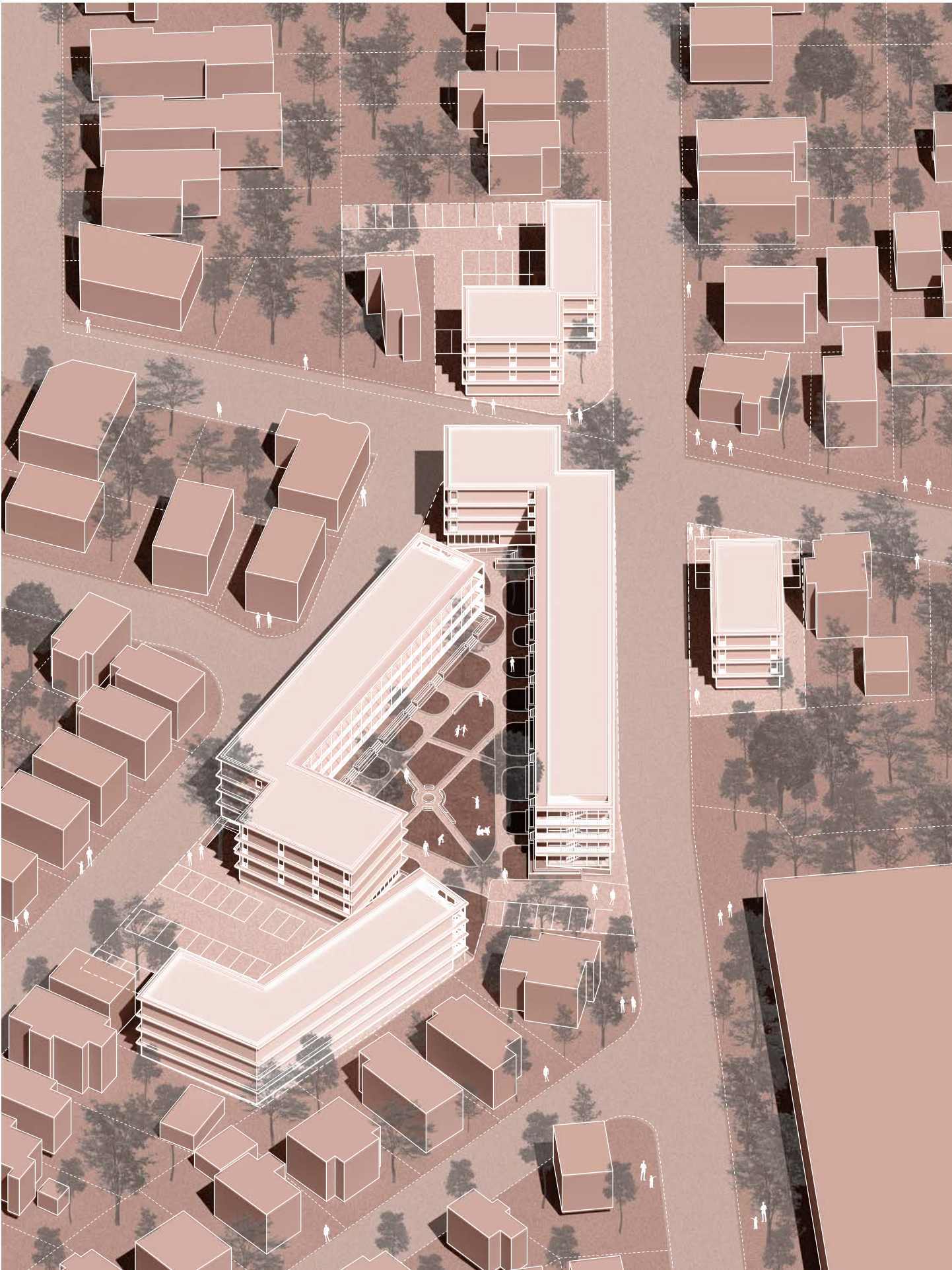
Early Childhood Education Center and other community space

16,000 sf

Courtyard and communal garden

\$490,027

Total development cost per unit



Our Mission and Goals

Our mission is to address the ever changing needs of Watertown families by providing supportive, healthy, and dignified homes.

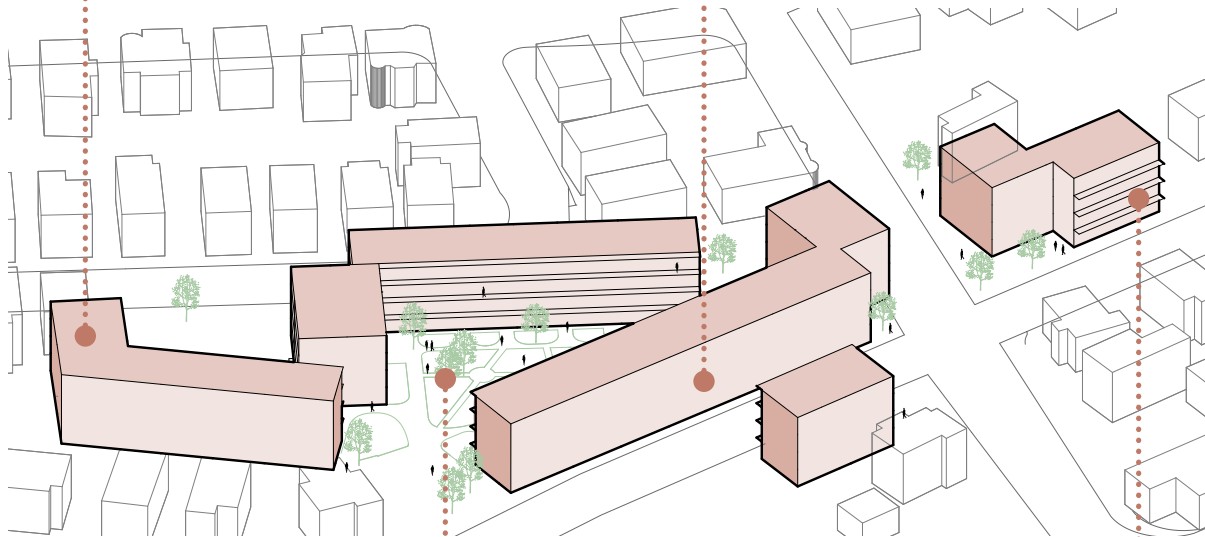
Project Goals

Provide Space for Multi-Generational Living and Leisure

A majority of homes at Willow Park have 2 or 3 bedrooms. There is also ample indoor and outdoor space for neighbors to socialize.

Support Access to New Models of Education for All

Willow Park is home to an Early Childhood Education Center, Lifelong Learning Center, and space for Outdoor and Environmental Education.



Promote Strategies for Healthy Living

Well ventilated homes and single-loaded outdoor corridors provide a healthy environment. A shared courtyard promotes active engagement with neighbors.

Preserve the Environment and Neighborhood Fabric

Willow Park maintains its original smaller scale, and houses residents between five buildings. Material re-use ensures environmentally sustainable and contextual design.

Project Highlights



Design

The proposed design utilizes the existing building foundations, infilling between them to achieve higher density and provide upgraded affordable housing for new and current residents. Keeping the building massing to the existing footprint and the height to four stories helps maintain the urban fabric, while respecting the history of the site and context of the surrounding area.



Finance

The development maximizes both federal and state LIHTC, with 47% of total funding coming from these sources. This is supplemented by additional local and state funding and a MassHousing permanent loan. Because there is no land acquisition cost, we can focus on sustainable project features such as solar power and electric. Finally, we focus heavily on extremely low income units.



Community Response

Our team met with current Willow Park residents and WHA staff to understand the needs and desires for their future home. We also met with the Watertown Planning Board to discuss a Friendly 40B process that would include the East Watertown community. We discussed very specific programs, which also made this feasible.



Environmental Response

Willow Park's environmental response centers on supporting residents. The project utilizes passive design and high-efficiency mechanical systems to reduce costs to residents and the environment, while also promoting health and access. The proposed development will be all-electric. Because buildings stay in operation for many decades, decisions on energy sources for today's buildings are vital to a cleaner grid in the future.



Feasibility

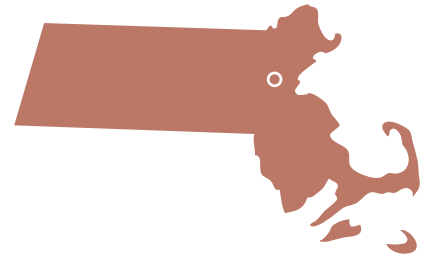
During this process, each of our funding sources have been extensively researched and verified by our partner, the Federal Home Loan Bank and DHCD. We met with architects and urban planners experienced in affordable housing construction in order to design a realistic solution to this unique site and community.



Innovation

The project focuses on resident well-being, growth, and community. The single-loaded exterior corridor design, though uncommon in the region, gives all residents plentiful access to natural ventilation, daylight, and connection to the courtyard space. Open circulation around the courtyard and a wide variety of communal spaces dispersed throughout the project provide opportunities for residents to build community.

Physical & Social Context



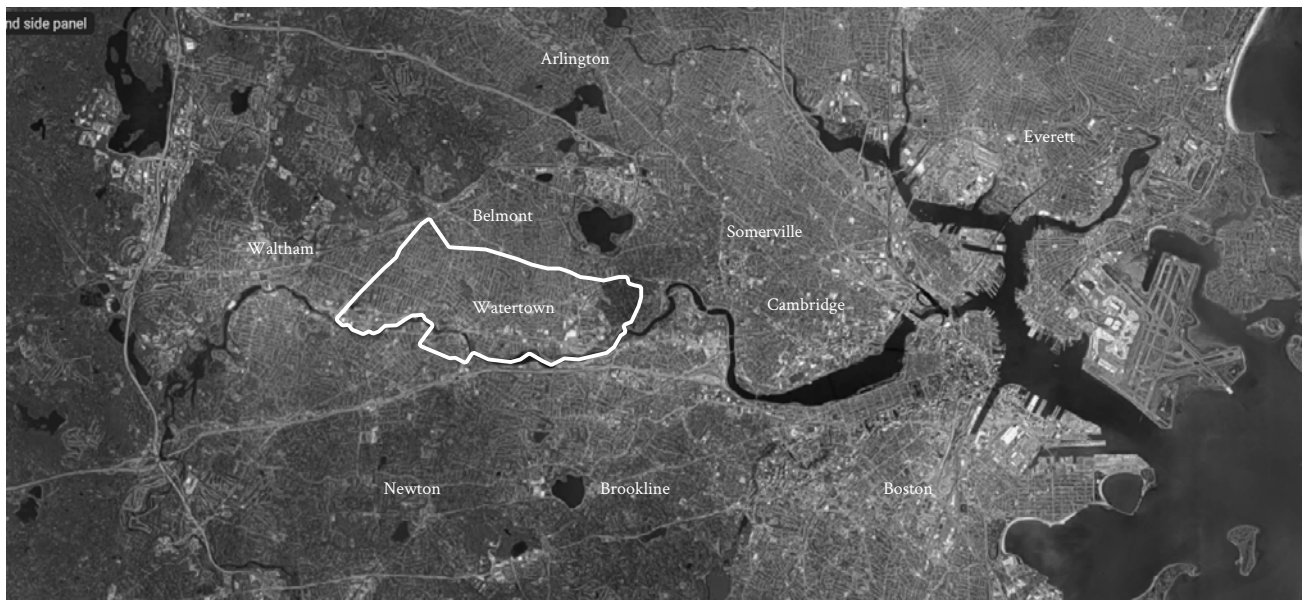
Welcome to Watertown

Watertown, Massachusetts is a quintessential New England city in Middlesex County. As a part of Greater Boston, it is bordered by the city of Belmont to the North, Cambridge to the East, Boston to South, and Waltham to the West. As of 2018, the city had a population of approximately 35,000 residents. Interestingly, Watertown is one of about a dozen Massachusetts municipalities that retain the title of “town” while functioning under the laws of a city. While the city is relatively small and shares a strong unity, it has several neighborhoods with their own unique identities, including Bemis, Coolidge Square, the West End, and East Watertown, where our Willow Park redevelopment is located.

is a crucial need for affordable housing in the area. This is especially true in the rental market.

Watertown borders Soldiers Field Road and the Massachusetts Turnpike, two major arteries that go into downtown Boston. While most residents primarily drive to and from work, Watertown is also served by several MBTA bus and trolley routes that run into Cambridge and Boston. As new housing developments pop up around East Watertown and its surroundings, public transportation remains a very important priority.

With a median household income of \$97,929, Watertown is a relatively affluent community as compared to the rest of Massachusetts, which has a median household income of \$79,835. Despite this metric, there are many Watertown residents who face challenges as a result of income inequality. Unsurprisingly, there is a high cost of living in Watertown. The average property value in 2018 was \$521,700, which is 2.27 times larger than the national average of \$229,700. That number has only increased in the past three years. In addition, the city is growing. Between 2017 and 2018 the population of Watertown grew 1.59%. As this trend continues, there



Position of Watertown within the Greater Boston region

Physical & Social Context

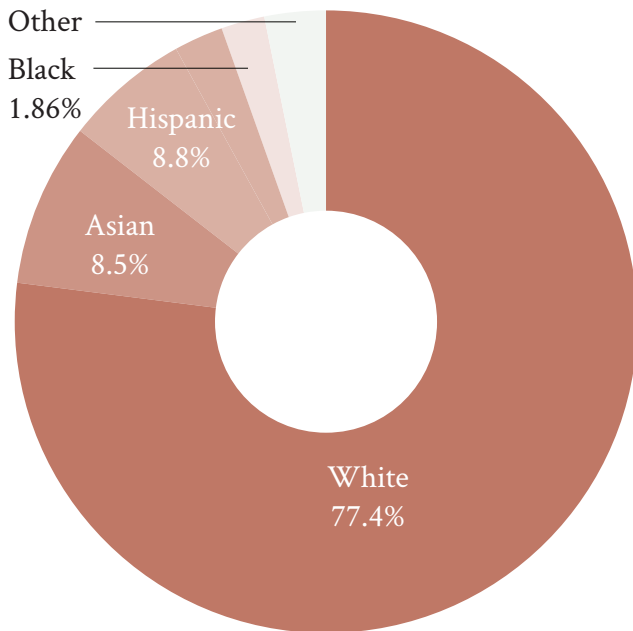
Population as of 2018

35,100

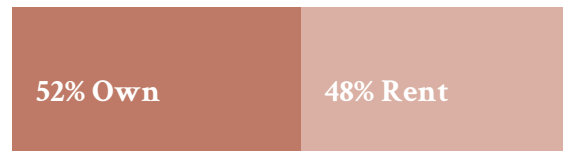
Average Age as of 2018

38.9 years

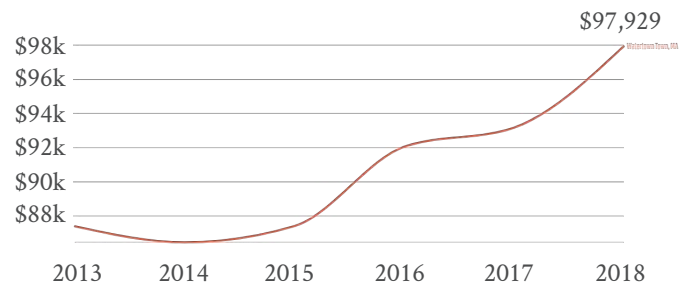
Watertown Residents by Race



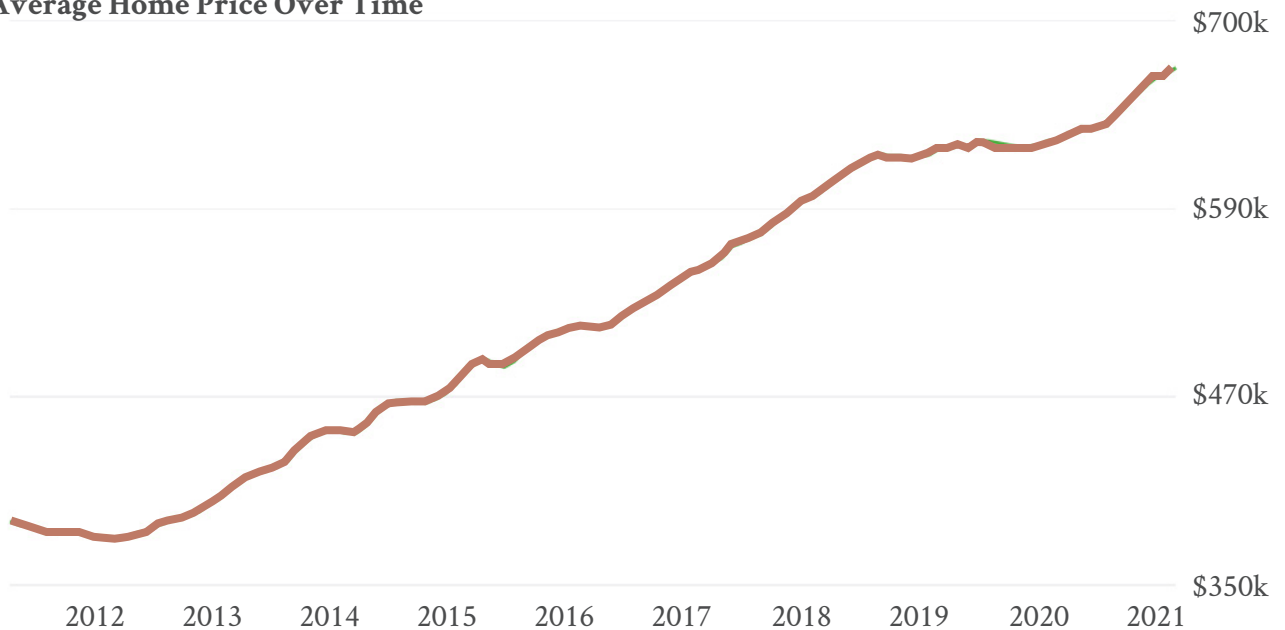
Home Tenure



Median Household Income



Average Home Price Over Time



Source: Zillow Home Value Index

Physical & Social Context

Willow Park and Watertown Housing Authority

We are proud to partner with Watertown Housing Authority, an autonomous, not-for-profit corporation governed by a local Board of Commissioners, some appointed and some elected. The WHA Board of Commissioners, through a public process, and in conjunction with Department of Housing and Community Development, maintain site control of Willow Park. WHA has contracted to work with Cambridge Housing Authority, in a consulting capacity, to help with guidance and advise as we consider how to finance the redevelopment of Willow Park, including a 4% Low-Income Housing Tax Credit ('LIHTC') application and a phased approach to development.

The "East Watertown Housing Development," now named Willow Park, was constructed in 1953-1954 by the Watertown Housing Authority with funds from the state and federal government. Fortunately, the land where Willow Park is located has never been mortgaged and is located in an extremely attractive real estate market. Willow Park is a block away from the Mt. Auburn St. bus route, which is a rarity in Watertown as most properties are located far from public transportation. The neighborhood that Willow Park is situated in has a mix of single family, two-family, and multi-family homes. There is ample commercial and retail space within walking distance. Residents at Willow Park are particularly fond of the mature trees and well maintained

outdoor space, including a courtyard that is used daily by many children and families that live in the area.

The existing Willow Park site has sixty rental units, all of which are two or three bedroom apartments. Some units are duplexes, meaning their kitchen and living area is on the ground floor and the bedroom are on the floor above, Some apartments have private or shared balconies, which are often used for storage or laundry drying. Exterior spiral staircases were recently added to provide safe exits in case of fire or emergency. Residents have shared that storage space in the apartments are sufficient.

However, the development as a whole is in need of a large modernization effort. The units lack proper ventilation, especially in the bathroom, and have little to no energy efficiencies due to the original design and material used when the development was constructed in 1952. The boilers are reaching the end of their lifespan and the authority will not be able to replace these in the near future without major financial assistance. While the structures themselves are sufficient, the condition, size, and type of apartments do not meet the needs of a twenty-first century family.



Site of East Watertown housing development from Melendy Avenue, 1953



Current Willow Park housing development from Nichols Ave, 2021

Physical & Social Context

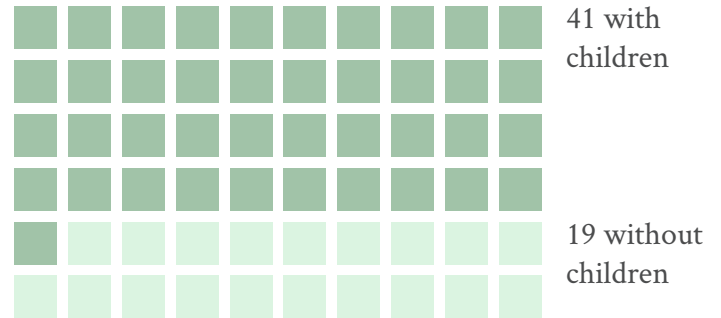
Low-income families are the most likely to be displaced from the Metro Boston area, and redeveloping Willow Park will secure the tenancies of the families who cannot afford to live anywhere near Watertown without a subsidy. In addition, this redevelopment will also create new affordable housing units for a waitlist that goes back ten years.

Willow Park is a family development. In fact, 41 of the 60 homes at Willow Park have at least one child under the age of 18. This development, just like the rest of WHA's portfolio, provides housing to very low, extremely low, and zero income family residents. The average household income for WHA families is under \$20,000 per year. Many of the households at Willow Park have only one parent in the household, and some primarily speak languages other than English.

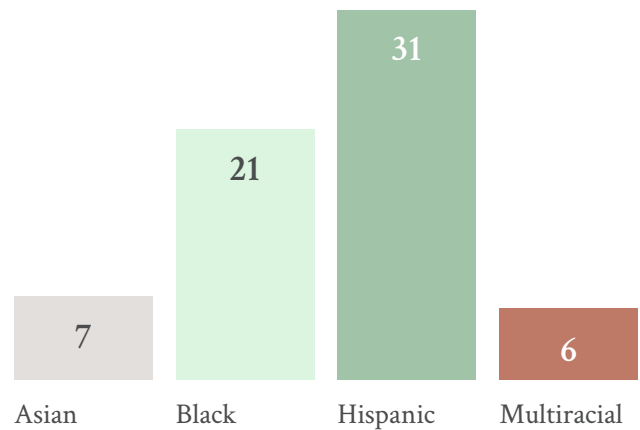


Current Willow Park housing development from Nichols Ave, 2021

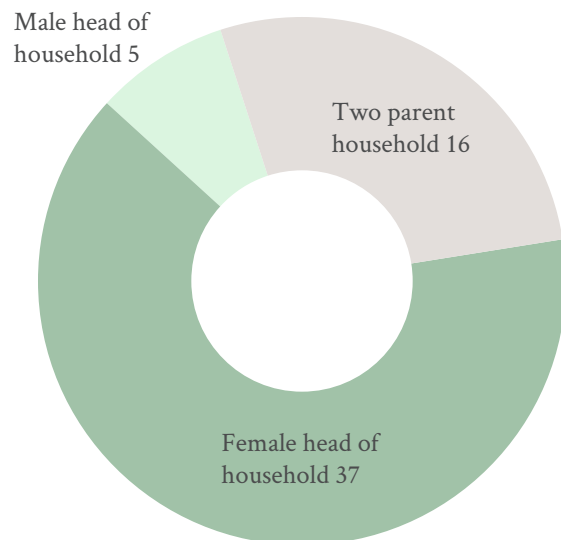
Current Willow Park Households with Children under 18



Current Willow Park Households by Race



Head of Households at Willow Park



Site Context

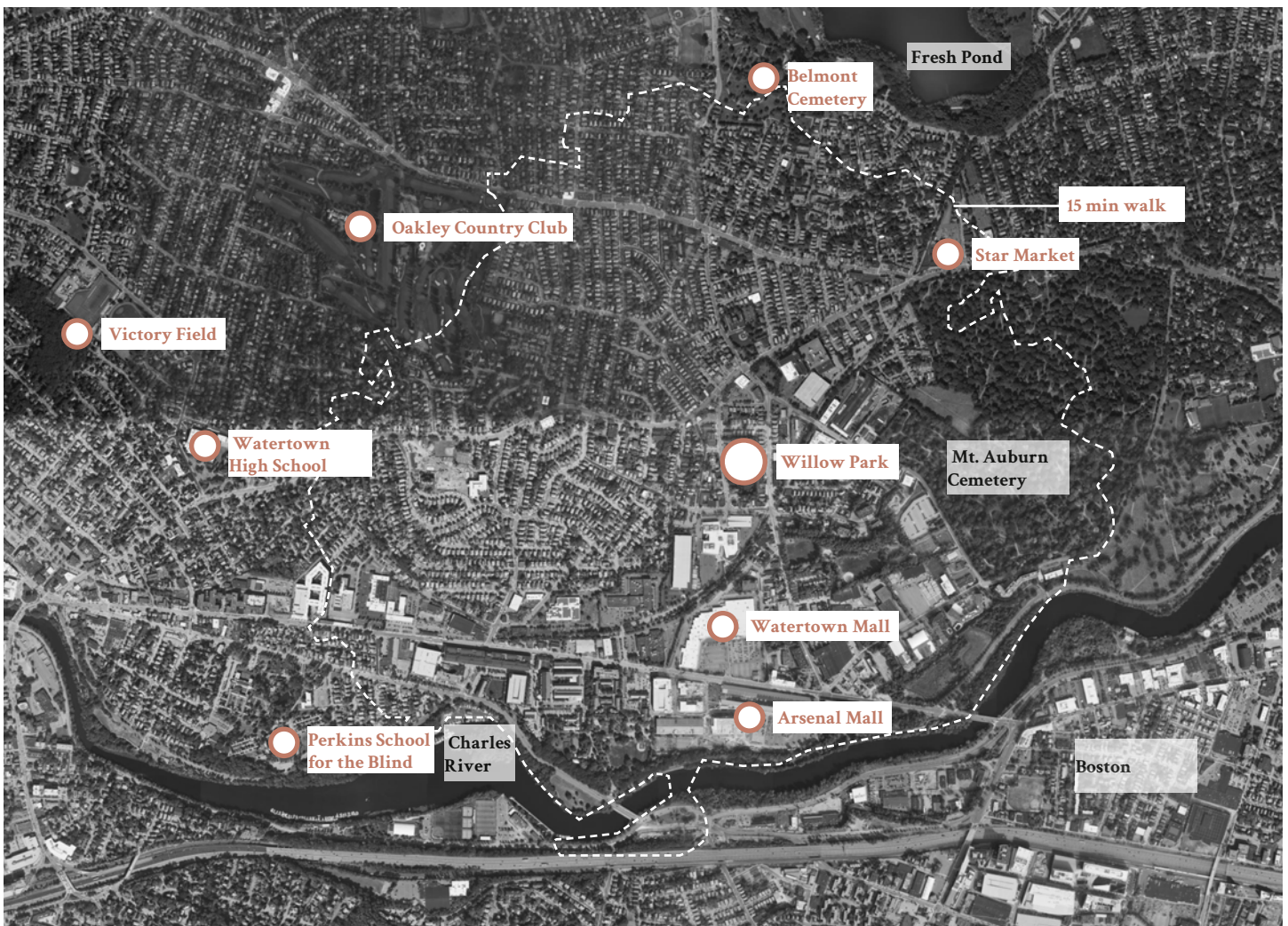
East Watertown

Strengths & Opportunities

- Walkable neighborhood
- Close to public transportation
- Community garden
- Willow Park courtyard and landscaping
- Existing partnerships for programming
- Strong neighborhood identity
- Proximity to Boston & Cambridge

Challenges & Constraints

- Constrained lot
- Rezoning efforts
- Parking requirements
- Potential hesitation for larger development
- Temporary relocation of current residents
- Demolition of existing structures



Existing Site Conditions



Physical & Social Context

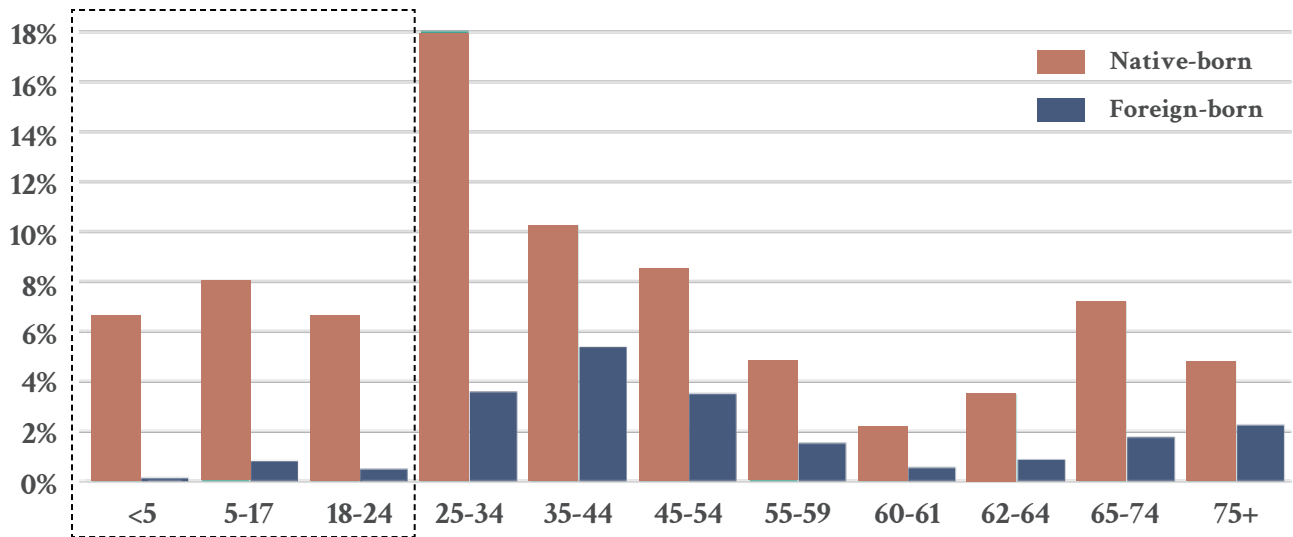
Why A Family Focused Development?

About 20% of Watertown’s residents are between the age of 0-24, which lead us to emphasize on affordable family housing in Willow Park. After meeting with some of the local residents, hearing their needs and hopes to raise their children within the existing community, we’ve further determined to help preserving housing affordability for families.

Our 42 affordable housing units to be built in phase I have all been devoted as Extremely Low-Income units (30% AMI). We understand that the lack of housing that the lowest income households can afford contributes to housing instability resulting in frequent moves and, for some families, periods of homelessness (Sheila, 2003). To

preserve affordability and to generate additional affordable units for families can lead to long-term benefits for children, as the relationship between residential mobility and school performance has been identified as a source of concern for educators, policymakers, and parents (Fowler-Finn, 2001; Holloway, 2000; Rothstein, 2000). Furthermore, the importance of safe, decent, and affordable housing to good health is increasingly prominent in public health policy and research (Anderson, Shinn, & St. Charles, 2002). With the impacts COVID-19, the needs for affordable family housing units are now more desperate than ever.

Watertown Residents by Age



Ribbon Cutting with Watertown Housing Authority Families



Watertown Youth Council Peer Leaders at SPEAK Week in 2018

Physical & Social Context

The Well Being of Watertown Youth

In 2016, the Watertown Health Department began a community health needs assessment as a collaboration with Live Well Watertown (LWW), a community health coalition that has since been incorporated into the Health Department. The purpose of the Assessment was “to characterize the population of Watertown and identify programming and other needs to support multigenerational healthy living.” A portion of this Assessment pointed to children and youth as a critical demographic to support in order to foster a healthy community. In general, interview respondents expressed considerable concern for youth in Watertown and felt that “beginning in middle school, there are fewer activities available outside of organized team sports that promote physical activity, healthy habits, socialization, and development of self esteem.” This information stemmed from a 2017 Youth Risk Behavior Survey (YRBS), which is administered to Watertown middle and high school students every one to three years by Wayside Youth and Family Support Network. The results of the YRBS are used

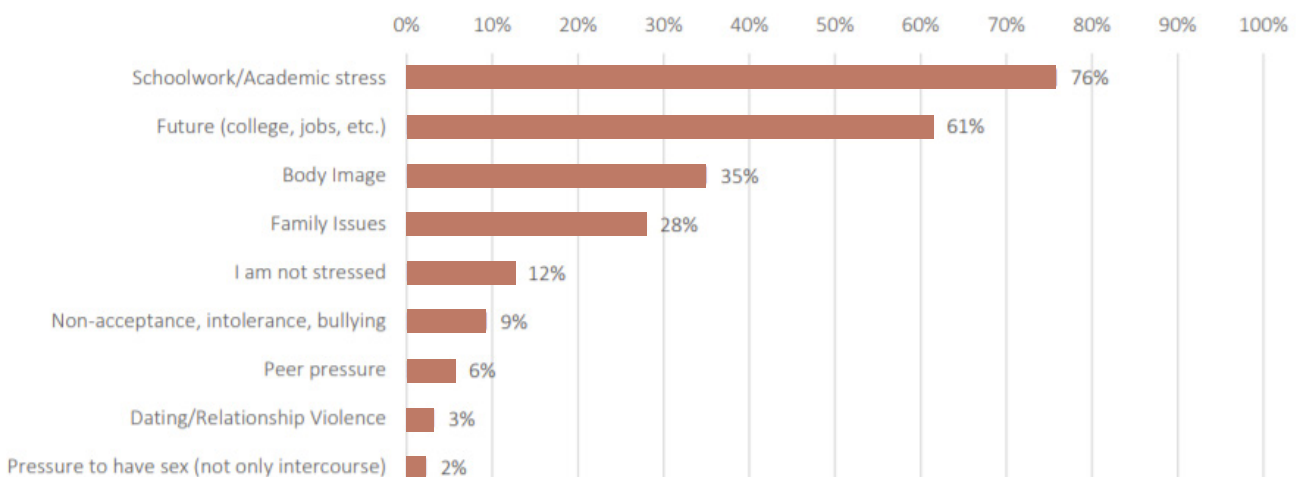
to “identify trends and track the prevalence of health-risk behaviors among Watertown adolescents.”

The Youth Risk Behavior Survey tracks sources of stress for Watertown middle school and high school students. Notable, the large majority of high schoolers are stressed, and point to factors such as schoolwork and academic issues, their future (college, jobs, etc.), and family issues. Undoubtedly, these sources of stress are exaggerated when housing and financial instability is also a concern. By providing safe and stable housing for families in Watertown, we can support the physical and emotional health of our most vulnerable neighborhood, including children and teenagers. It is particularly important to prioritize stable housing when working to reduce the stress and anxiety of families and youth, and the Willow Park redevelopment has the potential to do so.

“Beginning in middle school, there are fewer activities available (outside of organized team sports) that promote physical activity, healthy habits, socialization, and development of self esteem”

- Survey Respondant, 2019 Community Needs Assessment

Greatest Sources of Stress for Watertown High Schoolers



Design

Project Overview

Early on in the project we recognized the enormous potential behind Willow Park. While the buildings themselves were beginning to deteriorate there were many things about the current site that astounded us, namely, the level of engagement and sense of community those living in Willow Park have. While this underlying community was created by both the personalities that inhabit Willow Park and the strong relationship the Watertown Housing Authority has with these residents, there is no doubt that the architectural elements of the site help facilitate this community. Nevertheless, we also recognized that the existing construction was done in the 1950s and with that a need to reevaluate Willow Park with our modern sensibilities.

While ecofriendly design and combatting the stigmas of affordable housing in this country are key to this project, it is also important to recognize how much the dynamics of family unit has shifted in the last few decades. With our focus on family orientated housing, we want to acknowledge the changing lifestyles and necessities of the modern family.

As such, we approached this project with the intent of preservation and redefinition. We want to preserve as much of the existing infrastructure and organizational language of the current development and yet redefine what affordable housing should mean to the 21st century family.

Design Features

1. Maintain Existing Substructure and Service Connections
2. Build Around Existing Mature Tree Cover
3. Screened Exterior Staircases
4. Unit Access from Communal Exterior Walkway / Balcony
5. New Building to Match Form and Scale
6. Sensitive Building Scale
7. Vegetated Bio-swale
8. Communal Courtyard

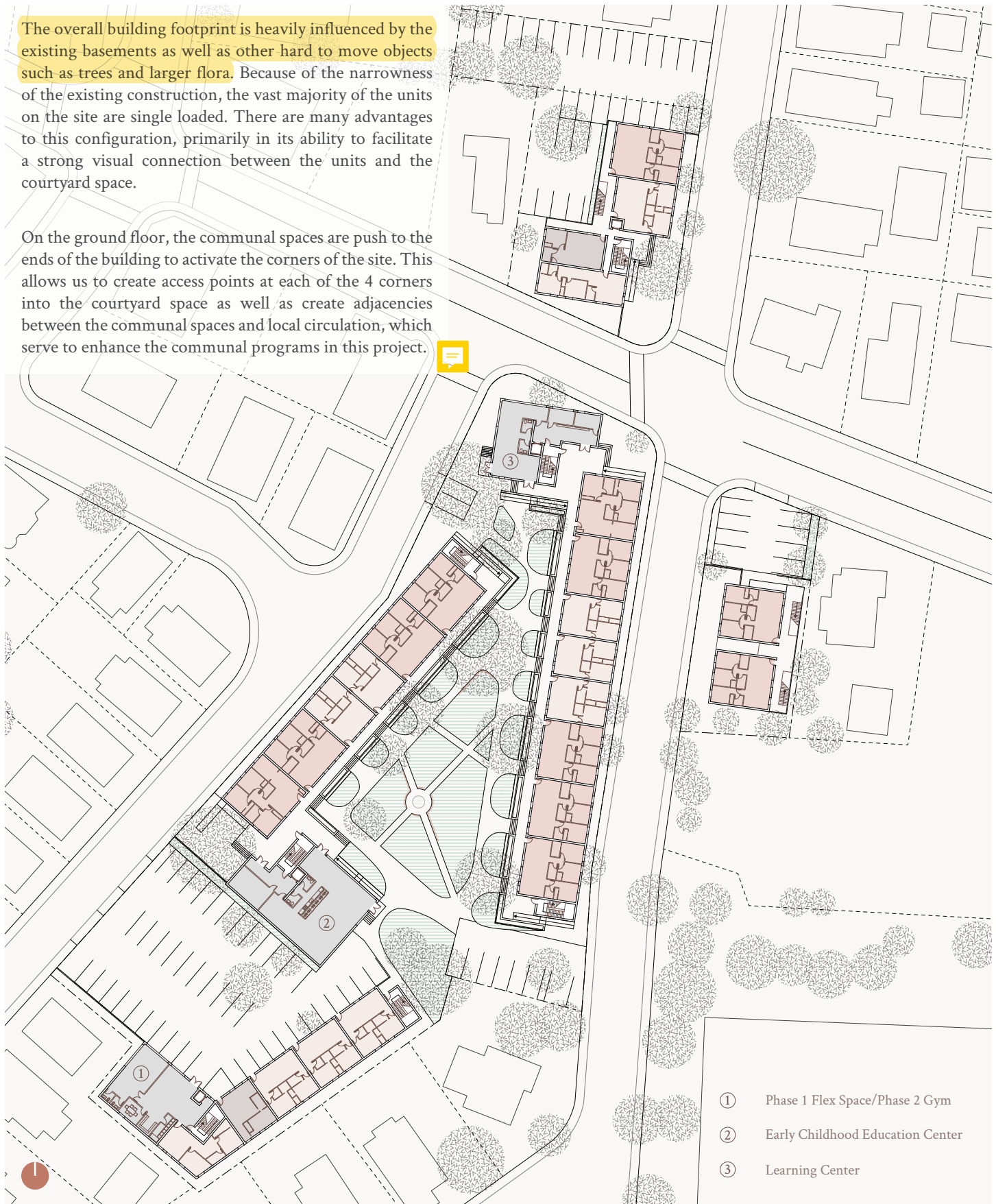




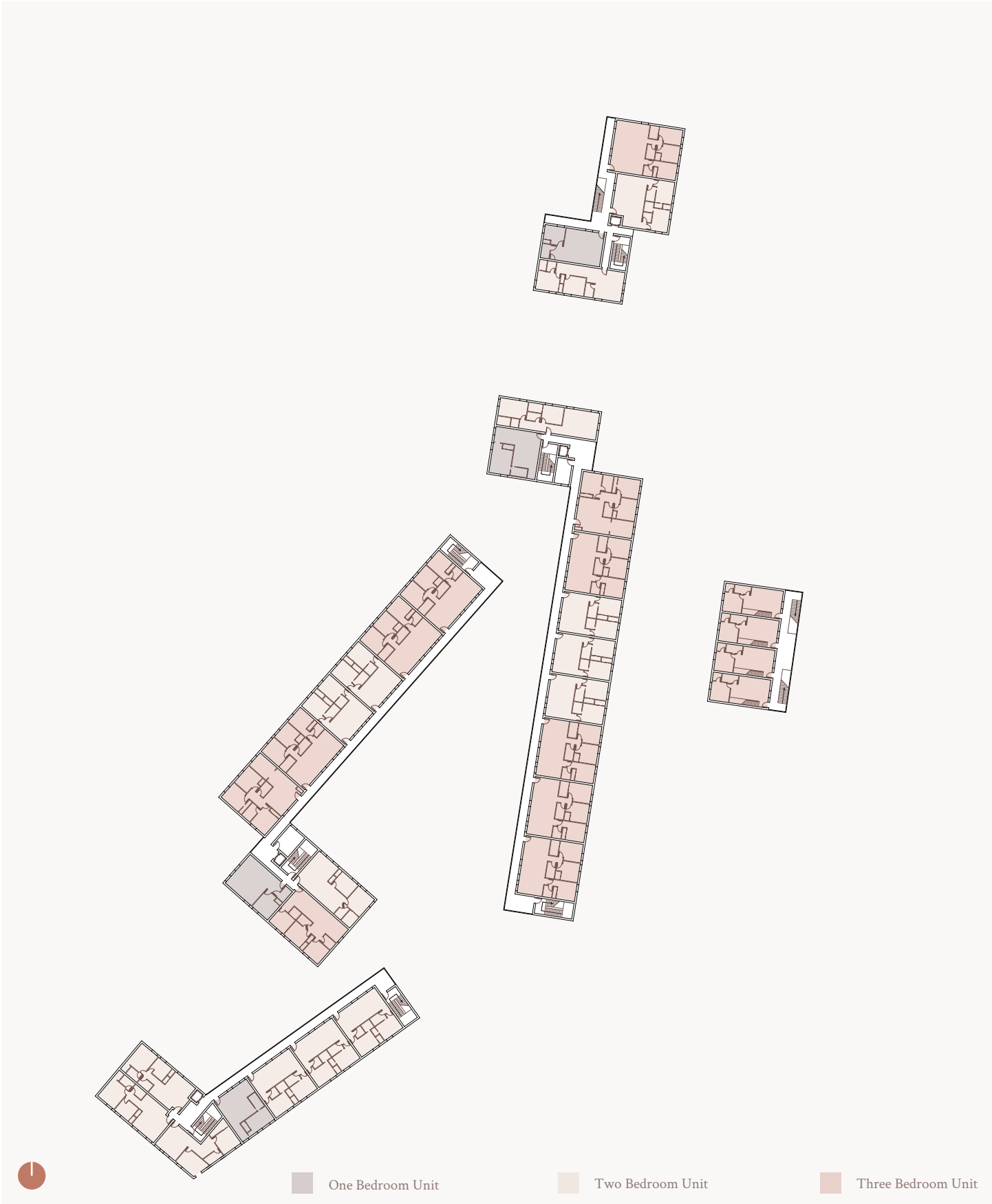
Ground Floor Plan

The overall building footprint is heavily influenced by the existing basements as well as other hard to move objects such as trees and larger flora. Because of the narrowness of the existing construction, the vast majority of the units on the site are single loaded. There are many advantages to this configuration, primarily in its ability to facilitate a strong visual connection between the units and the courtyard space.

On the ground floor, the communal spaces are push to the ends of the building to activate the corners of the site. This allows us to create access points at each of the 4 corners into the courtyard space as well as create adjacencies between the communal spaces and local circulation, which serve to enhance the communal programs in this project.

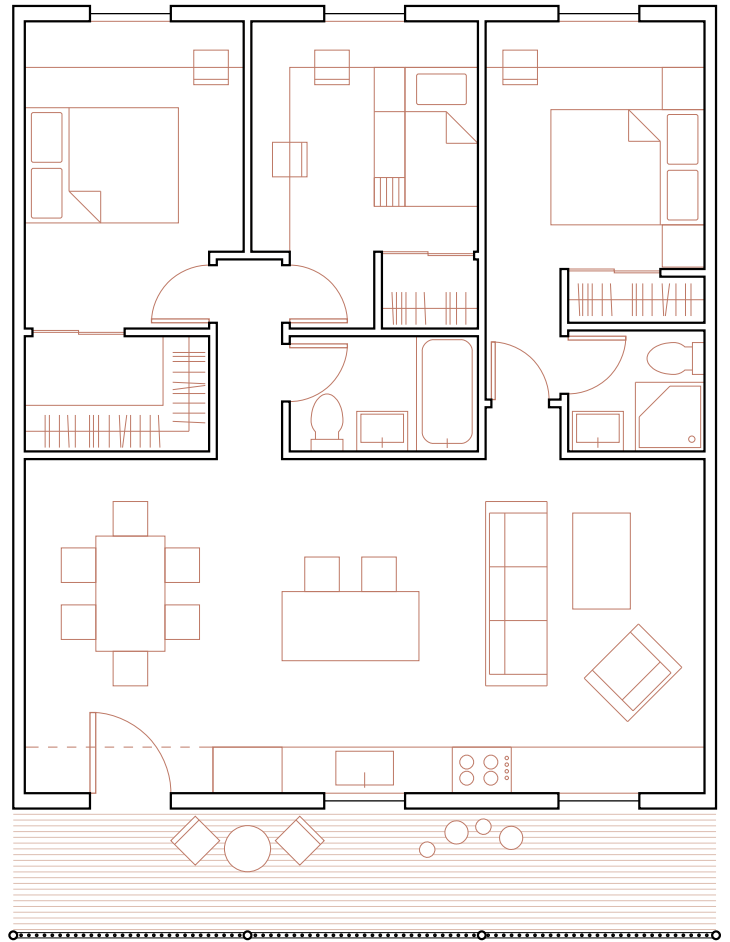
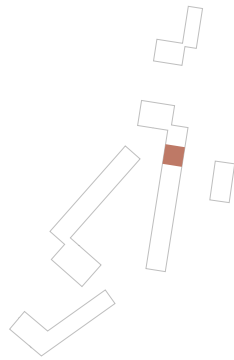


Typical Floor Plan



Unit Plans

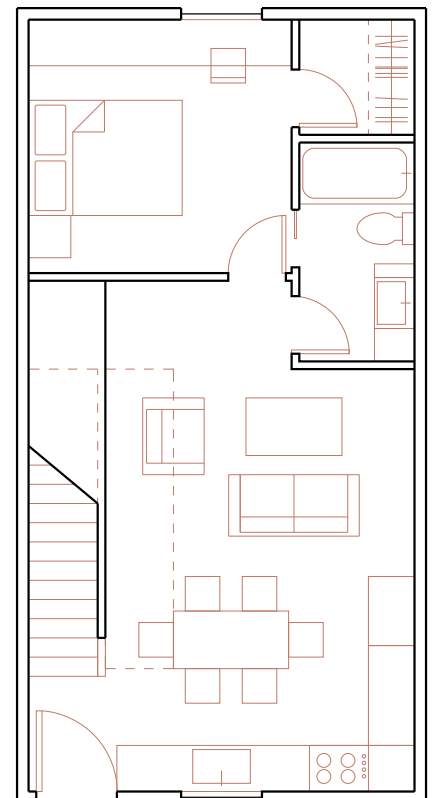
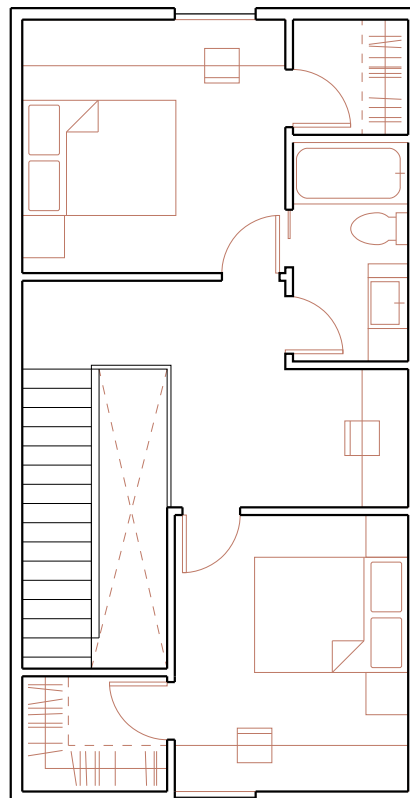
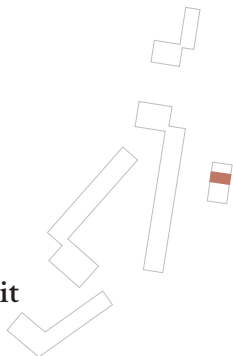
Cat is in her early thirties and has two children: Lucas, who is 15 and Parker, who is 13. She moved into Willow Park ten years ago. Before that, she was living with her parents on the other side of Watertown. The move allowed more space for their growing family and shortened her bus commute into work in Harvard Square. Cat and her sons are happy to relocate while Willow Park is under construction, and will move back into a three bedroom that gives them more space for cooking, dining, and lounging.



3 Bedroom

1,020 sf

Derek, 57, and Angelo, 55, live with their two children, Jake, 22, and Ann, 17. Both of their children are getting older. Jake, in particular, is looking for housing elsewhere but in the meantime wants his own space. He and his sister both live upstairs while their parents prefer to live downstairs.



3 Bedroom - Split

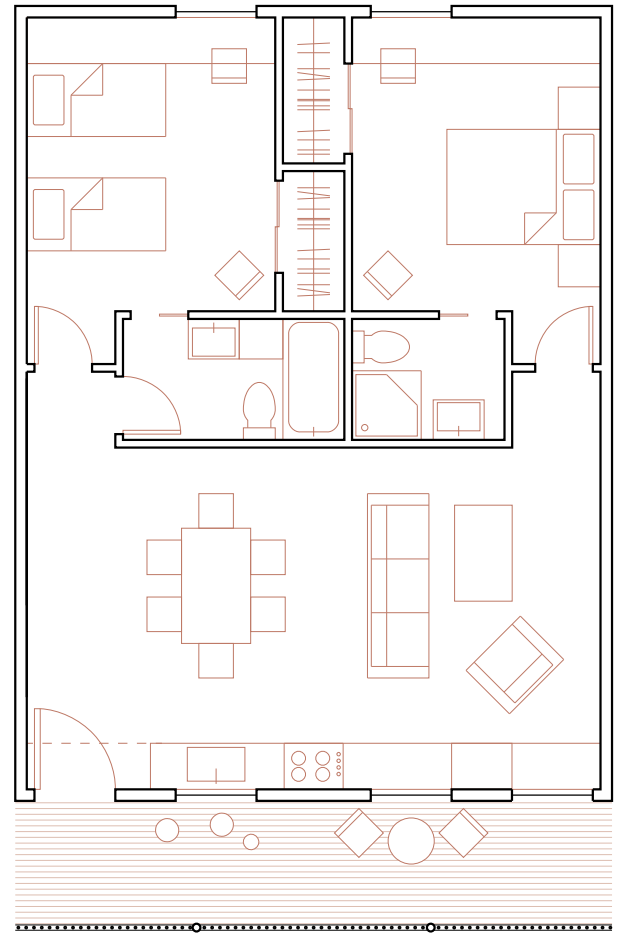
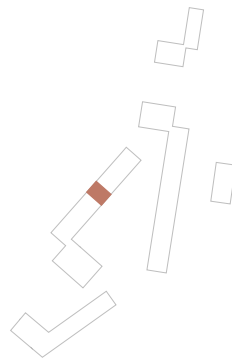
1173 sf



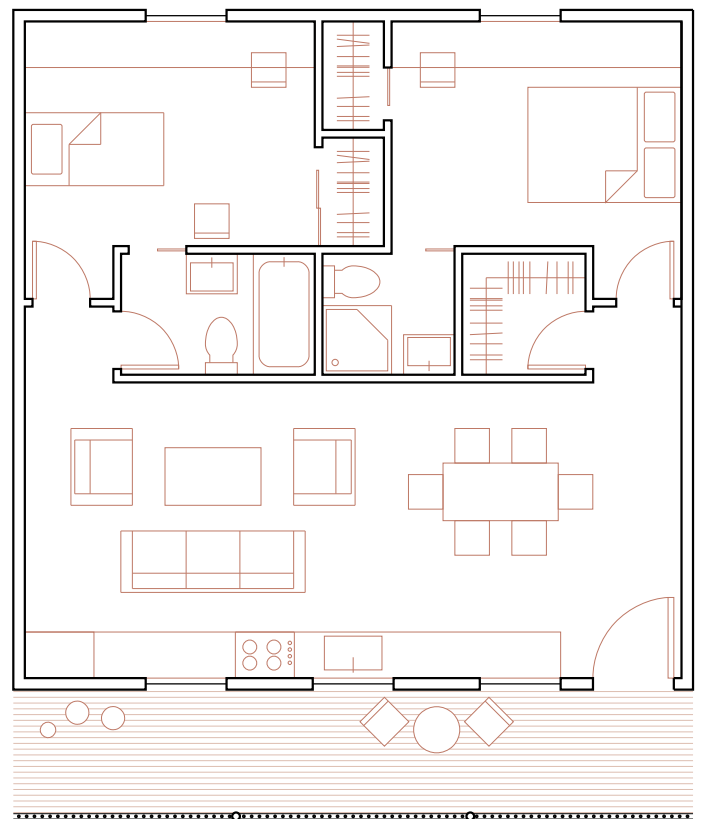
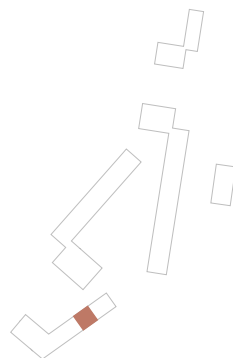
View from a kitchen into the courtyard

Unit Plans

Josefa is 41 years old and lives with her son Rafael who is 17 years old and attends Watertown High school as a junior. Josefa works half a mile from home and often walks in the morning to her job at the Residence Inn Marriot Boston. Rafael works 10 hours per week and also just a half mile from home at Best Buy, given his love for technology and gadgets. Josefa is participating in the English for Advancement classes in the evening and her goal is to improve her English language skills to get a promotion at her current job. Rafael is fulfilling his community service hours by tutoring web browsing and technology fundamentals in the afternoon as part of one of the learning center programs. Josefa also participates in the Family Self Sufficiency programs and hopes that once she is able to get a promotion at work and increase her income, that money would be saved towards supporting Rafael through college and/or saving to buy a home.



Elaine, 46, is a single mother taking care of her 7 year old son. She has just recently moved into one of the new 2 bedroom units. Elaine is an avid participant in communal programs at Willow Park, choosing to volunteer whenever she gets the chance at the local community garden and the daycare downstairs. Being a single parent is hard but her neighbors and the supportive programs at Willow Park help her out when she is in need.

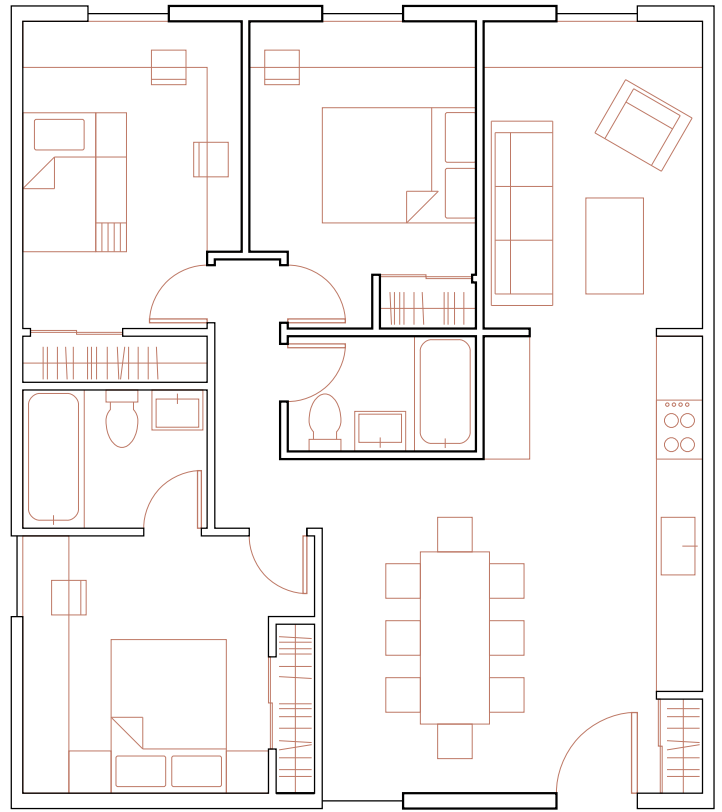
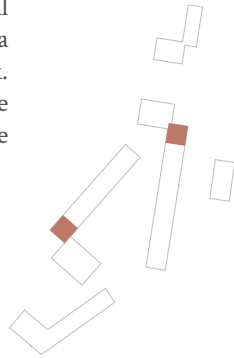


2 Bedroom

841 sf

Unit Plans

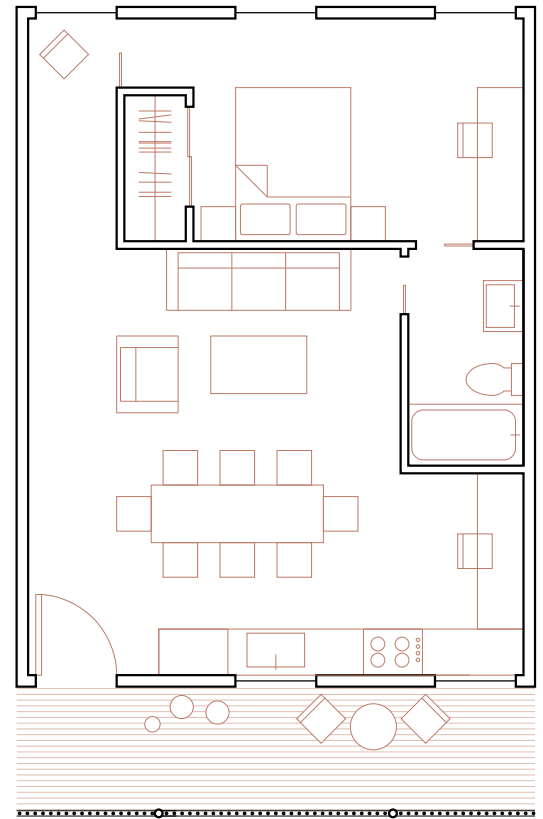
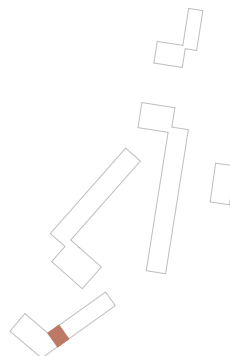
Jo and Sarah have been married for five years. They live with their 10 year old daughter Mandy and Jo's mother Sophia. The family shares a strong bond and needed a space that would allow them to include Sophia in their household as she ages in place. Sophia has been having trouble getting around lately, so the family will move into a ground floor accessible apartment. Mandy plays in the courtyard and participates in virtual learning during the day. Grandma Sophia watches her while Jo and Sarah are at work. The ground floor unit allows Sophia to be more active with Mandy and keep a close eye on the outdoor space.



3 Bedroom

1020sf

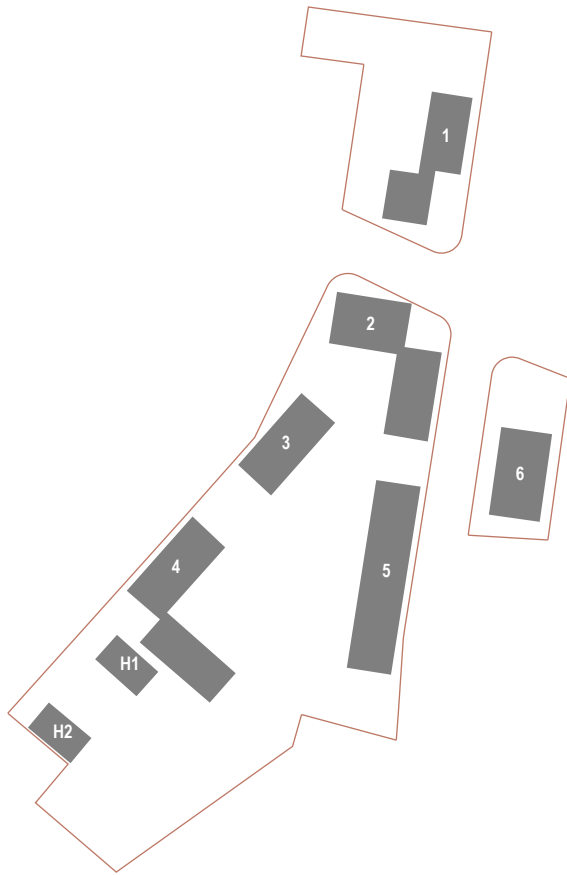
Rose is 73 years old and has lived in Watertown for the last 40 years. She lived in West Watertown with her husband, and he passed away 10 years ago she moved to Willow Park when an opening was made available. She loves gardening and is an active volunteer with Watertown Community Gardens. She enjoys participating three times a week in the Zumba classes that take place at the healthy living communal space on the site during the cold weather months and in the warm weather takes place at the courtyard. She is also an active volunteer at the Sacred Heart Parish on Mount Auburn St.



1 Bedroom

640 sf

Phasing Timeline

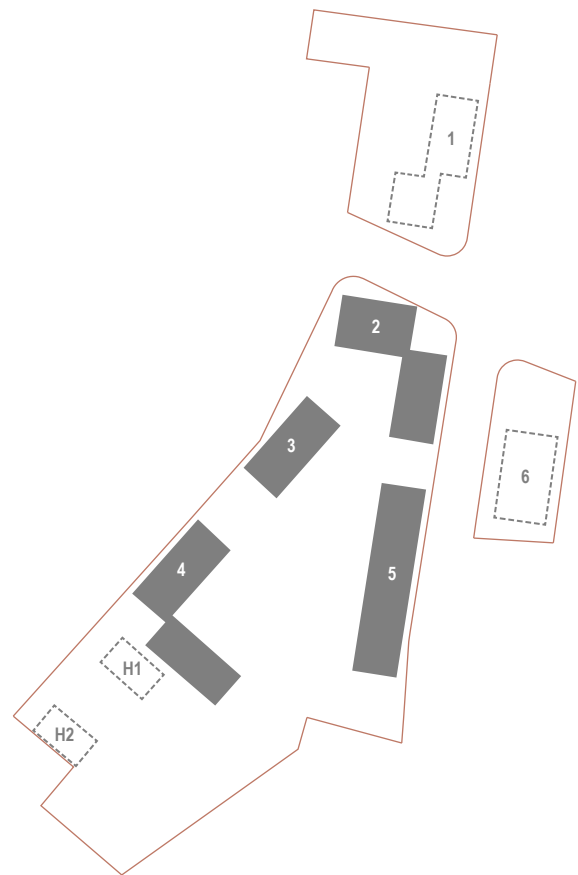


Existing Conditions

There are currently 5 existing building parcels that constitute the Willow Park community. Overall, 60 residential units (largely Federal Public Housing). The H1 and H2 are both duplex units, each contains 2 separate condominiums.

Resident Relocation

For Phase I, we will be relocating 15 families from Building 6 and Building 1. The Watertown Housing Authority will be assisting with relocating the families to other Township supported affordable housing units for the duration of Phase I. After this relocation, Willow Park will have 45 families remain in Building 2, Building 3, Building 4, and Building 5 for the duration of Phase I. Currently H1 and H2 are overall 4 condo units owned by three individual owners and the Metro West Collaborative Development. WHA will be purchasing all four units to obtain the ownership of the land.

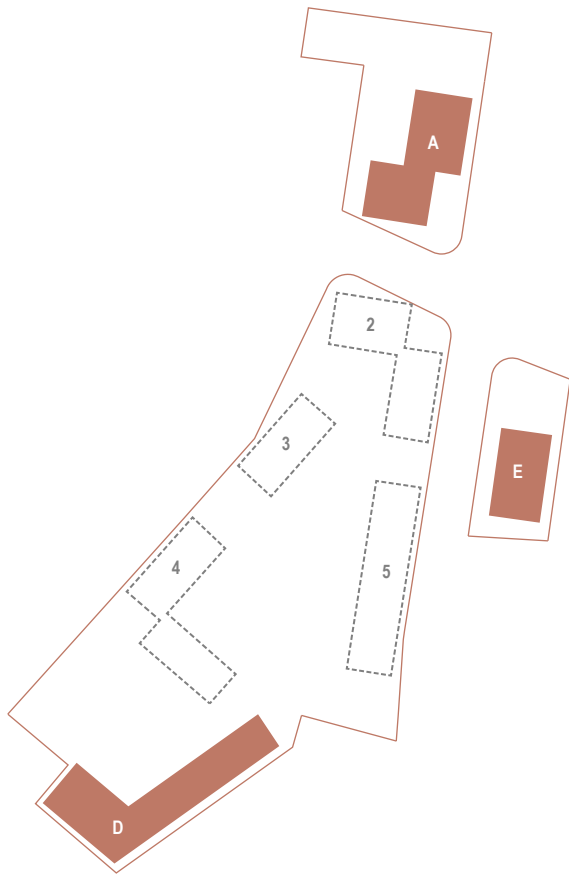


Demolition for Phase I

For Building 6, and Building 1, we will demolish the above group building while preserving the existing foundation to build new residential units. H1 and H2 condo units (4) will be completely demolished to allow space for the newly proposed Building D and parking lots.

Construction Progress

We hope to demonstrate our building strategies and project planning throughout the phased construction process, through both regular project updates with the residents remaining in Building 2, Building 3, Building 4, and Building 5; as well as demonstrating changes through the construction site. In this way, the residents can be confident in Watertown Housing Authority to help securing their housing affordability in an efficient and effective manner.

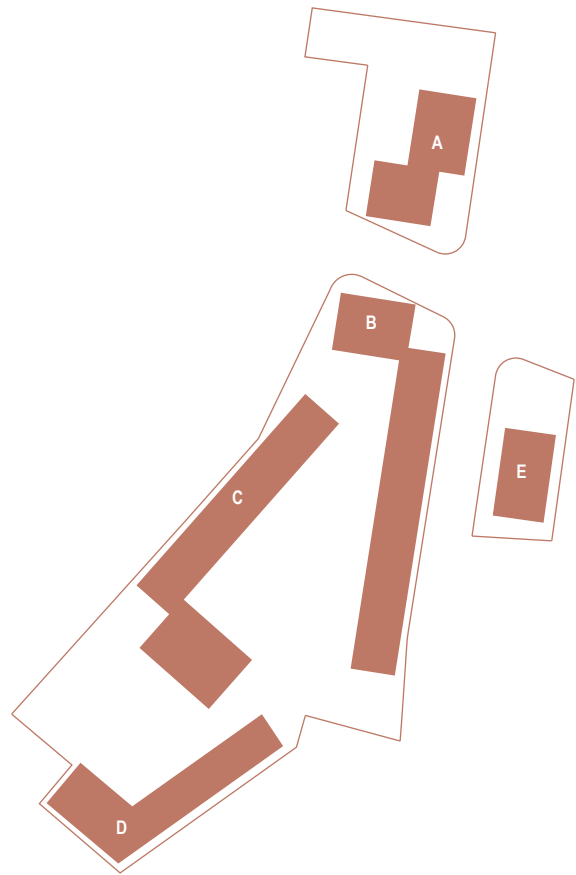


Phase I Complete

Upon completion of Phase I, we will be able to generate 42 affordable housing units (in Building D and Building A), 4 replacement 3-bedroom units (for the 4 condo units) for rental purposes and 4 additional market rate 3-bedroom units (both in Building E).

Resident Relocation

To prepare for Phase II, we need to inquire if the previously relocated 15 families wish to move back to the Willow Park community. Currently we are estimating that 40% of the families will be willing to relocate back to Willow Park. This is considering that most families with children (current Willow Park demographics) are less likely to relocate multiple times within 5 years. With that, we are estimating 6 families moving back to the newly built Building D and Building A. We will also be able to relocate the exiting 36 residents from Building 2, Building 3, Building 4, and Building 5 to the rest of the units in Building D and A. With that, we have an additional 6 families that will be relocated outside of the Willow Park community for the duration of Phase II; for which the WHA will be able to assist with additional units in their other affordable housing communities.



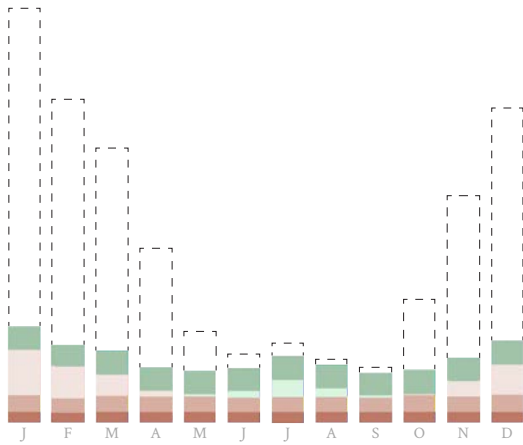
Phase II Complete

Upon completion of Phase II, we will be providing additional 70 residential units, combining both affordable housing units and workforce units (in Building B and Building C). At this point, all the courtyard programs will be completed as well to serve the entire Willow Park community.

Summary

Upon completion of Phase II, we will be generating overall 121 housing units to accommodate the needs for affordable housing, workforce housing, and market rate housing, which encourages mixed-income residential profiles as well as a diverse community culture. We will be providing an Early Childhood Development Center and a Family and Community Learning Center, among with other communal programs that promote health and happiness. These programs will be servicing not only the Willow Park community, but also the East Watertown community as a whole.

Sustainability Overview



code min. bldg. total energy consumption

proposed bldg. total energy consumption

plug loads lighting
water heating heating
cooling

Project Metrics

66%
fewer emissions
than a comparable
building built to
code minimums

28%
of the total site
area is covered
with permeable
groundcover

52%
of the building's
energy consumption
can be offset by the
proposed solar array



Sustainable Design Objectives

Willow Park's sustainability goals are central to their mission of providing supportive, healthy, and dignified homes for Watertown families. The goals touch upon energy, health, and equity, all with the primary goal of supporting the Willow Park families and residents.

Low income families often pay a disproportionate share of their income on utilities. They are also more likely to live in regions that suffer the greatest impacts from climate change. To both relieve low-income families of this energy burden and mitigate future harms from climate change, Willow Park aims to reduce the development's carbon emissions to the greatest extent possible.

The effort begins by prioritizing passive strategies that require no energy. These include relying on natural daylight and natural ventilation as much as possible before turning on a light or space conditioning equipment. The roof, wall, and floor assemblies, window selections, corridor overhangs, and tree placements are all designed to keep the apartments cool in the summer and warm in the winter. These strategies are important to reducing carbon emissions, but they also foster greater occupant health and comfort.

When the weather is not suitable for passive strategies alone, electric heat pumps, low flow plumbing fixtures, and high efficiency LED lighting fixtures keep residents comfortable. A solar array on the roof provides electricity for the new development. Whereas previously, Willow Park relied on oil for heating, the all-electric proposal contributes clean energy to the grid, eliminates the cost to run new gas lines to the development, and spares residents the negative health impacts affiliated with operating combustion equipment in buildings.

At the site level, the design promotes equity and accessibility. Neighbors from the surrounding area are encouraged to make use of the development's ample communal spaces and courtyard, while residents are guaranteed access to healthy, delightful, sustainable spaces that promote personal growth and community connections.

Smart Growth and Site Strategy

MBTA
Bus Line
Within
0.25 mi.

Smart growth consists of: actively involving the community into the development process, encouraging transit-oriented, walkable, bicycle-friendly land use, increasing green infrastructure, reducing the urban heat island effect, reducing impervious surfaces, and adapting energy and water efficiency strategies.

We propose several site strategies: preserving existing trees, integrating seating and planting beds, installing secure bicycle parking, designing for community programming in the central courtyard area, and providing a bioretention swale on the site's parking lot. The coalescence of these strategies will play a significant role in reducing our carbon footprint, and contribute to a better quality and more fulfilling lifestyle for Willow Park residents.

Planter Seating

Preserve

Existing Trees

Community Public
Programming

Pervious

Bioretention Swale

Bicycle Parking



Bioretention Swale

Mulch
Bioretention Soil
Gravel
Perforated Pipe

Sustainable Design Strategies



Site Strategies

1 - Parking (not pictured)

Secure, enclosed bike parking helps incentivize alternate modes of transportation. Vehicle parking is provided in limited quantities to encourage transit. Vegetated filter strips border all parking areas and remove sediment and pollutants from runoff water.

2 - Protect Existing Trees

Mature deciduous trees dispersed across the site shade the buildings courtyard and in summer. When their leaves fall in winter, the sun can reach the interior spaces and help warm the dwelling units.

3 - Planting

The project proposes native planting in the courtyard.

4 - Rainwater Management

Rainwater drains from the roof, through the hollow steel members that support the exterior circulation, and down to a rain water cistern and planter beds at the base of the building, where the rainwater helps replenish the local groundwater level.

Passive Strategies

5 - Exterior Circulation

By proposing covered exterior circulation, the proposed development can save significant cost and energy by not having to heat and cool that space. The external corridor also doubles as a sun shade to help block summer sun.

6 - Shading Strategy

Where there is no exterior circulation to help shade windows, awnings are sized to block the high summer sun while also let in the low winter sun to aid in warming.

7 - Natural Ventilation

Operable windows on both sides of each unit allow the units to be cooled passively for the majority of the year.

8 - Daylighting and Artificial Lighting

Having windows on both sides of each unit allows all occupied spaces to be naturally daylight for most day-time hours. High efficiency LED fixtures are low-maintenance and provide light in the evenings.



Active Strategies

9 - Window Strategy

All windows are double-pane with an argon fill and low-E coating to achieve high performance at an affordable cost. Windows on the west facade have a low solar heat gain coefficient to reduce unwanted heat gain from direct sun.

10 - Continuous insulation and airtight details ensure conditioned air stays within occupied areas.

11 - Electric Heat Pump and Energy Recovery Ventilator [ERV]

The proposed water-source heat pump system moves heat more efficiently than comparable systems. The ERV saves energy by transferring heat from warm outgoing air to cool incoming air.

12 - Solar Panels

Rooftop solar provides renewable electricity to the grid and residents receive a discount on their electric bills.

13 - Low Flow Fixtures and Energy Star Appliances

reduce utility costs and consumption of energy and water.

Material Strategies

14 - Reuse of the Existing Foundation

Structural systems, concrete in particular, are huge contributors to embodied carbon emissions from buildings. Reusing the existing foundations prevents the carbon emissions associated with new concrete construction.

15 - Construction Waste (not pictured)

The demolition of the existing brick buildings at Willow Park will generate a large amount of brick and rubble that will be handled in accordance with the Massachusetts solid waste regulations. The project specifications will require that a highly qualified and proven recycler that can best reuse the materials is selected.

16 - Low Carbon, Healthy Materials

The project prioritizes materials that are cost effective, durable, healthy, and environmentally friendly, such as FSC certified wood framing, cellulose insulation, and fiber cement board with high recycled content. For interior finishes, natural materials are specified wherever possible to avoid adhesives and composite materials that frequently contain high levels of toxic VOCs.

Material Selection

Willow Park sits within a residential neighborhood largely set aside for two-family homes. Most of the houses in the area are constructed from wood, with some masonry at the basement level. Often, the basements sit above grade by about half a story. Atop the basement, homes are typically two stories high, with another half story at the attic. Hipped roofs are adorned with attic dormers on nearly every home. Many homes also have large, covered patios and balconies that are recessed into the front facade.

The scale of the existing development at Willow Park, both in height and overall building footprint, fits well with the existing neighborhood context. However, current residents at Willow Park noted that the buildings' flat roofs and brick facades can draw undesirable attention to the housing complex. Though the residents appreciate the development and the opportunities it provides them, they noted that others in the neighborhood sometimes refer to it as "the projects" because of the buildings' distinct architectural character.

The proposed design maintains the scale of the existing development while incorporating features common to surrounding homes, like the raised ground floor, short stairways to a shared patio, and the covered balconies at the fronts of many homes. In place of the existing brick walls, the new development will use fiber cement panels that more closely mimic the wood siding used on most homes around the area. The fiber cement panels have the added benefit of being extremely durable.



FSC-Certified Wood Framing

promotes sustainable forestry practices, which also reduces the carbon footprint of the development

Cellulose Insulation

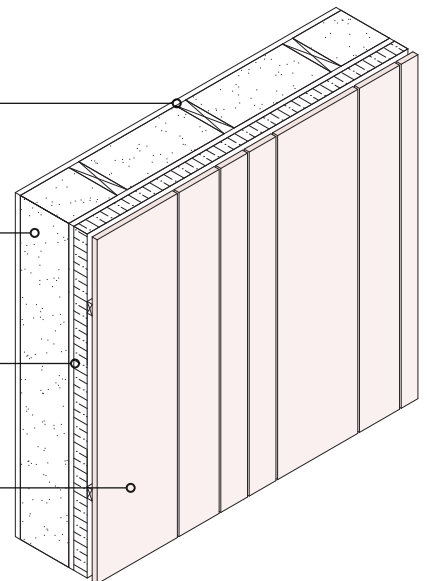
made from recycled wood and paper product
low carbon and very affordable

Mineral Wool Continuous Insulation

extremely durable, and well-suited for exterior insulation because of its natural resistance to moisture

High Recycled Content Fiber Cement Planks

extremely durable, affordable, and mimics the wood siding that clads surrounding homes



Enterprise Green Communities Criteria

Willow Park is targeting Enterprise Green Community Certification. To achieve this certification, new construction projects must meet all mandatory requirements (denoted by “M”), and achieve at least 40 optional points. The proposed design is projected to far exceed that amount, with a total of **278 optional points**.

	Achieved	Max Points		Achieved	Max Points
1. Integrative Design			5. Operating Energy		
1.1	M	M	5.1a	M	M
1.2	M	M	5.2a	12	12
1.3	M	M	5.3b	6	8
1.4	M	M	5.4	0	24
1.5	15	15	5.5b	15	15
1.6	10	10	5.6	M	M
1.7	8	8	5.7	M	M
Subtotal of Optional Points	33	33	5.8	M	M
2. Location + Neighborhood Fabric			5.9	8	8
2.1	M	M	5.10	4	8
			Subtotal of Optional Points	45	75
2.2	M	M	6. Materials		
2.3	M	M	6.1	8	8
2.4	5	7	6.2	3	3
2.5	M	M	6.3	8	8
2.6	M	M	6.4	15	15
2.7	6	6	6.5	12	12
2.8	8	8	6.6	M	M
2.9	8	8	6.7	4	4
2.10	5	5	6.8	M	M
2.11	0	6	6.9	M	M
2.12	6	6	6.10	M	M
2.13	0	8	6.11	2	2
2.14	6	6	Subtotal of Optional Points	52	52
2.15a	M	M	7. Healthy Living Environment		
2.15b	6	6	7.1	M	M
Subtotal of Optional Points	50	66	7.2	M	M
3. Site Improvements			7.3	M	M
3.1	M	M	7.4	M	M
			7.5	M	M
3.2	M	M	7.6	10	10
3.3	M	M	7.7	12	12
3.4	M	M	7.8	5	5
3.5	10	10	7.9	3	3
3.6	M	M	7.10	3	3
3.7	6	6	7.11	8	8
Subtotal of Optional Points	16	16	7.12	8	8
4. Water			7.13	8	8
4.1	M	M	Subtotal of Optional Points	57	57
4.2	3	6	8. Operations, Maintenance, and Resident Engagement		
4.3	8	8	8.1	M	M
4.4	4	4	8.2	M	M
4.5	4	4	8.3	M	M
4.6	6	6	8.4	M	M
4.7	0	8	8.5	M	M
Subtotal of Optional Points	25	36			
Total of Optional Points	278	335			

Community Programming

Family Focused Programming through Community Partnerships

Willow Park has the potential to become a hub of community life for residents on the site and welcome other Water Housing Authority residents and the greater Watertown community. Willow Park would benefit from establishing strategic partnerships with proven providers who could increase the expertise and capacity of Willow Park to offer high quality

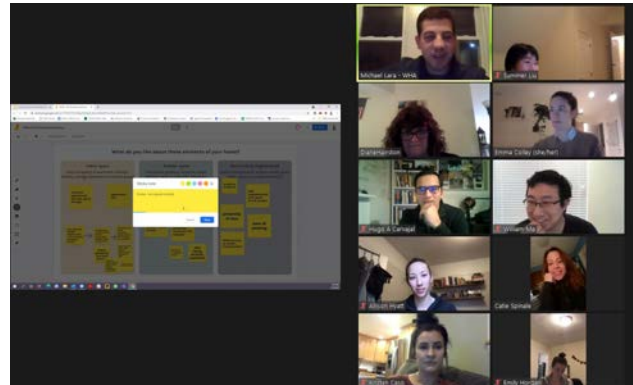
community programs that are inclusive of the needs, talents and aspirations of residents. The potential partnerships recommended would in most require no additional or minimal costs for operating.



Community Engagement

Engaging with Community Needs

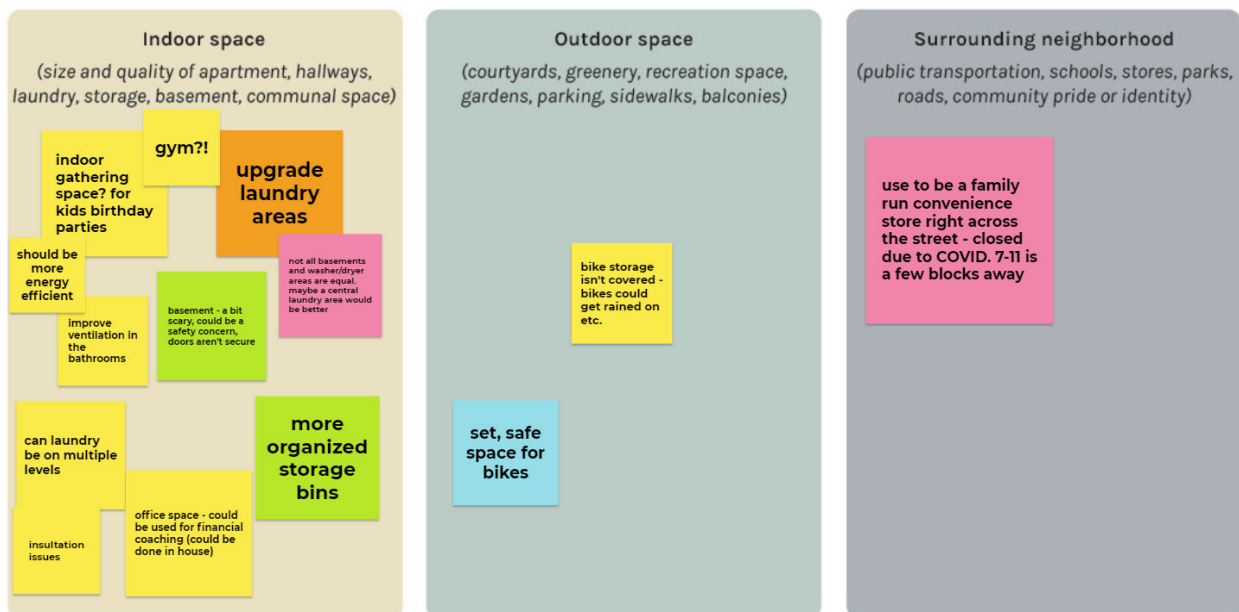
Our first step in reimagining Willow Park was to visit the site and speak with the current residents. Our initial site visit with Michael Lara and Anthony DiGiovanni resulted in a long list of strengths, challenges, and opportunities of the Willow Park site and the homes that currently exist. From there, we took our questions to residents and community members. We held a series of interviews with city and state representatives, residents of Watertown, and those involved in the Greater Boston affordable housing world. Most importantly, we spoke with Willow Park families. Using Zoom and Google Jamboard, we conducted a workshop with residents to understand two main questions: what do you like about your home and what could be improved? We also had residents share stories about what brought them to Willow Park, how long they've lived there, and how long they plan to stay. Residents like Katy, a mother of two teenagers, were optimistic and had favorable views of Willow Park. They emphasized the focus on families. We heard stories of kids playing kickball and reading in the courtyard. We also heard about the "scary" basement, and the fact that many residents go off site to do their laundry. Overall, we gathered meaningful information that helped shape the entirety of our architectural design, landscaping design, and programming.



What do you like about these elements of your home?



What could be improved about these elements of your home?

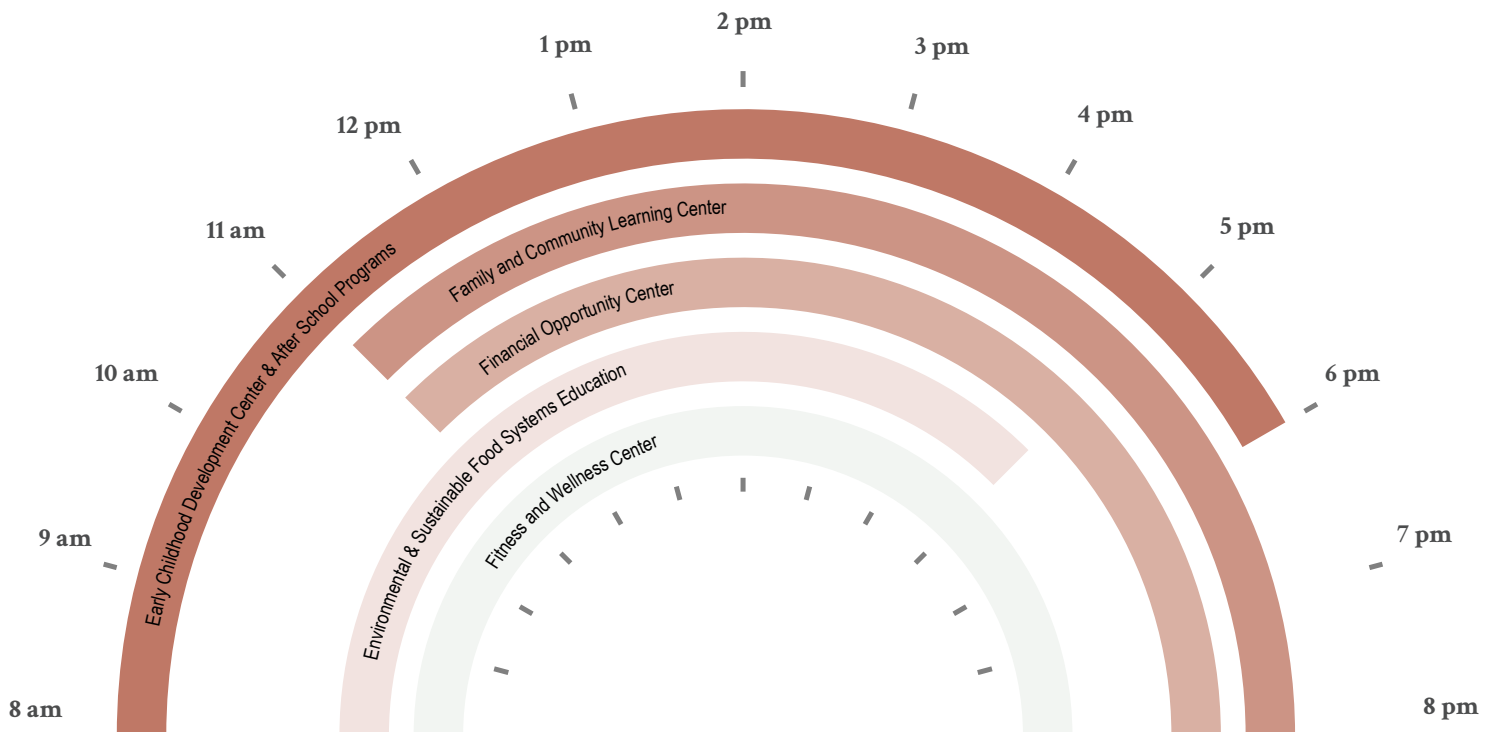
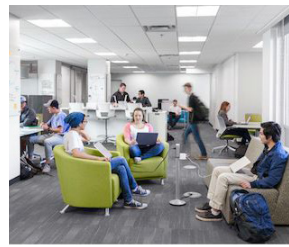


Community Programming

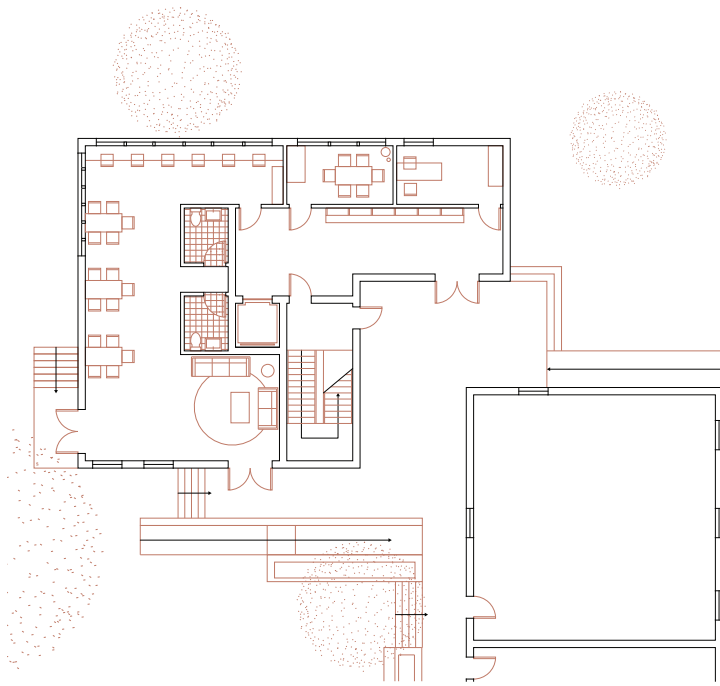
Activity Throughout the Day

Willow Park programming will be available to residents and community members from morning to evening. We envision flexible, multi-functional spaces that can transition from one purpose to another as residents and visitors need. The Family and Community Learning Center, for example, can accommodate an ESL class and then a Zumba class just an hour after! The diagram below shows when

the five main programming components would be utilized throughout the day. Finally, we would work with residents and program partners to develop an interior design aesthetic that is welcoming and comfortable for all who use the space. We'd draw inspiration from similar spaces in housing developments and educational spaces throughout the country.



Community Programming



Family and Community Learning Center

2130 sf

Potential Partners: LISC (Local Initiatives Support Corporation), Compass Working Capital

The northeast courtyard building contains both the learning center and the housing office. The learning center contains a variety of programs, some of which such as Zumba dancing, require larger unprogrammed space whereas other programs such as financial education require smaller, more intimate spaces. We are opening up these programs to the community at large, which is the primary reason why the communal space borders the busier Nichols Avenue.

Willow Park has an existing learning center on site, and we believe that through strategic partnerships the capacity, program offerings and impact can be further improved. Some of the potential partners include Jewish Vocational Services, who offers a highly successful English for Advancement programs. Another partnership which could promote wealth creation opportunities for residents is the Family Self Sufficiency programs and an outstanding proven provider who has partnered with multiple housing authorities in Massachusetts is Compass Working Capital. These programs offer residents who receive Section 8 vouchers financial and mentoring education and once residents increase their earnings and income, that money would go to a dedicated savings account to be used for purposes of home buying, business ventures or furthering their own or their children's education.

Financial Opportunity Center

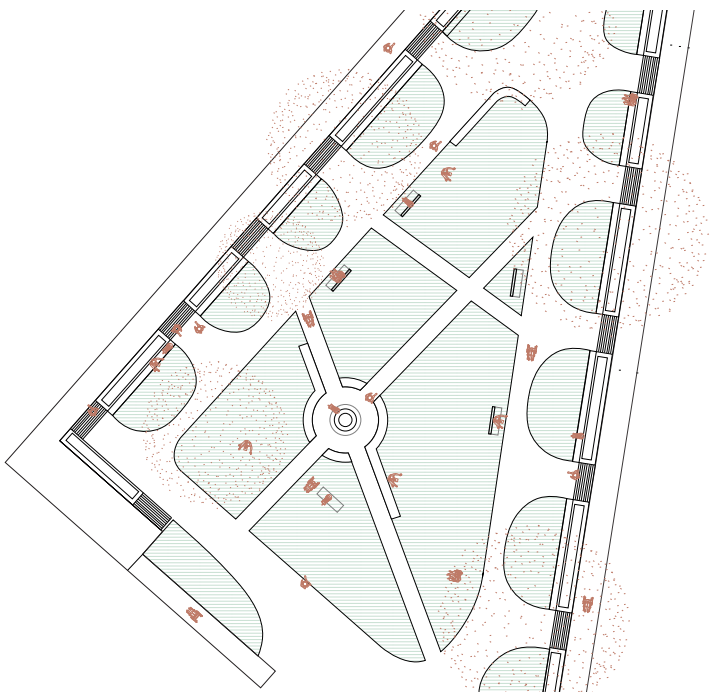
Potential Partners: JVS and Compass Working Capital

Residents at Willow Park have expressed interest in having access to financial education programs. Willow Park could partner with LISC to establish a Financial Opportunity Center (FOC) open to residents and the greater community. The FOC would offer financial coaching and career counseling and employment as well as connect residents to other income support services. LISC could offer Willow Park technical assistance and grants to establish the FOC.

Outdoor Environmental Education

Potential Partners: Watertown Community Gardens, The Food Project

Willow Park has already participated in community gardening projects to promote healthy eating, community connections and environmental stewardship. Willow Park could continue this work in partnership with Watertown Community Gardens.



Community Programming

Hollistic Support for Youth & Families

Physical and social isolation due to the COVID-19 pandemic has been especially difficult on children and teenagers. Through healthy, supportive, and fun social spaces, Willow Park can act as a space of gathering and healing. We've examined The Youth Risk Behavior Survey (YRBS), which is administered to Watertown middle and high school students every one to three years by Wayside Youth and Family Support Network, to understand what is most important to adolescents in Watertown. Programming by Wayside the Watertown Youth Coalition can be expanded at Willow Park. Willow Park has the potential to provide safe and stable housing for Watertown families as well as make space for life outside of the house. Children and teenagers can stay active and connected to each other through a variety of structured programming as well as unstructured leisure space throughout the development.

Family Financial Literacy During COVID-19

Through group lessons and classes as well as individual coaching sessions, Willow Park residents- and the broader East Watertown community- will have access to on-site financial literacy and planning. The pandemic has caused economic uncertainty throughout the United States, and this is one way to support families through this time of need.

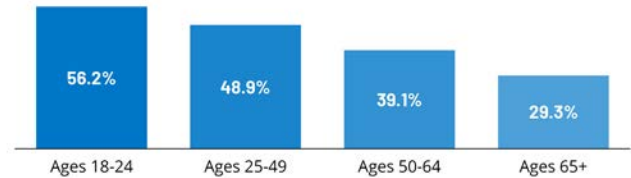
63% of Americans want to prioritize financial education.

89% of Americans believe a lack of financial literacy leads to social issues.

65% of Americans believe schools should provide financial education.

Metrics from a 2020 Charles Schwab Financial Literacy Survey

Younger Adults are More Likely to Report Symptoms of Anxiety and/or Depressive Disorder During the COVID-19 Pandemic



SPEAK Project

SPEAK (Sharing Personal Experiences and Knowledge) Project at Watertown High School is organized by Wayside Multi-Service-Center's Watertown Youth Coalition (WYC) Peer Leaders from WHS. Every year, WYC Peer Leaders organize a fun-filled week with guest speakers, activities and knowledge building that relate to helping youth make positive healthy choices. In 2017 and 2018, SPEAK Project activities included:

- **All-School Assemblies:** Jonathan "Globe" Lewis speaking about Kingian nonviolence and "Mykee" Fowlin performing "You Don't Know Me Until You Know Me."
- **Speaker Series sessions with guests:** Active Bystander Stories, Minding Your Mind, Community Organizing, Spoken Word 101, Strategies for Stress, and Addiction / Recovery.
- **Student-led Speaker Series sessions:** Sexuality in Gender-al (Decoding the letters of LGBTQ+), #BlackLivesBlackLungs, Your Problems Are Relevant, and Conflict Resolution.
- **Lunchtime Activities:** "I Am" Photobooth from WYC Peer Leaders, Coloring Mural from WYC Peer Leaders, Apology Box from WYC Peer Leaders, Kindness Wall from WYC Peer Leaders, Community Map from World in Watertown, Survey from Hope Squad, Trivia from GSA, Food samples and music from International Club, and Robotics Demonstration from Robotics Team.

Watertown Youth Coalition Peer Leaders thank Watertown Community Foundation (WCF), World in Watertown, Shirley Lundberg (Watertown High School Principal), and all of our guests for helping make the SPEAK Project possible.



From WYC Peer Leaders' "I Am" Photobooth during SPEAK Week 2018



WYC Peer Leaders with Jonathan "Globe" Lewis at SPEAK Week 2018



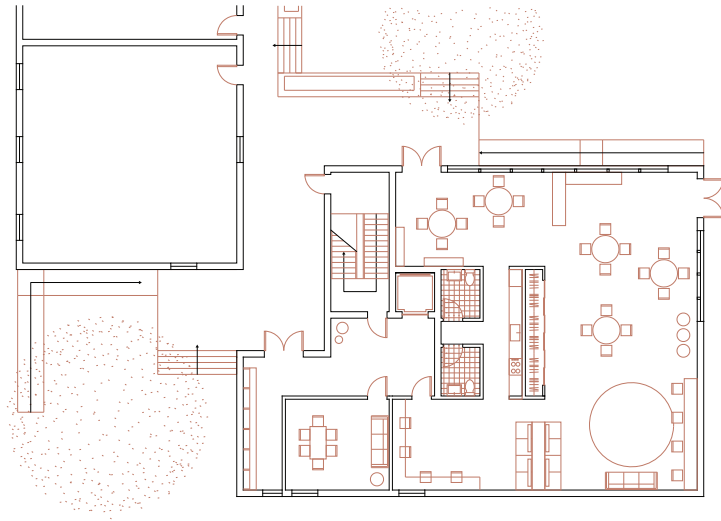
Mass LEAP Director, Alex Charalambides performs a poem during Spoken Word 101 at SPEAK Week 2017



International Club shares food, music, and Know Your Rights information during SPEAK Week 2017

Watertown Youth Coalition prepares a report on their annual events and programming

Community Programming



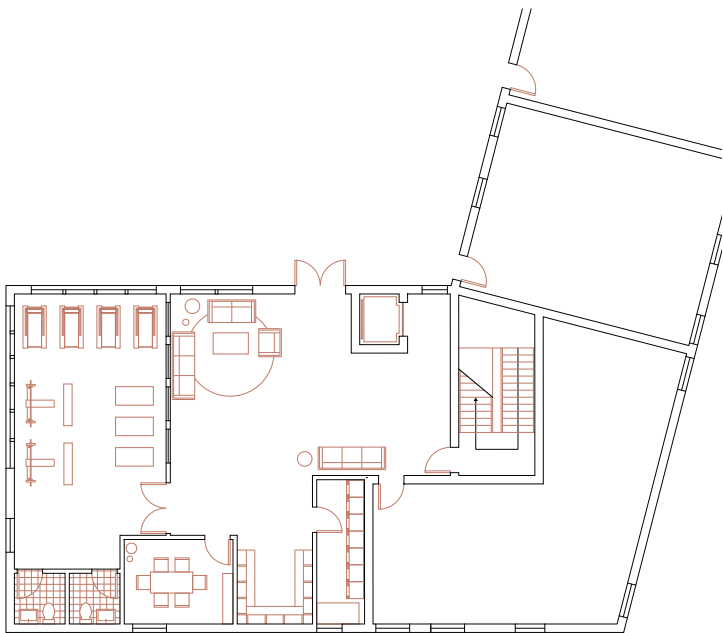
Early Childhood Development Center

3287 sf

Partners: Boys & Girls Club, YMCA

The early childhood education center is part of phase 2 construction when the site undergoes renewal of the courtyard space. The education center has direct access to the courtyard space to encourage the children to engage in the outdoor courtyard amenities. Furthermore, because children are a relatively vulnerable population, the education center is more centrally located on the site to maximize the buffer space between the program and the neighborhood at large.

Willow Park has experience running youth enrichment services in partnership with the Boys & Girls Club. The purpose of this program will be to offer a safe, fun and healthy learning environment onsite for Willow Park residents as well as open to members from the surrounding community would offer an essential service with educational and socio-economic benefits for families and children in the short term and long term.



Health and Wellness Center

2245 sf

The health and wellness center is located in the south building and is part of the phase 1 construction. Initially, the health and wellness center space will serve as a flexible space that functions as both the early childhood education center and the learning center. Both these programs are part of the phase 2 construction therefore initially, they will temporarily take place in this space until phase 2 of the project is completed.

Financial & Feasibility

Overview

Due to the size of this project (121 units in total), we have decided to phase the projects in two parts. Phase 1 includes the 42 affordable units and the (8) 3-bedroom units designed to replace 4 condo units purchased from Metro West and adding 4 additional workforce units to encourage mixed-income resident's participation. In phase 2 the remaining 71 units will be built. (Combining affordable, workforce and market rate units).

Financially, the (8) 3-bedroom units are financed by the WHA Acquisition Loan and portion of the MassHousing Permanent Loan. These (8) units were not included in our LIHTC calculations. Overall, the two phases of the project helped us maximize the amount of funding we may receive from federal, state, and non-profit organizations; as well as minimizing the cost and challenges associated with relocation. The Watertown Housing Authority will be able to accommodate the 15 families to relocate during phase I, our relocation associated cost will be minimal (please refer to phasing plans for relocation details). Our focus for phase I will be on the extremely low-income (ELI) affordable housing units (30% AMI), and our focus on the phase II will continue to focus on creating additional affordable units.

In this chapter, we will only be presenting the financial analysis of phase I of the master plan.

To ensure feasibility, we have kept the consolidated funding from the Department of Housing and Community Development (DHCD) under \$100,000. Specifically, combining HOME, Housing Stabilization Fund, Community Based Housing, Affordable Housing Trust Fund, and Affordable Housing Preservation and Development Fund, our per unit DHCD funding is at \$81,363.

Mass Housing Permanent Loan

Effective Gross Income	\$835,897
Annual Operating Expenses	\$426,603
Acquisition & Program Loan Debt Service	\$166,329
Cash Flow after WHA Financing	\$242,966
Debt Service Coverage	\$1
Funds Available to Debt Service	\$211,274
Annual Constant (30yr, 4.5%)	\$0
Max Loan Supported	\$3,474,907
Annual Payment	\$211,274

Main Buildings Funding Sources (Phase I)	Total	Percentage	Per Unit	Per Sq
EQUITY				
Federal LIHTC 4%	\$8,859,460	36%	\$210,940	\$148
State LIHTC	\$2,799,720	11%	\$66,660	\$47
HARD DEBT				
Permanant Loan (Mass Housing)	\$3,474,907	14%	\$82,736	\$58
SOFT DEBT				
Watertown CPA	\$1,350,000	6%	\$32,143	\$22
WHA Acquisition loan	\$3,000,000	12%	\$71,429	\$50
WHA Program Loan	\$750,000	3%	\$17,857	\$12
HOME Investment Partnerships Program	\$1,000,000	4%	\$23,810	\$17
Housing Stabilization Fund	\$750,000	3%	\$17,857	\$12
Community Based Housing	\$750,000	3%	\$17,857	\$12
Affordable Housing Trust Fund	\$667,253	3%	\$15,887	\$11
Affordable Housing Preservation and Development Fund (AHPD)	\$250,000	1%	\$5,952	\$4
MetroWest Home Consortium	\$200,000	1%	\$4,762	\$3
FHLB Direct Subsidy	\$650,000	3%	\$15,476	\$11

Financial & Feasibility

4% Federal LIHTC	
Total Development Cost	\$24,498,400
Applicable Fraction	84%
Eligible Basis Fraction	90%
LIHTC Eligible Basis	\$18,520,790
Number of Applicable Unit	42
Base per unit	\$440,971
Tax credit	\$0.04
QCT basis boost	130%
Annual tax credit	\$963,081
Years applicable to tax credit	10
TOTAL TAX CREDIT	\$9,630,811
% sold to investors	99.99%
Credit sold	\$9,629,847
Projected raise	\$0.92
TOTAL FEDERAL LIHTC EQUITY	\$8,859,460

State LIHTC	
LIHTC Eligible Basis	\$700,000
Number of Applicable Unit	42
Base per unit	\$16,667
Years applicable to tax credit	5
TOTAL TAX CREDIT	\$3,500,000
% sold to investors	99.99%
Credit sold	\$3,499,650
Projected raise	0.8
TOTAL STATE LIHTC EQUITY	\$2,799,720

Funding Source

Equity

LIHTC

In this project, we had considered utilizing the 9% credit, however after consulting with both DHCD and Cambridge Housing Authority (CHA), considering the substantial amount of waiting and reviewing period for 9%, as well as the competitive nature of the 9% awards, we have decided to adopt the 4% credit.

Moreover, because the Willow Park zip code has been listed as a Qualified Census Tract (QCT), we are able to utilize the 30% boost when calculating the eligible amount for LIHTC equity, which substantially increased our total equity amount to \$8,859,460. This amount of funding is close to what we would have been able to achieve with the 9% credit (considering the 1 million caps currently in place for 9%).

We have also considered the income averaging method for calculation, however, we do not believe that this specific method will benefit us significantly. As our phase I is largely focusing on the ELI units (30% - 60% AMI), where the income averaging method mostly increase funding for units designated for 80% AMI.

Lastly, for state LIHTC, we have maximized the phase funding based on the current state LIHTC funding limited per total units per phase (41 - 60 units bracket).

Hard Debt

MassHousing Permanent Loan

To help ensure our funding from the state and federal agencies are sufficient, we first ensure we have implemented the maximum amount of permanent loan. Our primary lender will be MassHousing, who offers the competitive 5% interest rate with 30-year amortization.

Soft Debt

We are maximizing funding sources by including the community reserves, state funding, federal funding, as well as the support from the FHLB Affordable Housing Program. Specifically with the Federal Home Loan Bank of Boston, we are able to secure the \$650,000 direct subsidy for purchasing, constructing, or rehabilitating affordable housing units designated for units below 80% AMI. With the generous support from DHCD and various other funding sources, we will be able to build a healthy neighborhood with educational resources and sustainable public infrastructure.

Development Cost

The Development of Willow Park offers great promise to double the number of units on the site and significantly increase the number of affordable housing units for ELI residents. Our cost structure includes acquisition, hard costs, soft costs, financing costs and reserve costs. In order to ensure that doubling the development in the number of units and in order to increase the spaces on site dedicated to family and community support services; there will be an acquisition cost to buy the existing property/lot with a total of four condominiums from MetroWest for \$900,000. The Development will meet the prevailing wage requirements.

The cost of demolition in the first phase is lower given that it includes only two of the existing and smaller buildings on the site and the two timber frame houses purchased from MetroWest. All the existing foundations and basements on the Willow Park building will be preserved and this offers a slight cost savings as well. For the first phase of the project there will be very low relocation costs because all residents will be relocated to existing units within the Watertown Housing Authority portfolio. In preparation of these relocations, WHA will begin taking units offline as they become available. The total development cost per unit is of \$490,027 out of which 72.6% are hard costs and 18% are soft costs. The total hard cost of \$296/sf for a total estimated phase 1 sf of 60,001.

Development Budget	% of total	Amount Total	Per Unit	Per Sqft
Total acquisition Cost	3.7%	\$900,000	\$7,500	\$15.00
Demolition	2.0%	\$490,000	\$9,800	\$8.17
Site preparation	1.0%	\$245,000	\$4,900	\$4.08
New Construction	65.0%	\$15,925,000	\$318,500	\$265.41
Construction contingency	4.5%	\$1,102,500	\$22,050	\$18.37
Solar Costs	0.1%	\$12,250	\$245	\$0.20
Total Hard Costs	72.6%	\$17,774,750	\$355,495	\$296.24
Engineering	0.7%	\$159,250	\$3,185	\$2.65
Architecture	4.0%	\$980,000	\$19,600	\$16.33
Construction permits	0.1%	\$26,950	\$539	\$0.45
Legal fees (including 40B)	0.5%	\$122,500	\$2,450	\$2.04
Environmental	0.5%	\$122,500	\$2,450	\$2.04
Consulting services CHA	0.1%	\$24,500	\$490	\$0.41
Insurance	0.5%	\$122,500	\$2,450	\$2.04
Clerk of the Works	0.2%	\$49,000	\$980	\$0.82
Utility Hook up Fees	0.2%	\$49,000	\$980	\$0.82
Real Estate Taxes	0.1%	\$24,500	\$490	\$0.41
Appraisal Fees	0.0%	\$7,840	\$157	\$0.13
Accounting Costs	0.1%	\$12,250	\$245	\$0.20
Builder's fee	8.0%	\$1,960,000	\$39,200	\$32.67
Builder's overhead	2.0%	\$490,000	\$9,800	\$8.17
Soft Cost contingency (5%)	1.0%	\$232,750	\$4,655	\$3.88
Inspecting Engineer	0.1%	\$12,250	\$245	\$0.20
Affordable Lottery	0.0%	\$-	\$-	\$-
Relocation	0.1%	\$24,500	\$490	\$0.41
Total Soft Costs	18.0%	\$4,420,290	\$88,406	\$73.67
Construction Loan Interest	2.0%	\$490,000	\$9,800	\$8.17
Loan/Debt fees	0.8%	\$196,000	\$3,920	\$3.27
Predevelopment Interest Fees	1.0%	\$245,000	\$4,900	\$4.08
LIHTC Fees	0.1%	\$24,500	\$490	\$0.41
Total Financing Costs	3.9%	\$955,500	\$19,110	\$15.92
Expense Reserve	0.8%	\$205,800	\$4,116	\$3.43
Operating Reserve	1.0%	\$245,000	\$4,900	\$4.08
Total Reserve Costs	1.8%	\$450,800	\$9,016	\$7.51
Total Development Costs	100.0%	\$24,501,340	\$490,027	\$408.35

Despite Covid-19 and its negative impact on the overall economy, development costs have increased over the past year. For instance, according to the National Association of Home Builders the price of lumber has increase in more than 180% since spring of last year. By the time Willow Park breaks ground the price per square foot of construction may have decreased and therefore the total development cost might be lower.

Bedrooms	#Units	Total sqft	Per unit
1 Bed	8	5,604	701
2 Bed	30	26,374	879
3 Bed	4	4,680	1,170
3 Bed Eastern Lot	8	8,704	1,088
Building 1 int circulation South B		1,102	
Building 1 ext circulation South B		4,392	
Building 1 communal space		1,674	
Northern Building Int Circulation		544	
Northern Building Ext Circulation		1,360	
Eastern Lot interior/communal		947	
Eastern Lot exterior circulation		4,620	

Housing Vouchers			
Income Level	Unit Type	Voucher Type	# of Voucher
30% AMI	1-Bed	PBV	2
	2-Bed	PBV	4
	3-Bed	PBV	2

Building	Sqft	Purpose
Southern Building (5) PHASE 1	1,674	Flexspace and Gym
Building 4 East Lot PHASE 1	947	Communal meeting 2nd floor and laundry 1st floor
Western/south courtyard building 2 PHASE 2	2,830	Earth Chilhood Education Center
Courtyard building 3 learning center PHASE 2	1,713	Learning Center

Affordability and Unit Mix					
Category	Unit Type	Voucher Type	Monthly Rent	# of Units	Total Annual Rent
Affordable (30% AMI)	1-Bed	Section 8 PBV	\$2,009	2	\$48,216
	2-Bed	Section 8 PBV	\$2,434	4	\$116,832
	3-Bed	Section 8 PBV	\$3,030	2	\$72,720
	1-Bed	N/A	\$648	6	\$46,656
	2-Bed	N/A	\$770	26	\$240,318
	3-Bed	N/A	\$880	2	\$21,117
Workforce (80% AMI)	1-Bed	N/A	\$1,788	-	\$-
	2-Bed	N/A	\$2,138	-	\$-
	3-Bed	N/A	\$2,461	4	\$118,104
Market Rate (120% AMI)	1-Bed	N/A	\$2,901	-	\$-
	2-Bed	N/A	\$3,462	-	\$-
	3-Bed	N/A	\$3,988	4	\$191,424
Total	1-Bed	N/A	\$8,797	8	\$94,872
	2-Bed	N/A	\$10,535	30	\$357,150
	3-Bed	N/A	\$11,756	12	\$403,365

Financial & Feasibility

15 Year Proforma

	Stabilized Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
INCOME						
Affordable Rent	\$663,963	\$677,242	\$690,787	\$704,603	\$718,695	\$733,069
Market Rate Rent	\$191,424	\$195,252	\$199,158	\$203,141	\$207,203	\$211,348
Laundry Income	\$10,000	\$10,200	\$10,404	\$10,612	\$10,824	\$11,041
Potential Gross Income	\$865,387	\$882,695	\$900,349	\$918,356	\$936,723	\$955,457
Affordable Vacancy (3%)	\$19,919	\$20,317	\$20,724	\$21,138	\$21,561	\$21,992
Market Rate Vacancy (5%)	\$9,571	\$9,763	\$9,958	\$10,157	\$10,360	\$10,567
Effective Gross Income	\$835,897	\$852,615	\$869,667	\$887,060	\$904,802	\$922,898
ADMINISTRATIVE						
Payroll, Benefits, and Taxes	\$47,612	\$48,802	\$50,022	\$51,273	\$52,555	\$53,869
Community Center Staff & Programming	\$30,000	\$30,750	\$31,519	\$32,307	\$33,114	\$33,942
Office Expenses	\$13,098	\$13,425	\$13,761	\$14,105	\$14,458	\$14,819
Professional Services (Legal, Audit, etc.)	\$10,000	\$10,250	\$10,506	\$10,769	\$11,038	\$11,314
Total Administrative	\$100,710	\$103,228	\$105,808	\$108,454	\$111,165	\$113,944
Maintenance Labor	\$37,405	\$38,340	\$39,299	\$40,281	\$41,288	\$42,320
Materials & Supplies	\$11,360	\$11,644	\$11,935	\$12,233	\$12,539	\$12,853
Elevator Maintenance	\$7,500	\$7,688	\$7,880	\$8,077	\$8,279	\$8,486
Landscaping & Grounds Maintenance	\$5,000	\$5,125	\$5,253	\$5,384	\$5,519	\$5,657
Trash Removal	\$9,500	\$9,738	\$9,981	\$10,230	\$10,486	\$10,748
Snow Removal	\$7,500	\$7,688	\$7,880	\$8,077	\$8,279	\$8,486
Cleaning & Janitorial	\$25,000	\$25,625	\$26,266	\$26,922	\$27,595	\$28,285
Extermination	\$5,000	\$5,125	\$5,253	\$5,384	\$5,519	\$5,657
Total Maintenance	\$108,265	\$110,972	\$113,746	\$116,590	\$119,504	\$122,492
Water & Sewer	\$49,660	\$50,902	\$52,174	\$53,478	\$54,815	\$56,186
Electricity	\$48,150	\$49,354	\$50,588	\$51,852	\$53,149	\$54,477
Cable/Wireless	\$1,500	\$1,538	\$1,576	\$1,615	\$1,656	\$1,697
Total Utilities	\$99,310	\$101,793	\$104,338	\$106,946	\$109,620	\$112,360
Insurance	\$15,000	\$15,375	\$15,759	\$16,153	\$16,557	\$16,971
Payment in Lieu of Taxes	\$30,000	\$30,750	\$31,519	\$32,307	\$33,114	\$33,942
Employee Benefits	\$38,818	\$39,788	\$40,783	\$41,802	\$42,847	\$43,919
Other General Expenses	\$2,000	\$2,050	\$2,101	\$2,154	\$2,208	\$2,263
Operating Reserve/Contingency	\$12,500	\$12,813	\$13,133	\$13,461	\$13,798	\$14,143
Total Insurance, Taxes and General Expenses	\$98,318	\$100,776	\$103,295	\$105,877	\$108,524	\$111,237
Replacement Reserves	\$20,000	\$20,500	\$21,013	\$21,538	\$22,076	\$22,628
Total Other Expenses	\$20,000	\$20,500	\$21,013	\$21,538	\$22,076	\$22,628
Total Expenses	\$426,603	\$437,268	\$448,199	\$459,404	\$470,889	\$482,662
Total Expenses per Unit	\$8,532	\$8,745	\$8,964	\$9,188	\$9,418	\$9,653
Net Operating Income	\$409,294	\$415,347	\$421,468	\$427,656	\$433,912	\$440,236
WHA Acquisition & Program Loan Debt Service	\$166,329	\$166,329	\$166,329	\$166,329	\$166,329	\$166,329
Cash Flow After WHA Financing	\$242,966	\$249,018	\$255,139	\$261,327	\$267,583	\$273,907
Permanent Loan Debt Service	\$211,274	\$211,274	\$211,274	\$211,274	\$211,274	\$211,274
Debt Service Coverage Ratio	1.15	1.18	1.21	1.24	1.27	1.30

Financial & Feasibility

Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15
\$747,730	\$762,685	\$777,938	\$793,497	\$809,367	\$825,555	\$842,066	\$858,907	\$876,085
\$215,575	\$219,886	\$224,284	\$228,769	\$233,345	\$238,012	\$242,772	\$247,627	\$252,580
\$11,262	\$11,487	\$11,717	\$11,951	\$12,190	\$12,434	\$12,682	\$12,936	\$13,195
\$974,566	\$994,058	\$1,013,939	\$1,034,218	\$1,054,902	\$1,076,000	\$1,097,520	\$1,119,470	\$1,141,860
\$22,432	\$22,881	\$23,338	\$23,805	\$24,281	\$24,767	\$25,262	\$25,767	\$26,283
\$10,779	\$10,994	\$11,214	\$11,438	\$11,667	\$11,901	\$12,139	\$12,381	\$12,629
\$941,356	\$960,183	\$979,386	\$998,974	\$1,018,954	\$1,039,333	\$1,060,119	\$1,081,322	\$1,102,948
\$55,215	\$56,596	\$58,011	\$59,461	\$60,947	\$62,471	\$64,033	\$65,634	\$67,275
\$34,791	\$35,661	\$36,552	\$37,466	\$38,403	\$39,363	\$40,347	\$41,355	\$42,389
\$15,190	\$15,569	\$15,959	\$16,358	\$16,767	\$17,186	\$17,615	\$18,056	\$18,507
\$11,597	\$11,887	\$12,184	\$12,489	\$12,801	\$13,121	\$13,449	\$13,785	\$14,130
\$116,793	\$119,713	\$122,705	\$125,773	\$128,917	\$132,140	\$135,444	\$138,830	\$142,301
\$43,378	\$44,463	\$45,574	\$46,714	\$47,882	\$49,079	\$50,306	\$51,563	\$52,852
\$13,174	\$13,503	\$13,841	\$14,187	\$14,542	\$14,905	\$15,278	\$15,660	\$16,051
\$8,698	\$8,915	\$9,138	\$9,366	\$9,601	\$9,841	\$10,087	\$10,339	\$10,597
\$5,798	\$5,943	\$6,092	\$6,244	\$6,400	\$6,560	\$6,724	\$6,893	\$7,065
\$11,017	\$11,293	\$11,575	\$11,864	\$12,161	\$12,465	\$12,776	\$13,096	\$13,423
\$8,698	\$8,915	\$9,138	\$9,366	\$9,601	\$9,841	\$10,087	\$10,339	\$10,597
\$28,992	\$29,717	\$30,460	\$31,222	\$32,002	\$32,802	\$33,622	\$34,463	\$35,324
\$5,798	\$5,943	\$6,092	\$6,244	\$6,400	\$6,560	\$6,724	\$6,893	\$7,065
\$125,554	\$128,693	\$131,910	\$135,208	\$138,588	\$142,053	\$145,604	\$149,244	\$152,976
\$57,590	\$59,030	\$60,506	\$62,019	\$63,569	\$65,158	\$66,787	\$68,457	\$70,168
\$55,839	\$57,235	\$58,666	\$60,133	\$61,636	\$63,177	\$64,756	\$66,375	\$68,035
\$1,740	\$1,783	\$1,828	\$1,873	\$1,920	\$1,968	\$2,017	\$2,068	\$2,119
\$115,169	\$118,048	\$121,000	\$124,025	\$127,125	\$130,303	\$133,561	\$136,900	\$140,322
\$17,395	\$17,830	\$18,276	\$18,733	\$19,201	\$19,681	\$20,173	\$20,678	\$21,195
\$34,791	\$35,661	\$36,552	\$37,466	\$38,403	\$39,363	\$40,347	\$41,355	\$42,389
\$45,017	\$46,142	\$47,296	\$48,478	\$49,690	\$50,932	\$52,205	\$53,511	\$54,848
\$2,319	\$2,377	\$2,437	\$2,498	\$2,560	\$2,624	\$2,690	\$2,757	\$2,826
\$14,496	\$14,859	\$15,230	\$15,611	\$16,001	\$16,401	\$16,811	\$17,231	\$17,662
\$114,018	\$116,869	\$119,790	\$122,785	\$125,855	\$129,001	\$132,226	\$135,532	\$138,920
\$23,194	\$23,774	\$24,368	\$24,977	\$25,602	\$26,242	\$26,898	\$27,570	\$28,259
\$23,194	\$23,774	\$24,368	\$24,977	\$25,602	\$26,242	\$26,898	\$27,570	\$28,259
\$494,728	\$507,096	\$519,774	\$532,768	\$546,087	\$559,740	\$573,733	\$588,076	\$602,778
\$9,895	\$10,142	\$10,395	\$10,655	\$10,922	\$11,195	\$11,475	\$11,762	\$12,056
\$446,627	\$453,086	\$459,613	\$466,206	\$472,866	\$479,593	\$486,386	\$493,245	\$500,170
\$166,329	\$166,329	\$166,329	\$166,329	\$166,329	\$166,329	\$166,329	\$166,329	\$166,329
\$280,299	\$286,758	\$293,284	\$299,877	\$306,537	\$313,264	\$320,058	\$326,917	\$333,841
\$211,274	\$211,274	\$211,274	\$211,274	\$211,274	\$211,274	\$211,274	\$211,274	\$211,274
1.33	1.36	1.39	1.42	1.45	1.48	1.51	1.55	1.58

Financial & Feasibility

Operational Expenses

Sources of Income: Our residential rental income will generate almost all of our annual income, with the remaining 1% being generated from laundry income. We conservatively assumed that rents will grow at 2% annually. Since a project can receive up to 8 or 25% of units in Section 8 project-based vouchers (PBV), we are assuming we will be allocated 8 vouchers. All vouchers will be allocated for 30% AMI units. Our PBV rent assumption is 110% Fair Market Rent (FMR) as outlined by WHA's 2021 Section 8 Payments Standards. Of our annual rental income 28% will be generated from PBV units, 36% percent from affordable units (30% AMI) without the PBV subsidy, 14% from workforce units (80% AMI) and 22% from market rate units, assumed to be 120% AMI. Given the high demand for affordable units, we assumed the vacancy rate for the affordable and workforce units to be 3% and the market rate units to be 5%.

Operating Expenses: Operating expenses are modeled after current Watertown Housing Authority operations and we assumed that expenses will increase 2.5% annually, in line with projected inflation. Of note, the redeveloped buildings will rely on electric heat, so there is no natural gas expense going forward for Willow Park. The electric heat and the use of solar panels will result in energy savings for both WHA and residents, who are responsible for paying electricity. Their rents reflect this by incorporating a utility allowance. Using these assumptions, Year 1 Operating Expense is \$ 8,532 per unit.

Community Center Staff & Programming: As part of the master plan, there is a gym in the southern building which is part of the phase I construction. Until the full project is completed, this gym area will be used as a flex space used as an educational center, daycare, and general communal space so that residents have access to these resources during phase II construction. We have allocated \$30,000 to cover part-time staff and programming that is not covered by community partners.

Payment in Lieu of Taxes (PILOT): Due to the community and political support for this project and with guidance from the WHA Executive Director, we have assumed that the local tax assessor will continue the WHA's PILOT with this redevelopment since the Housing Authority will continue to manage the property. Additionally, it should be noted that there is legislation before the Massachusetts State House to standardize the PILOT process that would exempt housing authorities, across the board, from ordinary real estate taxes. Since 2017, WHA's highest PILOT payment for another 50-unit property in its portfolio was approximately \$9,800. While we are assuming the PILOT payment will continue, we have assumed a more conservative payment of \$30,000.

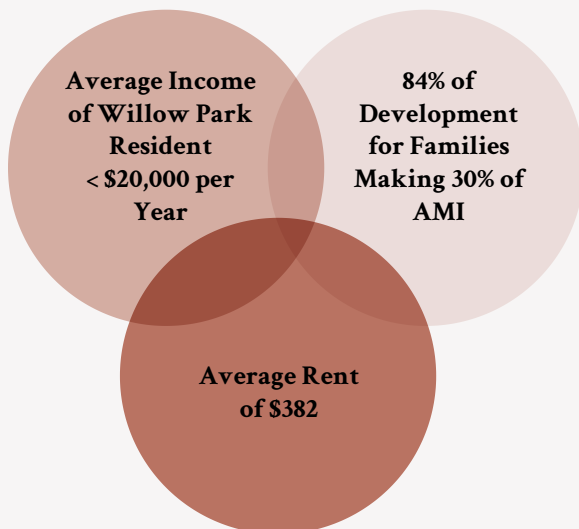
Impact

Preserving Affordability

The current Watertown Housing Authority resident has an average income of less than \$20,000 per year and an average rent of \$382.00, therefore, the Watertown Housing Authority is consistently securing tenancies of the most vulnerable in its community. With the increase demand for affordable units, it is becoming even more important that we both preserve affordable units and create new units. Preserving and creating deeply affordable units, especially for those families in the 30% AMI bracket, was a key goal of this project from the start. After a conversation with the Watertown Planning Department, we learned that there are no other majority deeply affordable projects in the current pipeline, so this objective became even more important. Our project includes 42 units, 84% of the project, that is dedicated to families and individuals making 30% AMI. We are hoping to secure at least 8 Section 8 project-based vouchers to provide support to those families that need the additional assistance. This goal of maximizing the number of deeply affordable units will continue in phase II.

Balancing Sustainable Energy & Funding

We will be proceeding with the solar power purchase agreement (PPA), as this financial agreement will lead to the developer arranges for the design, permitting, financing and installation of a solar energy system on a Willow Park's property at minimal costs.



Minimal upfront capital costs: The developer handles the upfront costs of sizing, procuring, and installing the solar PV system. Without any upfront investment, Willow Park is able to adopt solar and begin saving money as soon as the system becomes operational.

Reduced energy costs: Solar PPAs provide a fixed, predictable cost of electricity for the duration of the agreement.

Limited risk: The developer is responsible for system performance and operating risk.

Better leverage of available tax credits: Developers are typically better positioned to utilize available tax credits to reduce system costs. For example, municipal hosts and other public entities with no taxable income would not otherwise be able to take advantage of the Section 48 Investment Tax Credit.

Potential increase in property value: helps with the long term investment value.



Project Timeline

	Year 1				Year 2				Year 3				Year 4				Year 5				Year 6	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Existing Foundation Review	█																					
Community Engagement	█	█			█																	
Funding Application	█	█																				
Design Development		█	█		█																	
Residents Relocation		█	█		█	█																
Demolition Starts					█																	
Construction Starts						█	█		█	█	█											
Community Updates									█	█	█	█	█	█	█	█	█	█	█	█	█	█
Solar Panel Install															█	█						
Landscaping Install																		█	█			
Appliances Install																					█	█
Move-in Planning																					█	█
Phase I Consolidation																						█
Phase II Initiation																					█	█

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