

## MEMORANDUM

TO: Town of Braintree                      FROM: Kimberly Barnett, AIA, LEED AP, LDa Architecture & Interiors  
Brett Pelletier, CRE, FRICS, Hiraeth Community Advisors, LLC  
RE: Braintree Housing Data              DATE: 09-05-2024

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The following memorandum is intended to summarize contextual Braintree housing information relevant to the Feasibility and Initial Design Study for Senior & Veteran Low Income Housing at 74 and 90 Pond Street. Further information is shared in greater detail in the study documentation.

Data provided by the Redfin House Value Index indicate that Braintree's median single-family home price stands at \$795,000. To afford this median-priced home, families need an income exceeding \$200,000. The high and rising cost of homeownership reflects broader affordability housing production issues, as current average rents for various unit sizes range from \$2,000 for a studio to \$3,500 for a three-bedroom, necessitating incomes between \$80,000 and \$142,000 to manage these expenses without being burdened by housing costs.

The town's demographic trends reveal a high-income community with over 25% of households earning more than \$200,000, a figure projected to rise to 30.4% by 2028. This growth of higher-income households, combined with limited housing production, puts upward pressure on home prices and increases affordability challenges for homeowners and renters alike. These numbers are contrasted with the median household income in Braintree is \$118,018 and nearly 1/3 of all households in Braintree earn less than \$75,000 per year, making market rate housing unaffordable for so many. Braintree's housing stock is predominantly single-family homes (63%), with 87% built before 2000, and only 9.3% of the stock classified as affordable under the State Housing Inventory (SHI).

The gap between the cost to develop new housing and the affordable pricing limits is particularly pronounced for lower-income brackets, such as those at 30% and 50% of Area Median Income (AMI). This gap underscores the need for substantial capital and operating subsidies to make affordable housing projects viable. The demand for affordable housing spans from 0% to 120% AMI, with seniors facing even more acute affordability pressures due to their typically lower median incomes.

Several regional housing organizations reflect the ongoing need for affordable and supportive housing:

- The Braintree Housing Authority manages various housing units, including 162 one-bedroom units for elderly or disabled individuals and 504 Section 8 vouchers, with long wait times averaging between 1 and 3 years.
- Father Bill's & MainSpring reports a rising demand for senior housing, with a significant increase in the homeless population, particularly among seniors.
- South Shore Elder Services highlights the growing waitlists and the need for supportive housing with on-site staff to assist seniors.
- Independence Manor provides supportive living with extended wait times and a variety of unit options tailored for seniors.

This report was prepared by LDa Architecture & Interiors and Hiraeth Community Advisors to summarize the Feasibility & Initial Design Study for senior and veteran low-income housing at the town-owned properties at 74 & 90 Pond Street in Braintree, MA. The Town of Braintree, Department of Planning and Community Development sought a design and real estate analyst team to study and propose creative solutions for developing much-needed affordable housing on this site that also served to enhance the neighborhood and preserve the unique architectural features of the existing historic buildings



**Feasibility and Initial Design Study  
Senior & Veteran Low Income Housing  
74 and 90 Pond Street**  
Town of Braintree, MA

August 30, 2024

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## CREDITS

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### Town of Braintree

Feasibility and Initial Design Study for Senior & Veterans Housing at 74 & 90 Pond Street

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## THE STUDY STEP-BY-STEP:

### I. PHASE 1: INFORMATION GATHERING

- 2/02/24 Project Kick Off Meeting with TOB**
- 3/15/24 Housing Needs Discussion with TOB & Stakeholders**
- 4/11/24 Existing Conditions Findings Meeting with TOB**

### II. PHASE 2: CONCEPTUAL DESIGN

- 5/02/24 Initial Conceptual Design Meeting with TOB**
- 5/09/24 Public Meeting to Share Findings and Gain Feedback**
- 6/06/24 Final Conceptual Design Meeting with TOB**
- 6/27/24 Meeting to Review Final Report with TOB**

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# EXECUTIVE SUMMARY & RECOMMENDATIONS

## 1. STUDY GOALS & PROCESS

### Introduction

This report was prepared by LDa Architecture & Interiors and Hiraeth Community Advisors to summarize the Feasibility & Initial Design Study for senior and veteran low-income housing at the town-owned properties at 74 & 90 Pond Street in Braintree, MA. The Town of Braintree, Department of Planning and Community Development sought a design and real estate analyst team to study and propose **creative solutions for developing much-needed affordable housing on this site that also serves to enhance the neighborhood and preserve the unique architectural features of the existing historic buildings.**

The study site is made up of three separate parcels which for the purposes of this study have been considered together:

- 74 Pond Street - Noah Torrey Primary School built 1926,
- 90 Pond Street - Noah Torrey Grammar School built 1905,
- Adjacent Lot at Fairview Ave with no existing buildings.

The executive summary section includes a description of the study process, overview of the housing needs for seniors and veterans, financial analysis used to determine housing feasibility and design recommendations for housing development on this site. Following the executive summary are additional financial analyses and site & building programming materials that were developed and presented throughout the course of the study and support the summary findings.

### Town of Braintree

Feasibility and Initial Design Study for Senior & Veterans Housing at 74 & 90 Pond Street

### Study Goals

**The goal of the Feasibility & Initial Design Study is to provide the town with sufficient information to determine whether senior and veteran affordable housing is feasible on this site** through a combination of redeveloping the existing historic school buildings and building additional complementary buildings on the site, and to identify what parameters shape that feasibility including:

- Site Opportunities & Constraints
- Adaptive Reuse of the Existing School Structures
- Senior & Veteran Populations Needs
- Scale of Development, Unit Type & Mix
- Parking & Site Circulation
- Balance of Affordable and Market Rate Housing
- Key Financial Assumptions

### Study Process

The study process is described in the project approach described below:

#### Phase 1: Information Gathering

##### 1) Project Goals & Relevant Documentation:

- Understand the community's housing achievements, status and goals.
- Identify affordable housing stakeholders.
- Collect existing building and site documentation.
- Assemble relevant regulatory documents.

##### 2) Existing Conditions Assessment:

- Perform visual exploration of the existing buildings & site.
- Assess the existing conditions as they relate to the potential future use of the properties for affordable housing.
- Establish building renovation costs to be included in the cost estimate for the adaptive reuse.
- 3D scan of the buildings and site to prepare accurate existing conditions documentation.

##### 3) Housing Opportunities & Market Conditions:

- Meet with the Town's affordable housing stakeholders; collect feedback on the community's housing needs and resources.
- Identify senior & veteran population specific housing needs.
- Analyze market conditions. Identify relevant regional affordable housing precedents and funding sources.

#### Phase 2: Conceptual Design

##### 1) Initial Conceptual Design:

- Determine housing feasibility within the existing buildings alone or in combination with new construction on the site.
- Determine a feasible unit size, unit type & affordability mix.
- Develop initial conceptual site plan focusing on site access, circulation, and parking.

# Executive Summary & Recommendations

## 1. STUDY GOALS & PROCESS

### 2) Share Findings & Engage Public

- Collect perspectives from across the community through public meeting & online poll.

### 3) Final Conceptual Design:

- Prepare conceptual site plans, building floor plans and building massing showing how the identified feasible development can take form.
- Incorporate the space planning improvements, new building systems, accessibility upgrades, fixture and finish renewals and repair work recommended from the building assessment.

### 4) Financial Feasibility:

- Establish conceptual construction cost estimate for proposed building and landscape development.
- Prepare project proforma to show proof of concept for housing development.

### 5) Final Report

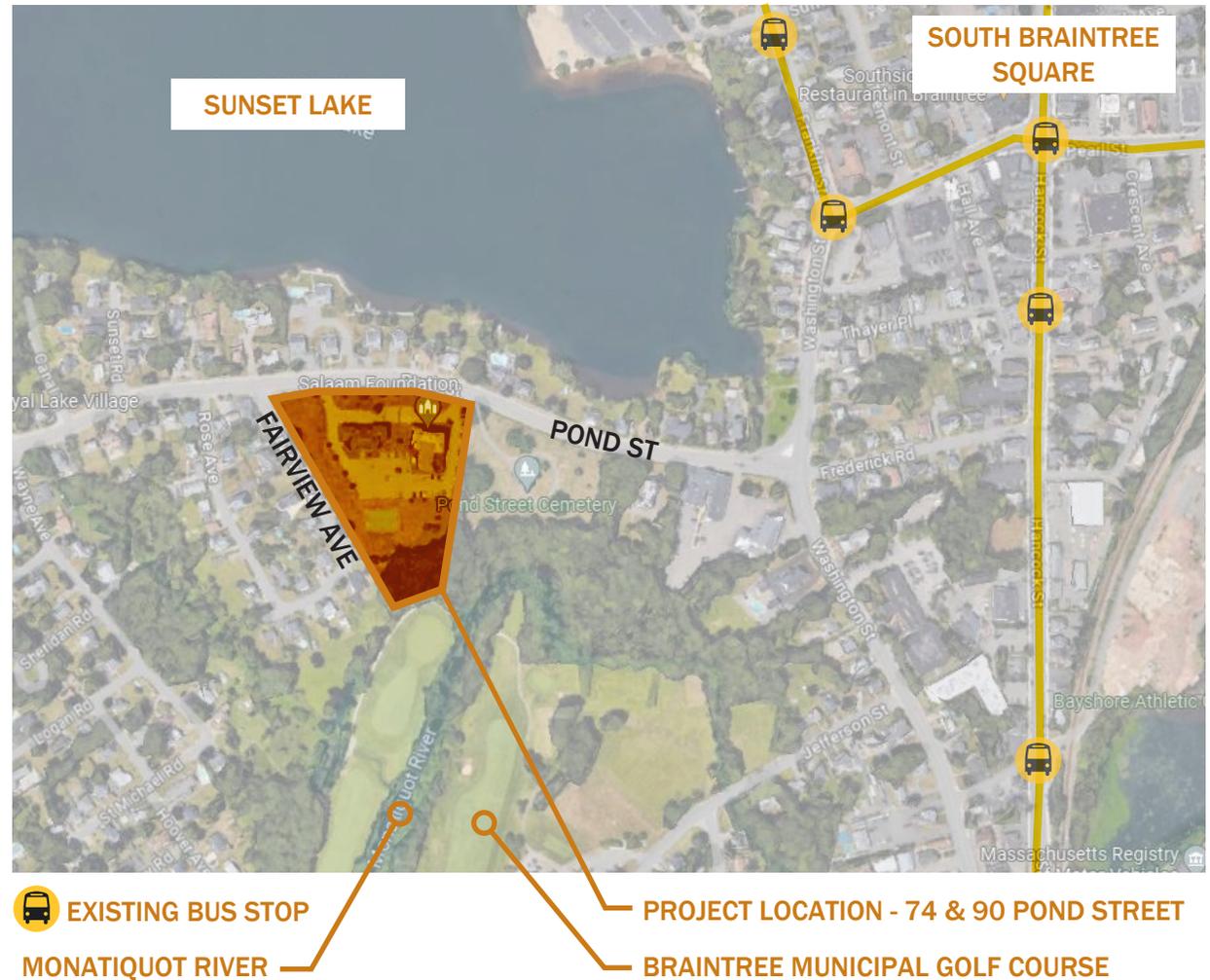
- Compile study report with deliverables from each task above + executive summary.

### Meeting Timeline

In support of this process, the design team met with the Town of Braintree project team and additional key stakeholders and members of the public at the following meetings. Presentations from the meetings can be found in the report appendices, as well as a record of the public feedback provided at the meetings.

### Town of Braintree

Feasibility and Initial Design Study for Senior & Veterans Housing at 74 & 90 Pond Street



### Phase 1 Meetings

- 2/2/24 TOB Kick Off Meeting
- 3/15/24 TOB & Stakeholders Housing Needs Presentation
- 4/11/24 Existing Conditions Findings

### Phase 2 Meetings

- 5/2/24 TOB Initial Conceptual Design Meeting
- 5/9/24 TOB Public Meeting
- 6/6/24 TOB Final Conceptual Design Meeting
- 6/27/24 TOB Conceptual Design Report

## 2. HOUSING BACKGROUND

### Review of Housing Terminology

**SHI** - Subsidized Housing Inventory

(EOHLC 10% Affordable)

**AMI** - Area Median Income

**LIHTC** - Low Income Housing Tax Credit

### Housing Cost Burdened

A household that pays more than 30% of their income for housing.

### Severely Housing Cost Burdened

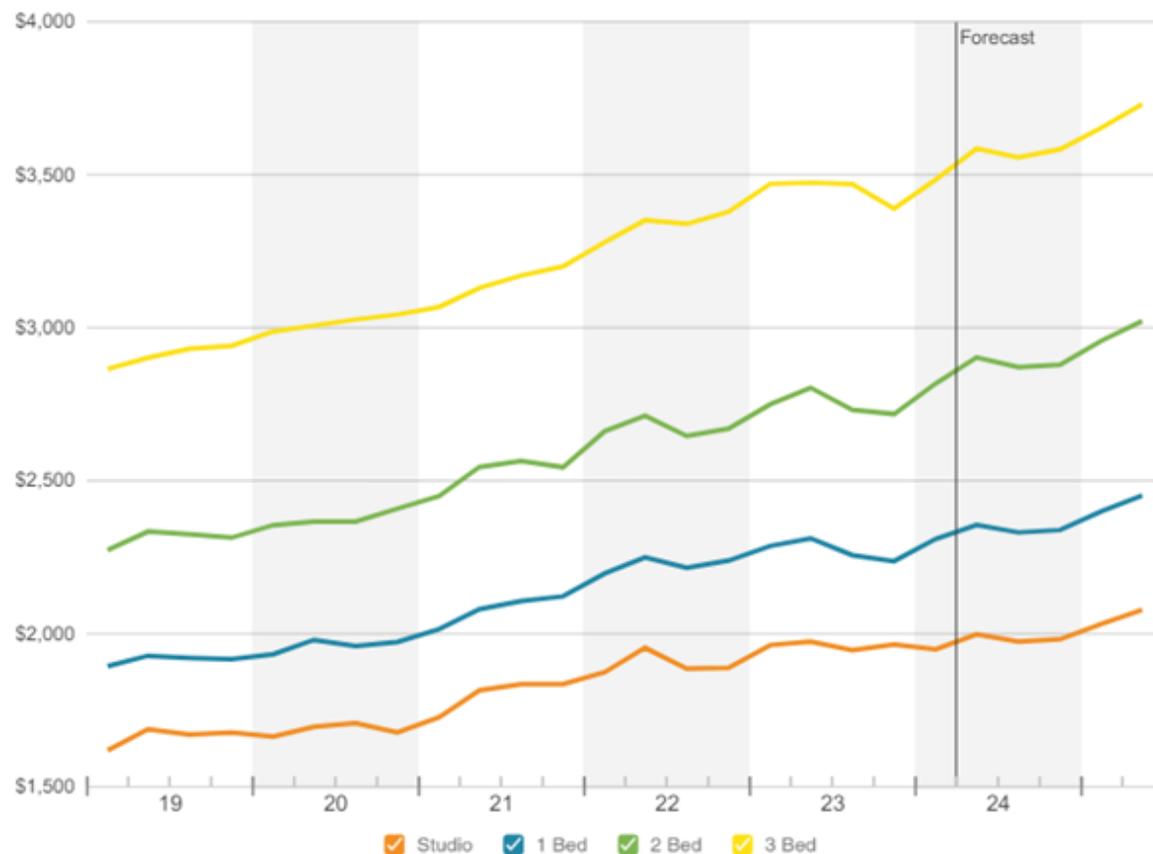
A household that pays more than 50% of their income for housing.

### Demographics & Housing Costs

#### Need Exists at Every Level

The median single-family home price in Braintree is \$795,000, meaning **in order to afford a median-priced home, a family must earn more than \$200,000** to comfortably qualify and afford the mortgage payments and expenses. Current average rents within the market are approximately: \$2,000 for a studio, \$2,300 for a one-bedroom, \$2,900 for a two-bedroom, and \$3,500 for a three-bedroom. In order to afford those rents a household would need to earn approximately \$80,000, \$93,000, \$115,000, and \$142,000, respectively. **Currently, more than 25% of the town's households earn over \$200,000** per year and is estimated to increase to 30.4% by 2028. This is an indication of a high-income community that is continuing to add higher income households, coupled with low housing production, ultimately resulting in an upward pressure on home prices.

Market Rent Per Unit By Bedroom



Above: Graph identifying Town of Braintree Data on Increasing Market Rent Pricing Per Unit by Bedroom from 2019 through today and forecast into 2025.

### Town of Braintree

Feasibility and Initial Design Study for Senior & Veterans Housing at 74 & 90 Pond Street

## 2. HOUSING BACKGROUND

### Market Rate Rent - Income Needs

| Market Rate Unit Type | Monthly Rent | Income Needed |
|-----------------------|--------------|---------------|
| Studio Unit           | \$1,963      | \$78,520      |
| One-Bedroom Unit      | \$2,317      | \$92,680      |
| Two-Bedroom Unit      | \$2,856      | \$114,240     |
| Three-Bedroom Unit    | \$3,528      | \$141,120     |

\*Source: Costar

**Braintree’s housing stock is overwhelmingly weighted toward owner-occupied, single-family detached housing**, with 63% of the supply in this category. 87% of the town’s housing stock was built before 2000. 9.3% of the town’s housing stock is categorized as affordable under the SHI. (That number may be inflated as the SHI may count all housing units within developments where only a portion of the units are affordable.)

### Market Rate For Sale - Income Needs

| Market Rate Unit Type | Median Price | Income Needed 20% Down | Down Payment Needed |
|-----------------------|--------------|------------------------|---------------------|
| Condominium           | \$595,000    | \$172,275              | \$119,000           |
| Single-Family House   | \$795,000    | \$228,967              | \$159,000           |

\*Source: Redfin Home Value Index

Approximately 40% of the town’s households fall between 30% AMI (extremely low income) and 120% AMI (moderate income). **38% of the town’s households are housing cost-burdened** (47% of renters, 31% of owners). **These percentages are higher than the Massachusetts averages.**

### AMI by Household Size

| Income as % of Area Median Income | Household Size (Persons) |           |           |           |           |           |           |
|-----------------------------------|--------------------------|-----------|-----------|-----------|-----------|-----------|-----------|
|                                   | 1                        | 2         | 3         | 4         | 5         | 6         |           |
| Extremely Low Income              | 30%                      | \$31,260  | \$35,730  | \$40,200  | \$44,670  | \$48,240  | \$51,810  |
| Very Low Income                   | 50%                      | \$52,100  | \$59,550  | \$67,000  | \$74,450  | \$80,400  | \$86,350  |
| LIHTC Standard                    | 60%                      | \$62,520  | \$71,460  | \$80,400  | \$89,340  | \$96,480  | \$103,620 |
| Low Income                        | 80%                      | \$83,360  | \$95,280  | \$107,200 | \$119,120 | \$128,640 | \$138,160 |
| Median Income                     | 100%                     | \$104,200 | \$119,100 | \$134,000 | \$148,900 | \$160,800 | \$172,700 |
| Moderate Income                   | 120%                     | \$125,040 | \$142,920 | \$160,800 | \$178,680 | \$192,960 | \$207,240 |

\*FY2024 HUD Income Limits for Boston-Cambridge-Quincy, MA-NH HUD Metro FMR Area

Above: Current data on Town of Braintree Housing Affordability

## Town of Braintree

Feasibility and Initial Design Study for Senior & Veterans Housing at 74 & 90 Pond Street

## 2. HOUSING BACKGROUND

There is a significant feasibility gap between the cost to develop housing and the affordable housing pricing limits for 2024 for 30%, 50%, 60% AMI and 80% AMI units, however this gap is hardest to fill in the 50% and 30% AMI cohorts because of the need for dedicated operating subsidies, which are competitive and limited. In order to make these developments feasible, these projects rely heavily on capital and operating subsidies. In general, **the demographic analysis shows that there is a significant need for affordable units from 0%-120% AMI, and possibly beyond that.**

**Senior households face even tighter housing affordability pressures, with lower median incomes than the population as a whole.** Statewide, 26% of elderly family households and 40% of non-elderly, non-family households are cost burdened, respectively. As the number of elderly households increases, the number of cost-burdened elderly households is likely to increase. In Braintree, cost burden among elderly family households and non-elderly, non-family households is 26% and 40%, respectively.

*Narrowing the Options will be the Challenge*

### Senior and Veteran Specific Needs

In an effort to identify the goals and challenges of this study, the design team spoke with several local agencies involved in affordable housing, senior services, and veteran services. Each in turn outlined that there is a clear need for affordable housing for a variety of individuals, resulting in **overly-long**

### Town of Braintree

Feasibility and Initial Design Study for Senior & Veterans Housing at 74 & 90 Pond Street

### Age 50+ Profile

Braintree Town city, MA  
 Braintree Town city, MA (2502107740)  
 Geography: County Subdivision

Prepared by Esri

| 2023 Households by Income and Age of Householder 55+ |           |         |           |         |          |         |           |         |
|--|-----------|---------|-----------|---------|----------|---------|-----------|---------|
|  | 55-64     | Percent | 65-74     | Percent | 75+      | Percent | Total     | Percent |
| Total  | 2,928     | 100%    | 2,382     | 100%    | 2,419    | 100%    | 7,729     | 100%    |
| <\$15,000  | 144       | 4.9%    | 161       | 6.8%    | 268      | 11.1%   | 573       | 7.4%    |
| \$15,000-\$24,999                                    | 118       | 4.0%    | 186       | 7.8%    | 366      | 15.1%   | 670       | 8.7%    |
| \$25,000-\$34,999                                    | 78        | 2.7%    | 91        | 3.8%    | 230      | 9.5%    | 399       | 5.2%    |
| \$35,000-\$49,999                                    | 117       | 4.0%    | 155       | 6.5%    | 339      | 14.0%   | 611       | 7.9%    |
| \$50,000-\$74,999                                    | 173       | 5.9%    | 393       | 16.5%   | 334      | 13.8%   | 900       | 11.6%   |
| \$75,000-\$99,999                                    | 306       | 10.5%   | 341       | 14.3%   | 267      | 11.0%   | 914       | 11.8%   |
| \$100,000-\$149,999                                  | 532       | 18.2%   | 401       | 16.8%   | 202      | 8.4%    | 1,135     | 14.7%   |
| \$150,000-\$199,999                                  | 546       | 18.6%   | 249       | 10.5%   | 182      | 7.5%    | 977       | 12.6%   |
| \$200,000+   | 914       | 31.2%   | 405       | 17.0%   | 231      | 9.5%    | 1,550     | 20.1%   |
| Median HH Income                                     | \$149,465 |         | \$88,290  |         | \$50,340 |         | \$93,287  |         |
| Average HH Income                                    | \$180,563 |         | \$127,968 |         | \$89,064 |         | \$135,717 |         |

Above: 2023 Data outlining Income Distribution by Households Age 55+

**wait times for the existing stock of available housing.**

In speaking with individuals from South Shore Elder Services, Independence Manor, and the Braintree Housing Authority, it is clear the need for senior housing is growing. **Seniors in the community want to remain in the Town of Braintree in order to be closer to family, friends, religious organizations, and doctors.** Those who currently own houses and are looking to downsize are without options due to the available housing market and choose instead to stay where they are. Others who rent are being evicted or outpriced due to landlords selling their highly-valued properties. Many who are applying for affordable housing are doing

so at a younger age to mitigate the longer wait times.

The housing needs for veterans in the Braintree community is also present. Organizations such as Father Bills & MainSpring offer a dedicated program for veteran housing but have found they are overwhelmed with applications. Larger families looking for two or three bedroom residences are turned away given most affordable housing tend toward smaller units. HUD programs like VASH (Veterans Affairs Supportive Housing) vouchers are helpful in providing rental assistance but they do not include much-needed support services beyond housing.

## 2. HOUSING BACKGROUND

During interviews with key stakeholders, the team identified the following beneficial housing amenities for senior and veteran users:

- On-site staff and offices for supportive services.
- Places to gather that bring activities to seniors and encourage socialization.
- Some two bedroom units that allow for live-in caregivers.
- Dining facilities and catering kitchen, either to provide meal programs or offer places to socialize.
- Housing that accommodates residents who wander (dementia).
- Wellness centers for exercise.
- Outdoor spaces for socialization and exercise.
- Transportation to surrounding areas.

Veteran Housing encourages similar amenities but focuses mainly on providing offices for supportive services.

### Existing Regional Housing Options

There are a number of existing regional housing developments in Braintree and the surrounding areas. Below are some statistics provided by representatives from those organizations to the design team. They are included to help illustrate the ongoing need for senior and veteran housing.



**The Braintree Housing Authority (BHA)** offer the following statistics on current available housing:

- 162 one-bedroom units for elderly or residents with an income limit at 80% AMI or less.
- 17 Congregate housing units - efficiency style with half bath and shared showers for those with an income limit at 80% AMI or less.
- 24 units at Independence Manor, Building 41 - Massachusetts Rental Voucher Program (MRVP) Project based units for elderly only.
- 60 family units at Skyline Drive Apartments - MRVP Project based family units.
- 504 Section 8 vouchers.
- 667 total housing units.
- **304 local applicants on the waitlist, 17 of which are veterans.**
- **The average estimated wait time for local applicants is between 1 and 3 years.**

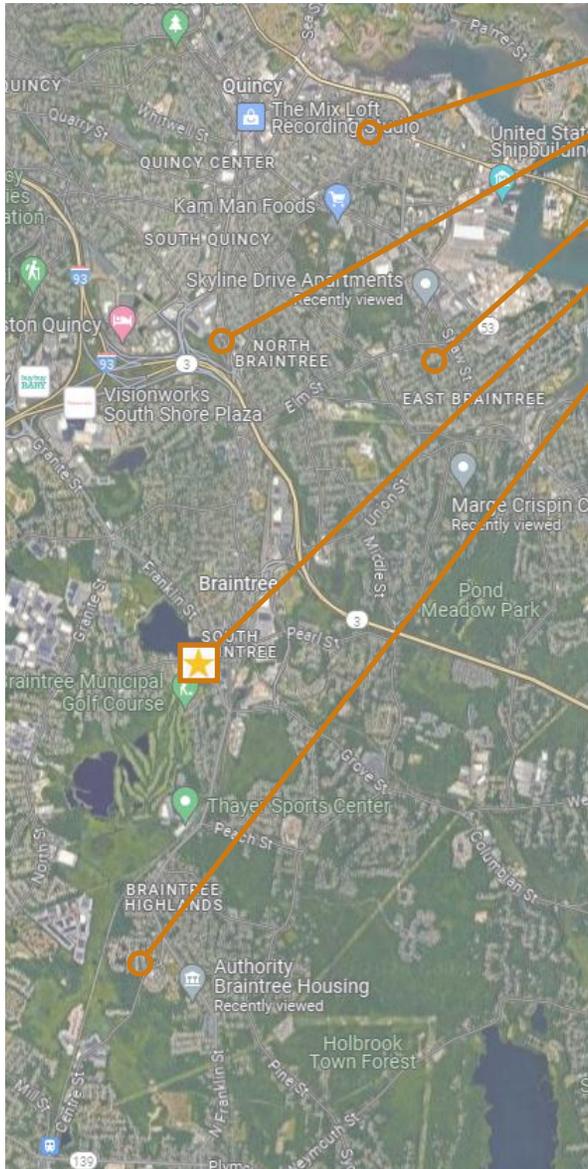


**Father Bill's & MainSpring**  
NOBODY SHOULD BE HOMELESS

**Father Bill's & MainSpring** is an organization based in Brockton, MA providing emergency and permanent housing and services for those in need:

- There are 700 current available housing units available (shelters not included).
- Between 2019 and 2023, those served in a shelter rose from 293 to 361 individuals.
- Between 2019 and 2023, those provided housing rose from 167 to 270 individuals.
- **The senior housing is the fastest growing homelessness population.**
- Efficiency units are preferred over units that offer shared kitchens and bathrooms.
- There is a downward trend in veterans seeking shelter because of the success of programs such as VASH (Veterans Affairs Supportive Housing). VASH services have successfully housed veterans but do not offer supportive service in conjunction with housing. Veterans not eligible for VA services have a harder time finding housing.

## 2. HOUSING BACKGROUND



Above: Map of existing senior and veteran affordable housing options in the Braintree area.

SKYLINE DRIVE APARTMENTS

INDEPENDENCE MANOR

WILLIAM F. MACRAE HOUSING DEV.

★ 74 & 90 POND STREET

MARJORIE L. CRISPIN DEVELOPMENT

WILLIAM H. DYKSTRA CONGREGATE



**South Shore Elder Services** provides a variety of support services for Seniors including access to a Housing Specialist who assists in the housing application process:

- **Wait lists are typically over 1 year long and continues to grow.**
- Many are applying at younger ages to avoid the long wait times.
- Supportive housing is needed with on-site staff.
- Bringing activities to seniors is a priority.
- Two-bedroom units are useful for those who require live-in caregivers.
- Housing needs to accommodate the needs of Seniors who wander due to conditions like dementia.



### INDEPENDENCE MANOR

St. Francis of Assisi Residences at Braintree, Inc.  
Senior Citizens Residence

**Independence Manor** is a supportive living community for Braintree seniors, owned and operated by a non-profit board of directors. Rental housing subsidies are provided through the Massachusetts Housing Finance Agency and the U.S. Department of Housing and urban Development. There are 3 separate housing facilities:

- Independence Manor I provides 94 housing units with an **average wait list time of 1.5 years**. 24 units are rented through the BHA, 56 are offered as one-bedroom units and 14 are offered as two-bedroom units.
- Independence Manor II provides 50 housing units with an **average wait list time of 1.5 years**. All units are one-bedroom units with a maximum income at 80% AMI and a mandatory meal program.
- Independence Manor III provides 16 housing units with an **average wait list time of 2 years**. All units are one-bedroom units, 3 of which are ADA accessible. Maximum income is 50% AMI and includes a mandatory meal program.

### Town of Braintree

Feasibility and Initial Design Study for Senior & Veterans Housing at 74 & 90 Pond Street

## 2. HOUSING BACKGROUND

### Similar Development Projects

In an effort to help the Town of Braintree visualize the transformation of the 74 and 90 Pond Street site for housing, the design team has assembled the following six examples of similar developments within the Boston Metro Area. Examples listed offer a range of historic, adaptive reuse, senior, and affordable housing with a wide array of amenity spaces.

#### Oxford Town Residences - Fairhaven, MA

Adaptive reuse of an existing historic school and new construction serving Fairhaven's Senior population (62+). There are a total of 52 new apartment units, 45 of which are affordably priced and rented to 60% AMI individuals, 11 rented to 30% AMI, and 6 are for homeless individuals. Also available on site are on-site parking, 24-hour emergency maintenance, game room, wellness center, a community room with a kitchen and bathroom tenant storage rooms, upper floor lounge and a central laundry facility. Completed: 2022.

SCG Development; ICON Architecture, Inc.



#### West Newton Armory - Newton, MA

This project includes an adaptive reuse of the former West Newton Armory Site into 43 developed residential units. Unit distribution will serve majority of households with incomes below 60% AMI and some 30% AMI households. Unit mix includes 15 one-bedroom, 21 two-bedroom, and 7 three-bedroom units. Each unit will be visitable and 5 will be fully accessible. Amenities include preservation and restoration of the historic head house into an office, gallery and community space. Estimated completion: 2026.

Metro West Collaborative Development, Inc.; Davis Square Architects



#### 62 Packard Street - Hudson, MA

Adaptive reuse of the former Hudson Police Station with a focus on neighborhood-scale housing as well as balancing housing and open space. Proposed design includes 40 affordable rental units distributed amongst a majority of households with incomes below 60% AMI and some 30% AMI households. Unit mix includes 13 one-bedroom, 22 two-bedroom and 5 three-bedroom units, with 9 of those units specified as townhouses. Each unit will be visitable and 5 will be fully accessible. Amenities include outdoor gathering spaces, community rooms, tenant storage lockers, and on-site laundry. Estimated completion: October 2024.

Metro West Collaborative Development, Inc.; Davis Square Architects



### Town of Braintree

Feasibility and Initial Design Study for Senior & Veterans Housing at 74 & 90 Pond Street

## 2. HOUSING BACKGROUND

### Henry T. Wing School Residences - Sandwich, MA

This project includes the preservation and adaptive reuse of the former Henry T Wing School into 80% affordable senior housing (62+). The project is projected to split into 3 phases, offering a total of 128 affordable housing units. The existing auditorium would be restored and used as a community space, including lounges, a dining area, community kitchen, game rooms, spaces for service agencies, shared laundry facilities, and storage units. Outdoor spaces include trellis bridges, outdoor courtyards and sitting areas. Estimated completion: July 2025.

SCG Development; ICON Architecture, Inc.



### Fulton School Residences - Weymouth, MA

Adaptive reuse of the former Alice B. Fulton School into 63 affordable housing for the senior community. A priority of the project was the historic renovation of the existing building. Unit mix includes one and two bedroom apartments with fully-equipped kitchen and bathrooms, high thermal window units, and split heating and high efficiency air conditioning systems. Amenities include central laundry system, dedicated storage units, and off-street parking. Construction completed 2011.

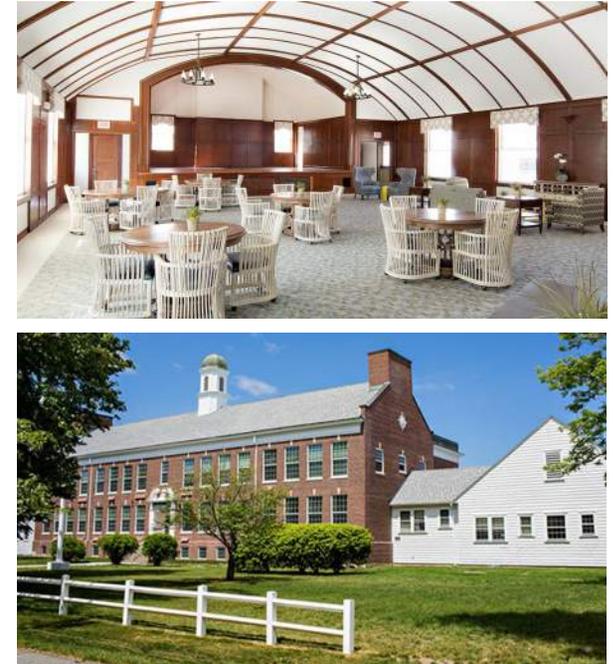
SCG Development; ICON Architecture, Inc.



### Simpkins School Residences - Yarmouth, MA

This project includes the adaptive reuse of the historic John Simpkins School into a 65 unit senior housing community. Unit mix includes studio, one-bedroom, and two-bedroom homes and construction focused on providing Energy Star rated units with a restored brick facade. Construction completed 2015.

SCG Development; ICON Architecture, Inc.



### Town of Braintree

Feasibility and Initial Design Study for Senior & Veterans Housing at 74 & 90 Pond Street

## 2. HOUSING BACKGROUND

### Housing Delivery Methods

**There are two distinct delivery methods for producing additional units of Affordable Housing within Massachusetts, and more broadly, within the context of regulatory and incentive structures within the United States.**

The first is a dedicated Affordable Housing model where the primary objective is to maximize affordable housing delivery through higher proportions of restricted units at each project and a deeper level of affordability set aside, or lower Area Median Income (AMI). The second is a mixed-income or inclusionary model that seeks to include additional affordable units within more traditional market-rate properties. This is the typical Chapter 40B model, whereby typically 25% of the units are restricted to residents earning less than 80% of AMI, while the remaining 75% of units are unrestricted and rented at market rates. Additionally, project models exist that use a larger affordable set aside, making the projects truly mixed income.

**The first delivery method is a dedicated Affordable Housing model, which is primarily deployed to provide low- and moderate-income residents with safe, high-quality housing that is affordable at a variety of income set asides.** These Affordable Housing developments, which typically provide for a majority of or all of the units at the development, are restricted as permanently affordable through various regulatory frameworks. These projects are typically deeply subsidized and utilize capital and operating subsidies established for the creation and

preservation of affordable housing to residents earning less than 80% and more often less than 60% of AMI. The largest and most robust funding source for these properties is the Low Income Housing Tax Credit Program (LIHTC) at both the Federal and State level. These projects are undertaken by housing developers with specialized expertise in delivering Affordable Housing and working within the LIHTC allocation, syndication, and compliance frameworks.

**The second delivery method involves the inclusion of a small portion of Affordable units within an unrestricted market-rate housing development.** These units are typically developed under local Inclusionary Zoning measures, Chapter 40B developments, and other similar regulatory structures to encourage additional Affordable Housing development alongside market rate development. Income restrictions for these properties can range from 80% of AMI to 120% of AMI, as local and state regulators permit or require. Capital funding sources and operating subsidies to support these properties and these units are

less abundant and robust. These projects are typically undertaken by traditional market-rate housing developers without deep expertise in Affordable Housing regulations, compliance, and management.

This mismatch of skills and resources is observable within the region and Braintree and has been noted during conversations with active developers and regulators within the market. Conversations with local and regional developers indicated that there is a significant administrative, regulatory, and cost burden for traditional market rate developers, small and mid-size projects, and more traditional market-rate economics to effectively and efficiently deliver mixed-income housing. Often, the resources and subsidies available to these developers and projects go unused because of the nature of the administrative and technical burden that application and management require. Small to mid-sized nonprofit developers and joint ventures often provide more success in delivering mixed-income housing models within Massachusetts and the region.



*Above: View of 74 & 90 Pond Street from Pond Street.*

### Town of Braintree

## 3. FINANCIAL ANALYSIS PROCESS

### Economic Analysis

**Through conversations with the community and policymakers in Braintree, we have refined the analysis of this feasibility exercise to focus on housing that is primarily affordable and targeted to seniors and veteran populations.** In assessing the economics of housing production in Braintree, we have prepared an economic analysis of the hypothetical preferred development scenario to understand the feasibility of delivering housing at a variety of income levels, with a **target between 30% and 60% AMI** and have presented the following technical memo that outlines the refined assumptions of the modeling approach and discrete findings from the analysis.

Based on discussions with community leaders, housing advocates and providers, and market participants, we have made refined assumptions regarding the allocation of units by bedroom size, and we have provided analysis based on a distribution of units allocated as studio units, one-bedroom units, two-bedroom units, and one three-bedroom unit. **Flexibility with unit distribution and mix should be considered when ultimately determining the site programming of these future developments.**

The LIHTC 2022-2023 Qualified Allocation Plan (QAP) for Massachusetts states: for projects applying to DHCD, (now, Executive Office of Housing and Livable Communities) at least 65% of the units in a project must

include two or more bedrooms, and at least 10% must be three-bedroom units, unless that percentage of two-bedroom or three-bedroom units is infeasible or unsupported by public demand. The priorities of the QAP include providing family housing production in neighborhoods and communities that provide access to opportunities, including, but not limited to, jobs, transportation, education, and public amenities. There are exceptions to this requirement in the case of housing serving special populations, including seniors.

### Housing Cost Drivers and Opportunities to Influence

In determining the feasibility of developing Affordable Housing on the specified properties, we have analyzed the financial and physical constraints of the site and present a design balancing both concerns. This is an iterative process of understanding what drives the economics of housing both from market externalities and internal site constraints.



*Above: View of Existing Residential Housing along Pond Street.*

The primary opportunities and challenges in the affordable for-sale and rental housing market in Braintree are on the supply side rather than on the demand side; however, income and economic capacity certainly influence the supply of housing. Understanding what challenges exist paves the way to develop strategies to address those challenges, which present opportunities for public and private sector leadership in housing policy and creation. **Currently, the public and private financial markets do not supply sufficient resources to meet existing and future housing needs**, which is the definition of an economic market failure.

**There are seven primary levers that directly impact the cost and availability of housing in most markets:**

1. Land and Infrastructure
2. Entitlements and Regulation
3. Hard Construction Costs
4. Soft Construction Costs
5. Developer's Profit
6. Future Operations
7. Capital Sources & Financing

**Each of these levers can be pulled or pushed to influence the cost of housing and therefore the level of availability, affordability and ultimate development and delivery.**

The cost of housing is made up of three main parts: the cost of the land, the cost of construction, and the cost of ongoing

### Town of Braintree

## 3. FINANCIAL ANALYSIS PROCESS

operations into the future. Within those three components are some subgroups worth expanding on, and each participant in the housing value chain has an opportunity to influence one or more of these subgroups, especially policymakers.

It is helpful to begin with the following task list to think about ways local leaders can have an impact:

**QUESTIONS:** What questions can be asked?

**TOOLS:** What tools are available to address this issue?

**EXAMPLES:** Successful examples in practice.

### 1. Land and Infrastructure

Infrastructure is a major cost center and a barrier to development for the private sector, and the cost and availability of raw land is additionally a huge barrier. A lower land cost means a lower per-unit development cost, so if it is possible to reduce the cost of land by increasing the density of the site through density bonuses, value capture subsidies, or subsidized infrastructure costs, housing becomes more affordable to produce. If the development is the beneficiary of low or no cost land, the project costs will be lower, and housing becomes more financially feasible to develop. The Town has significant leverage to influence this cost factor because the site is already controlled by the municipality and therefore can be made available to development without cost. This should be considered as a source of direct subsidy.

### 2. Entitlements and Regulation

Entitlements typically include the permits and legal and regulatory hurdles that need to be met in order to build housing, of which there are many. Expedited permitting, approvals, and planning review can result in lower costs and shorter timelines, which reduce risk and ultimately cost. Reducing risk, uncertainty, and time helps to deliver less expensive housing.

### 3. Hard Construction Costs (materials, site work, labor, etc)

Hard costs include raw materials, site work, labor and all the generally understood costs to build housing units. Strategies used to reduce overall cost to develop include value engineering, lower cost materials, and innovative building technologies that reduce cost, like 3d printing, modular construction, manufactured housing and adaptive reuse of existing buildings. While the Town may not have significant control over hard construction costs, consideration of what may drive those costs is essential to understanding the economic feasibility of housing delivery. Structured parking, ground floor retail space, and other cross uses or colocation of use typically have a negative impact on financial feasibility because they increase hard cost burdens without an offsetting benefit.

### 4. Soft Costs (architecture, engineering, legal, etc)

Soft costs include engineering, architecture, permitting, design, and legal, financing,



*Above: View of neighboring Pond Street Cemetery East of the site.*

insurance costs. These costs have an impact on overall cost and affordability as well. These costs are more marginal to an overall project budget, but every bit counts. Cost savings can include repeatable models, simplified designs, and replicable, simple products.

### 5. Developer's Profit

Limiting the profit a developer can generate from a project in order to accommodate affordable housing, workforce housing, or other community benefits is a noble goal. Nonprofit project sponsors are good partners in developing lower cost housing because, by nature of their business, they limit overhead and profit. Additionally, limited dividend policies for developers who utilize public financing or other taxpayer funding subsidy will reduce the

## 3. FINANCIAL ANALYSIS PROCESS

total development cost of a housing unit and reduce the future costs through limits on equity cash out. These are widely used models in Massachusetts and should be considered when refining policy around these sites going forward.

### 6. Future Operations (Income and Expenses)

If you think about all the operating expenses a property will be subject to once built, you can identify discrete solutions to reduce each line item. This is true of both for-sale and rental properties, especially in a climate such as Massachusetts. Expenses like sewer and water can be reduced by utilizing greywater recycling systems, solar arrays and wind energy can reduce electricity expenses, Passive House and similar construction techniques can reduce heat loss and lower utility bills, arrangements with the city and county can reduce the real estate property taxes, and alternative arrangements to utility and infrastructure connection and maintenance fees can be developed in order to subsidize the creation of new housing for residents who cannot afford market housing.



Above: 74 Pond Street main entry

### 7. Capital Sources and Financing

Subsidized interest rates and low or no cost capital provide significant upside benefit to the construction of rental and for-sale housing. Low and no cost land, expedited permitting, and reduction of project timing reduce the capital outlay needed and the finance carry that these projects are required to support.

#### Modeling Approach

The approach taken in this analysis was to build development and operating pro-formas for the most probable development scenario in order to determine where there might be opportunities for the market to recognize value in developing housing at the site and delivering units. We looked at single-family, condominium, and multifamily residential housing typologies and researched construction costs, current yields, capital inputs, and rent and sales price levels in developing a model for discussion. The initial analysis and discussion with the Town concluded that the focus should be on maximizing the housing density on the site with affordable housing for senior and veteran populations.

**The majority of this work focuses on multifamily rental property types because that is the property type that provides for a significant majority of Affordable Housing delivery.** This property type also has access to the most funding to build and operate. However, the economics are very similar between property types, and **this approach allows us to look at the gap between what**

**units cost to build and what units are able to generate** in an implied value based on the restricted rent. This first analysis shows feasibility based on current economic conditions, capital markets, construction costs, and operations, on a typical basis for rental multifamily units. This allows us to see what impact various inputs have on the ultimate feasibility.

Once that baseline is set, we can then test the feasibility of adding affordable units to the test property. **For our analysis, we have considered the scenario that provides 70 units of rental housing for tenants earning less than 60% of AMI and have developed a financial model to describe that project,** utilizing the OneStop application framework attached to this report. Through conversations with the Town, community members, and market participants, we have refined our analysis to include primarily affordable development scenario that contains Low Income Housing Tax Credit (LIHTC) models. **LIHTC is the most robust capital financing source for the development of new construction affordable housing within Massachusetts** and the United States as a whole. Through the redevelopment process that the Town will undertake, variations and modifications to this general model are expected and will serve to enhance the feasibility at the time of development, reflecting then current financial markets, market demand, and funding priorities from capital subsidy sources.

## 3. FINANCIAL ANALYSIS PROCESS

For the rental scenario, we have analyzed a 100% Affordable project at 60% of AMI, typical of a LIHTC model, with a small portion of the units expected to be supported through project-based vouchers for residents earning less than 30% of AMI. We then can look at the gap analysis through the lens of a series of capital funding sources that are available to developers to close that gap and make projects feasible. This gap analysis is an easy to understand way of determining likely feasibility for the project scenario model. If there are not enough subsidy resources available to fill the gap, the project will likely not be feasible enough in the market for a developer to be attracted to the deal and take the risk of developing and sourcing capital.

### Findings

In assessing the economics of housing production, certain data and information are necessary to baseline before overlaying development assumptions. **It is reasonable to conclude that a purely market-driven solution to housing supply and affordability is not possible under current economics conditions because of current capital market pricing, availability and construction costs. Therefore, alternative interventions must be explored and exercised to provide relief to residents through supply side factors such as subsidy through the availability of land, capital subsidy, or other creative allocations, discussed further in this report.**

We must analyze both quantitative and

qualitative factors through the economic feasibility analysis to determine the availability and appropriateness of funding sources. Generally speaking, the economic burdens of mixed-income projects are significant and consistent at various scales. Larger projects are typically able to offset funding gaps more effectively and efficiently, however, unless there is adequate upward pressure on market rents to self-subsidize the project, additional external subsidy is still required.

Market rents, in theory, are a function of a combination of costs: the cost to operate the project, the cost to construct the project, and the cost of land. The market will increase or decrease rents in line with the price of land to the very point at which the market is supported. If there is additional rent capacity in a community, typically the price of land will increase to reflect that additional value. Because land prices so quickly recognize and rise to reflect increasing rents, in many communities, it is often hard to capture additional rent capacity as a cross-subsidy.

As previously discussed in the preliminary analysis, there is a significant feasibility gap at almost all levels of for-sale units at all income levels. The one exception might be a project that is so heavily weighted towards market rate to make the affordability considerations nearly inconsequential. It is for that reason that in this final, refined analysis, we have largely ignored for-sale condominium units and focused on rental apartments. What is important to note is that there are few, capital subsidy offsets

for residential subdivision and condominium developers that would offset these costs, with the exception of internal project subsidy, contributions from the municipality, or low-cost financing for homeowners.

### Affordable Rental Apartment Feasibility

The following analysis indicates that for a typical LIHTC model including 100% of the units reserved to residents earning less than 60% of AMI, the funding gap, after an assumption of Federal and State LIHTC equity, State Historic Tax Credit Equity, a supportable first mortgage, and soft sources, is considered a reasonable funding gap that could be filled with a number of combined soft debt, grant, and other subsidy sources, including, but not limited to HOME funds, Affordable Housing Trust Funds, CPA funds, local resources, donated land, and others.



Above: 90 Pond Street main entry

## 4. DESIGN RECOMMENDATIONS

### Site Characteristics

The site is a total of 8.47 acres west of South Braintree Square, all within the GBD (General Business Zoning District) and OSC (Open Space Conservancy) zoning districts. According to the Braintree Zoning Ordinance, housing is allowed with a building height up to 50' (3-stories maximum). The site is not located within any existing overlay districts.

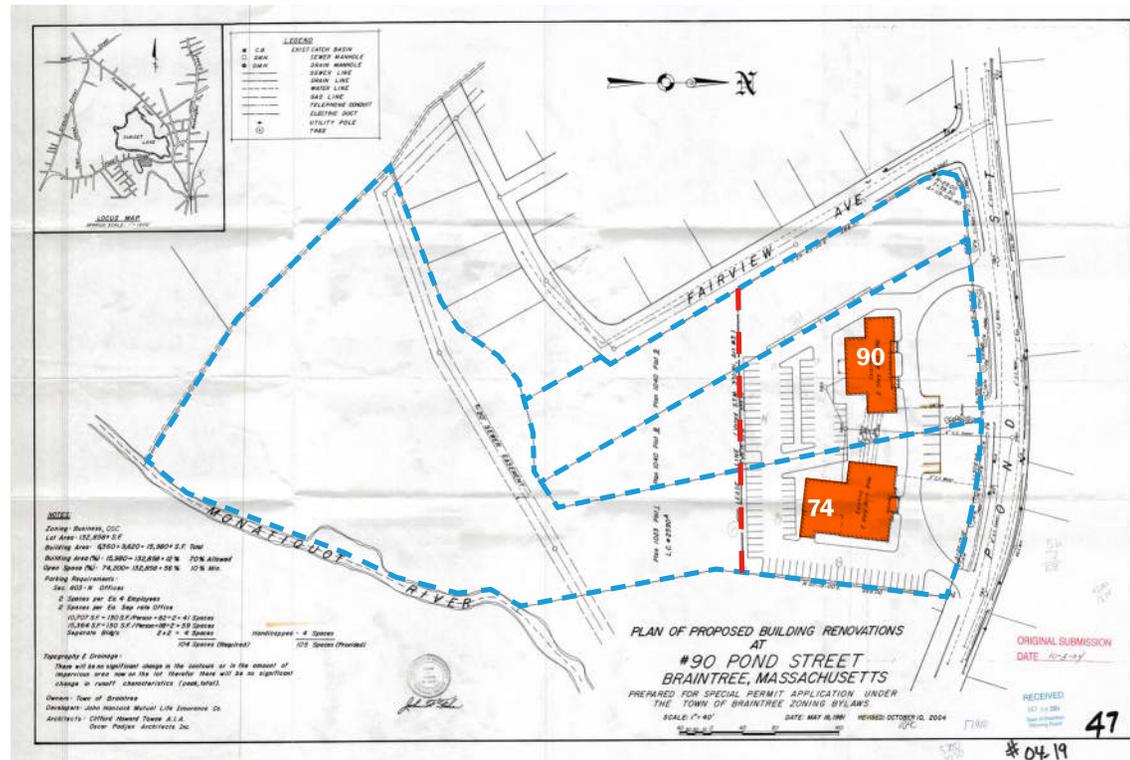
The buildable portion of the property is roughly triangular shaped with the Monaquot River frontage to the south and the existing buildings facing Pond Street to the north. The 74 Pond Street lot includes a large wedge shape south of existing woodlands abutting the Monaquot River and is unbuildable due to existing flood plains and Open Space Conservancy Requirements. There is approximately 540 ft of street frontage along Pond Street at the northern property line that tapers to 490 ft of frontage on Fairview Avenue at the western property line. The long eastern property line abuts the Pond Street Cemetery with very little tree buffer.

There are two existing masonry structures on the site and a surrounding paved parking lot. The lot currently provides approximately 95 parking spaces and is actively used for office and community center activities occurring at 74 Pond Street as well as Noah Torrey Park usage. The Noah Torrey Park consists of a partially fenced-in open grass field with a basketball court and a small playground south of the 74 Pond structure.

As part of this study, the town emphasized the requirement to focus all development north of the existing Open Space Conservancy Zone located south of the existing parking lot and lease line. There are existing residences bordering Pond Street to the north and Fairview Ave to the west with a developed existing residential neighborhood located further west. The impact of development on this site for the neighboring residences was noted as a concern reported in public feedback. **Any development on this site will require a traffic study.** No hazardous materials testing or soils testing was

included in this study and should be part of a future development project.

The site is moderately served by public transportation, located 0.4 miles (10 minute walk) to the South Braintree Square to the east. The #230 and #236 MBTA bus routes connect this town center to the Braintree MBTA station (northeast), the Montello Commuter Rail Station (south), and the South Shore Plaza (northwest). The sidewalks and pedestrian accommodations in the area appear to be in decent condition but could use some improvements to cater to a senior population.



--- Open Space / Lease Line  
 - - - Property Boundaries

### Town of Braintree

## 4. DESIGN RECOMMENDATIONS

### Building Existing Conditions - 90 Pond Street

The brick masonry structure at 90 Pond Street was built in 1905 as the Noah Torrey Grammar School. The building had previously been converted to professional office use and is currently used only as storage for the Town of Braintree. The structure consists of a 3 story classical-style brick building with hip-roofs.

The existing parking lot has adequate parking and the bus drop-off is functional along Pond Street. Surrounding the outside of the parking lot, there is inconsistent sidewalk and building accessibility and there is no accessible entrance at the First Floor Entry. To the south of the building is an existing sports court and playground in poor condition.

**Converting the existing building from office use to residential allows for residential units with large windows and a central circulation path with two existing well-positioned vertical circulation stacks. The structure of the building is in good condition however the mechanical, electrical, plumbing, and fire protection systems require modern updates for residential use.** Adjustments are required to allow for full accessibility throughout the structure. The interior finishes of the building are in poor condition and are in need of replacement. The existing exterior windows are in poor condition and require replacement for residential use. Exterior masonry is in fair condition and can be restored.

For full report on existing conditions, refer to Appendix B - Existing Conditions Reports.



Northwest Pond St Building Elevation



West Building Elevation



South Building Elevation



Third Floor Interior Office Space



Second Floor Interior Office Space



Basement Interior Storage

### Town of Braintree

## 4. DESIGN RECOMMENDATIONS

### Building Existing Conditions - 74 Pond Street

The brick masonry structure at 90 Pond Street was built in 1926 as the Noah Torrey Primary School, an expansion to the existing Noah Torrey Grammar School. In 1966 a commercial kitchen was added and the auditorium converted to a cafeteria. The school was then closed in 1981 and has since been converted to professional office use. Currently, the building is used as office space and catering kitchen.

**The structure consists of a two-story classical-style brick building with hip-roofs, similar to the existing 90 Pond Street structure and requires most of the same updates as 90 Pond Street.** The interior finishes of the building are in fair shape but will still require replacement in most locations for residential use. Alongside the Pond Street Entrance, there is an existing ramp from the sidewalk allowing for an accessible entry to the front doors. There are two existing well-positioned vertical circulation stacks inside the building as well as interior ramps that require accessibility updates for residential use.

For full report on existing conditions, refer to Appendix B - Existing Conditions Reports.

### Building Programming

Options for the development of housing at 74 & 90 Pond Street considered the impact of the following factors.

- Maximizing the amount of housing on the site vs. maintaining open space.



North Pond St. Building Elevation



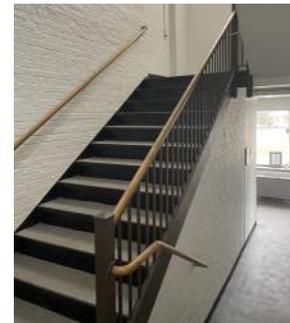
Southwest Building Elevation



Interior Hallway



Vestibule



Egress Stair



Existing Cafeteria & Auditorium



Second Floor Community Space



Catering Kitchen

## Town of Braintree

## 4. DESIGN RECOMMENDATIONS

- Maximizing the proposed additional building massing vs. scale of the existing historic school buildings.
- Unit type mix
- Providing adequate parking as well as well-organized vehicular and pedestrian circulation throughout the site.
- Creating additional housing while maintaining the residential fabric of the surrounding neighborhood.

These alternate versions of the development can be found in the 5/02/24 Initial Conceptual Design Meeting with TOB included in this report.

### Unit Mix & Amenities

**After discussion with town stakeholders, it was noted that there was a preference for unit mix weighted toward majority Studio and 1-Bedroom Units due to the project focus toward a senior population.** Site programming and conceptual design used a blended unit mix of 50% studio (typically 500-550 sf), 35% 1-bedroom (typically 650-700 sf), 14% 2-bedroom (typically 950-1000 sf), and 1% 3-bedroom (typically 1200 - 1250 sf) units.

**In addition to residential units, there was an expressed need for amenity spaces such as communal dining facilities, kitchen services, veteran and senior service offices, outdoor recreation spaces, and areas for social gathering.** Each of these have been accommodated in the proposed design, with the existing catering kitchen intended for reuse.

Many of the existing gathering spaces of the original school buildings allowed for natural social gathering spaces in the proposed design.

### Connecting 74 & 90 Pond

During initial meetings with the town, there was a preference to expand the footprints of 74 & 90 Pond by creating a connector structure directly between the two buildings and maximizing unit counts. Early design iterations explored this option, however it was determined that the most efficient layout involves the addition of a three-story third building set to the rear of the property with a single story connector & point of entry. This allows for a dedicated and welcoming entry courtyard, accessible entry to all three buildings and efficient layout for optimal unit counts.

### Site & Access

The surrounding parking lot and pedestrian circulation required significant accessibility updates to allow for full site access. Parking layouts were adjusted to provide safe pedestrian use throughout the site while also maximizing parking counts. Focusing on the third building design, an entry courtyard became the focus at the new main entrance. The existing recreation area could be reused for appropriate senior-focused recreational activities.

While there is no bus stop within the immediate vicinity of the property, it is recommended the town consider adjusting an existing bus route to allow for independent access to South Braintree Square and connecting sites. The site design retained the existing vehicular drop-off along Pond Street.



*Above: Photo of houses along Fairview Avenue.*

### Town of Braintree

### 4. DESIGN RECOMMENDATIONS

### CONCEPTUAL SITE PLAN

- KEY**
- PROPERTY LINE
  - ASPHALT
  - CONCRETE
  - GRAVEL
  - GRASS
  - WOODED
  - PLANTING BED
  - WETLAND
  - DECIDUOUS TREE
  - EVERGREEN TREE
  - SHRUB
  - CHAIN LINK FENCE

#### THIRD BUILDING + TOWNHOUSES CONCEPTUAL SITE PLAN

**PARKING COUNT**  
 TOTAL RES. UNITS: 79  
 1.5X SPACES/UNIT

REQUIRED SPACES: 119  
 PROPOSED SPACES: 92



### 4. DESIGN RECOMMENDATIONS

### CONCEPTUAL SITE PLAN



### THIRD BUILDING + TOWNHOUSES CONCEPTUAL SITE PLAN

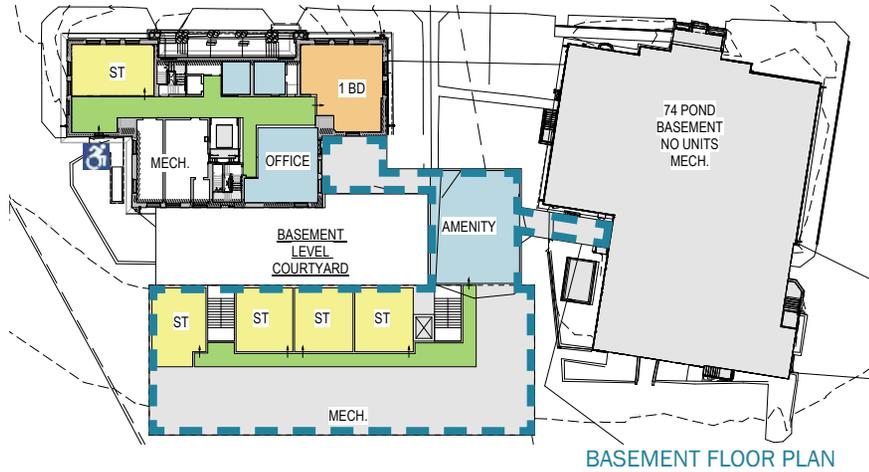
#### SITE DESIGN KEY

- FRONT LAWN
- ENTRY GARDEN
- COURTYARD
- RESIDENTIAL
- RECREATION
- SCREENING



### 4. DESIGN RECOMMENDATIONS

### CONCEPTUAL FLOOR PLANS



**COLOR KEY**

|                     |             |
|---------------------|-------------|
| ST: 500-550 SF      | CIRCULATION |
| 1BD: 650-700 SF     | AMENITY     |
| 2BD: 950-1,000 SF   | ADDITION    |
| 3BD: 1,200-1,250 SF |             |
| TOWNHOUSE: 1,200 SF |             |

**GROSS SF**

|            |            |
|------------|------------|
| EXISTING:  | 47,407 SF  |
| ADDED:     | 45,706 SF  |
| TOWNHOUSE: | 10,800 SF  |
| PROPOSED:  | 103,913 SF |

**UNIT COUNT**

|                     |           |                          |           |
|---------------------|-----------|--------------------------|-----------|
| STUDIO:             | 34        | TOWNHOUSE:               | 9         |
| 1 BEDROOM:          | 26        | <b>TOTAL UNITS + TH:</b> | <b>79</b> |
| 2 BEDROOM:          | 9         |                          |           |
| 3 BEDROOM:          | 1         |                          |           |
| <b>TOTAL UNITS:</b> | <b>70</b> |                          |           |

**Town of Braintree**

Feasibility and Initial Design Study for Senior & Veterans Housing at 74 & 90 Pond Street

**4. DESIGN RECOMMENDATIONS**

**CONCEPTUAL RENDERINGS**



*Above: Conceptual Rendering Birdseye View of 74 & 90 Pond Street, Proposed Building Addition, and Townhouses along Fairview Ave.*

**4. DESIGN RECOMMENDATIONS**

**CONCEPTUAL RENDERINGS**

*Right: Entry Courtyard Conceptual Rendering from the Parking Lot. 74 Pond Street on the left, Proposed Building Addition in the center, 90 Pond Street on the right.*

*Below: Conceptual Rendering from Pond Street. 74 Pond Street on the left, Proposed Building Addition in the center, 90 Pond Street on the right.*



4. DESIGN RECOMMENDATIONS

CONCEPTUAL RENDERINGS



Above: Conceptual Rendering from corner of Pond Street and Fairview Avenue. 90 Pond Street on the left, Proposed Building Addition in the center, Townhouses on the right.



Left: Conceptual Rendering from Townhouse Entries. 90 Pond Street on the left, Proposed Building Addition in the center, Townhouses on the right.

## 4. DESIGN RECOMMENDATIONS

### Townhouses

After studying the building massing along Fairview Avenue where the property faces a row of single family residences, it was recommended to study the addition of townhouse residences to mitigate the scale of the larger structures to this residential street. The addition of townhouses also allows for additional unit counts and variety, providing more independent and private residences with their own exterior entry. **The townhouse structures can be considered optional and may take other forms to allow for an appropriate balance of unit types and financial feasibility.**

Scalable funding options for affordable for-sale condominiums are significantly more limited than that of rental projects. Additionally, the product would likely be so different to that of the 100% affordable rental project in the main structures that it would too difficult to underwrite and finance as one project. The townhouse units provide a good opportunity to carve out as a separate, for-sale project to be sold at market rates, thereby providing an internal subsidy of sorts to the town and the development. Additionally, it is an opportunity to partner with a non-profit organization, community developer, or Habitat for Humanity, to create deeply affordable for-sale units that would not rely on the financing structure or underwriting of the larger affordable rental property adjacent. There is significant flexibility in the 'bonus' townhouse or cottage units to include them in the project or carve them out

| Site                                | Design without Townhouse | Design with Townhouse |
|-------------------------------------|--------------------------|-----------------------|
| # Units                             | 70                       | 79                    |
| <i>#Studio units</i>                | 34                       | 34                    |
| <i>(as % of total units)</i>        | 49%                      | 43%                   |
| <i># 1-Bed units</i>                | 26                       | 26                    |
| <i>(as % of total units)</i>        | 37%                      | 33%                   |
| <i>#2-Bed units</i>                 | 9                        | 18                    |
| <i>(as % of total units)</i>        | 13%                      | 23%                   |
| <i>#3-Bed units</i>                 | 1                        | 1                     |
| <i>(as % of total units)</i>        | 1%                       | 1%                    |
| # Beds                              | 81                       | 99                    |
| # Surface Parking Spots             | 105                      | 92                    |
| #Parking spots/unit                 | 1.50                     | 1.16                  |
| Building GSF                        | 93,861                   | 104,601               |
| <i>Typical Studio SF</i>            | 525                      | 525                   |
| <i>Typical 1 bed SF</i>             | 675                      | 675                   |
| <i>Typical 2 bed SF</i>             | 975                      | 1,088                 |
| <i>Typical 3 bed SF</i>             | 1,225                    | 1,225                 |
| <i>Residential units &amp; hall</i> | 63,606                   | 74,346                |
| <i>(as % of total SF)</i>           | 68%                      | 71%                   |
| <i>Entrance, stairs, mech.</i>      | 24,450                   | 24,450                |
| <i>(as % of total SF)</i>           | 26%                      | 23%                   |
| <i>Amenity</i>                      | 5,805                    | 5,805                 |
| <i>(as % of total SF)</i>           | 6%                       | 6%                    |
| Parking SF                          | 18,975                   | 16,720                |
| <i>(as % of site SF)</i>            | 14%                      | 13%                   |
| Total Site Area SF                  | 132,610                  | 132,610               |
| Building Cost                       | \$37,960,617             | \$44,401,249          |
| Sitework Cost                       | \$3,453,039              | \$4,186,417           |
| <b>Total Cost</b>                   | <b>\$41,413,656</b>      | <b>\$48,587,666</b>   |
| Building Cost/Unit                  | \$542,295                | \$562,041             |
| Building Cost/Bed                   | \$468,650                | \$448,497             |
| Sitework Cost/Unit                  | \$49,329                 | \$52,993              |
| <b>Total Cost/Unit</b>              | <b>\$591,624</b>         | <b>\$615,034</b>      |
| <b>Total Cost/Bed</b>               | <b>\$511,280</b>         | <b>\$490,785</b>      |
| Building Cost/ Building SF          | \$404                    | \$424                 |
| Sitework Cost/Site SF               | \$26                     | \$32                  |
| Total Cost/ Total SF                | \$441                    | \$465                 |

*note: costs from June 2024, no escalation included*

### Town of Braintree

Feasibility and Initial Design Study for Senior & Veterans Housing at 74 & 90 Pond Street

## 4. DESIGN RECOMMENDATIONS

as their own project with their own discrete investment and development profile.

### Construction Cost Estimates

The construction cost estimate focused initially on the Third Building addition, renovation to the existing 74 & 90 Pond Street and surrounding parking and site design. The total estimated construction cost for this scope was approximately \$41,400,000 for the 70 unit development. That yields an estimated cost of just over \$590,000 per unit. This cost estimate was based off the conceptual design described in the previous sections. As a conceptual estimate, an estimating contingency of 15% has been included. The cost estimate was completed in June of 2024. No escalation has been included in this cost analysis so that the estimated construction cost could be compared to the current financial conditions used in the feasibility modeling approach. It should be noted that construction costs have been escalating at near 6% per year, so the construction cost can be expected to increase in the future. See the full construction estimate in appendix C for more detailed information on the estimate assumptions and exclusions.

A second estimate also factors in the addition of two-story townhouse units for additional housing.

In an effort to maximize housing beyond the Third Building design and footprint of 74 & 90 Pond Street, the Design Team recommended to consider the additional Townhouse Units.

However, the cost estimate for these units was more than expected and thus the Building Cost / Unit rose from approx. \$590,000 to approx. \$615,000. In order to mitigate the additional costs, it is worth studying the design of the townhouses to potentially bring the cost closer to the \$590,000 range. The two-story, two bedroom townhouse design fit well within the neighborhood but can be consolidated to single-story, 1-bedroom units or stacked 2-story units to provide additional housing.

### Financially Feasible Development

Based on the site characteristics, opportunities and constraints, the site programming options reviewed and the construction cost estimates, the housing development that proves to be the most achievable at the site is as follows:

- 100% Affordable at 60% AMI
- Approximately 93,000 sf, 3-story, all-residential development
- 70 residential units (34xStudio, 26x1-bedroom, 9x2-bedroom, 1x3-bedroom)
- 105 surface parking spots (1.5 spaces per unit)

### Financial Analysis

The financial models used assume a development program of 100% affordable units reserved at 60% or lower than the Area Median Income (AMI), distributed according to the site programming analysis shown in previous sections. The property operating model is

developed based on typical operations and underwriting standards and includes a vacancy & collection loss factor of 3%, a management fee of 5%, an operating expense per unit of approximately \$10,500 and a \$325/unit/year replacement reserve allowance. All typical for multifamily affordable housing operations in the Boston metropolitan area.

The OneStop Project Output in Appendix E shows the typical expected operations and ultimately indicate the Net Operating Income the property would be able to generate, which is the basis for understanding the total financeable value and supportable first mortgage. On top of the primary debt, we layer on subsidy sources for analysis purposed and decision making.

We reconcile the financial resources the project can support, along with the high-level capital subsidy sources available to the project, in light of the assumption of Total Development Costs (TDC), which have been developed based on the construction cost analysis provided by the design team, with additional contingencies, land value, and profit and incentive. As indicated below, we have assumed a land acquisition placeholder of \$100, based on the intense budgetary pressures of developing housing in the current market, a total development cost (TDC) of \$639,809 per unit of residential housing, which is consistent with the current market for multifamily housing development and includes a contingency, and allocations for developer's fee, profit, incentive, and overhead costs. Reconciling the TDC of

### 4. DESIGN RECOMMENDATIONS

\$639,809 per unit with the implied financeable value of only \$603,857, we identify a feasibility gap of \$35,952 per unit, which must be filled in order to make the project financeable. The capital stack includes a first mortgage, and a variety of capital subsidy sources, including, but not limited to, state and federal LIHTC, deferred developer fees, direct land gift subsidy, local CPA funds, Affordable Housing Trust funds, HOME funds, and any number of soft sources, grants, and dedicated affordable housing support funds available through the State of Massachusetts, and potentially local sources.

We have assumed, for the purposes of this analysis, that a portion of the developer fee would be deferred, and the land would be made available to the developer at low- or no cost, to illustrate the impact on feasibility. These are two strategies nearly every affordable housing development utilizes in order to make the deal financially feasible. This leaves a potential funding gap of \$2,516,657, which represents approximately 5.6% of the TDC, which we believe is reasonable to fill with a variety of discrete additional soft debt instruments, grants, or other sources of capital subsidy, coupled with value engineering to reduce overall costs, where possible.

This is consistent with typical affordable housing development practice. We have defined a general capital program for this analysis. It is typical for affordable housing developments in Massachusetts to use at least 5-10 separate funding sources and programs for development, and the assumptions made in

this model are considered to be conservative to illustrate a likely typical scenario rather than a best-case scenario. Any improvements to interest rates for multifamily loans, reduction in capitalization rates in the market, reduction in permitting timing, materials cost, labor cost, or efficiencies in development, construction, or expedited entitlements will reduce overall cost, risk, and timing, and therefore increase the financial feasibility of development.



**STEP BY STEP STUDY:  
I. INFORMATION GATHERING**



**TOWN OF BRAINTREE**

**FEASIBILITY & INITIAL DESIGN STUDY FOR  
AFFORDABLE HOUSING STUDY AT 74 & 90 POND STREET**

**MEETING #1: KICK-OFF MEETING**

**FEBRUARY 02, 2024**



# INTRODUCTIONS

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## Agenda

### 1. PROJECT TEAM

### 2. PROJECT SCHEDULE

### 3. DISCUSSION OF 74 & 90 POND STREET

- » Site Context
- » Master Plan Documents
- » Existing Buildings

### 4. NEXT STEPS

- » Review Existing Documentation
- » Building & Site Assessments
- » Measured Drawings

## Goals

- » Understand the Town's goals for 74 & 90 Pond Street and how these sites fit into the larger town context & other ongoing initiatives.
- » Identify any additional documents the team should review.

The Town seeks a **FEASIBILITY AND INITIAL DESIGN STUDY** to understand if a senior/veteran low-income rental housing development is feasible. The rental housing would be restricted to occupancy by households earning less than 80% to as low as 30% of the Boston/Cambridge/Quincy MSA Median Income (AMI) with occupancy intended for Seniors and Veterans. With ten percent (10%) of the housing units containing three bedrooms if required and for all of the housing units to be eligible to be included in the Town's Subsidized Housing Inventory (SHI). The Town will consider market rate and proportions of affordable restricted housing if 100% affordable units are not feasible. The Town will also consider additional building(s) construction on the parcel. The locus of the **FEASIBILITY AND INITIAL DESIGN STUDY** is for one (1) location containing two (2) buildings as described and restricted further below.

The Town believes that re-development of this Town owned property presents an opportunity to build much needed affordable housing for the Senior and Veteran populations. The Town is looking for creative ideas and solutions that will enhance the community by providing an increase in senior and veteran housing; as these types of housing are not readily available in Braintree. The re-development would be respectful of the environment, the neighborhood and abutting land uses. Preservation of the existing buildings and architectural features shall be incorporated into the **FEASIBILITY AND INITIAL DESIGN STUDY**. The use of additions, dormers, connectors, and structured parking are all encouraged. Provisions for a community room and kitchen facilities shall be incorporated into the design at 74 and 90 Pond Street.

**Our jumping off point!**

# PROJECT TEAM

## BRAINTREE TEAM

### DEPARTMENT OF PLANNING & COMMUNITY DEVELOPMENT

Melissa M. SantucciRozzi  
*Director*

Connor Murphy  
*Assistant Director*

### MAYOR'S OFFICE

Erin V. Joyce  
*Mayor*

Kara Nyman  
*Chief of Staff &  
Director of Operations*

### VETERAN SERVICES

Vincent Fountaine  
*Veteran Service Officer*

### INSPECTIONAL SERVICES

Russell Forsberg  
*Inspector of Buildings / Code Compliance  
Officer*

### ELDER AFFAIRS

Sharmila Biswas  
*Director*

### OTHERS?

## DESIGN TEAM

### ARCHITECTURE & PLANNING

#### LDa Architecture & Interiors

Kimberly Barnett, AIA, LEED AP  
*Principal in Charge*

Gillian Baresich  
*Snr. Associate, Project Manager*

Sabrina Afrin  
*Architectural Designer*

### REAL ESTATE ANALYSIS, AFFORDABLE HOUSING DEVELOPMENT, & FINANCE

#### Kirk & Company

Brett N. Pelletier, CRE, MRA, FRICS  
*COO & Real Estate Analyst*

#### Esquire Advisors LLC

Milton D. Baxter, Esq.  
*Principal*

### MEP/FP ENGINEERING

#### Consulting Engineering

Scott Sullivan, PE, LEED AP  
*Principal in Charge*

### STRUCTURAL ENGINEERING

#### RSE Associates

Jennifer McClain, PE  
*Principal*

### CIVIL ENGINEERING & SURVEYOR

#### Nitsch Engineering

Deborah M. Danik, PE, LEED AP BD+C  
*Director of Civil Engineering*

### LANDSCAPE ARCHITECTURE

#### Crowley Cottrell

Naomi, RLA, ASLS  
*Principal & Owner*

### COST CONSULTING

#### Ellana, Inc.

Clive Tysoe, MRICS  
*Sr. Cost Manager*

### CODE CONSULTING

#### Code Red Consultants

Jeff Perras, PE  
*Snr. Project Manager*

### 3D BUILDING SCAN

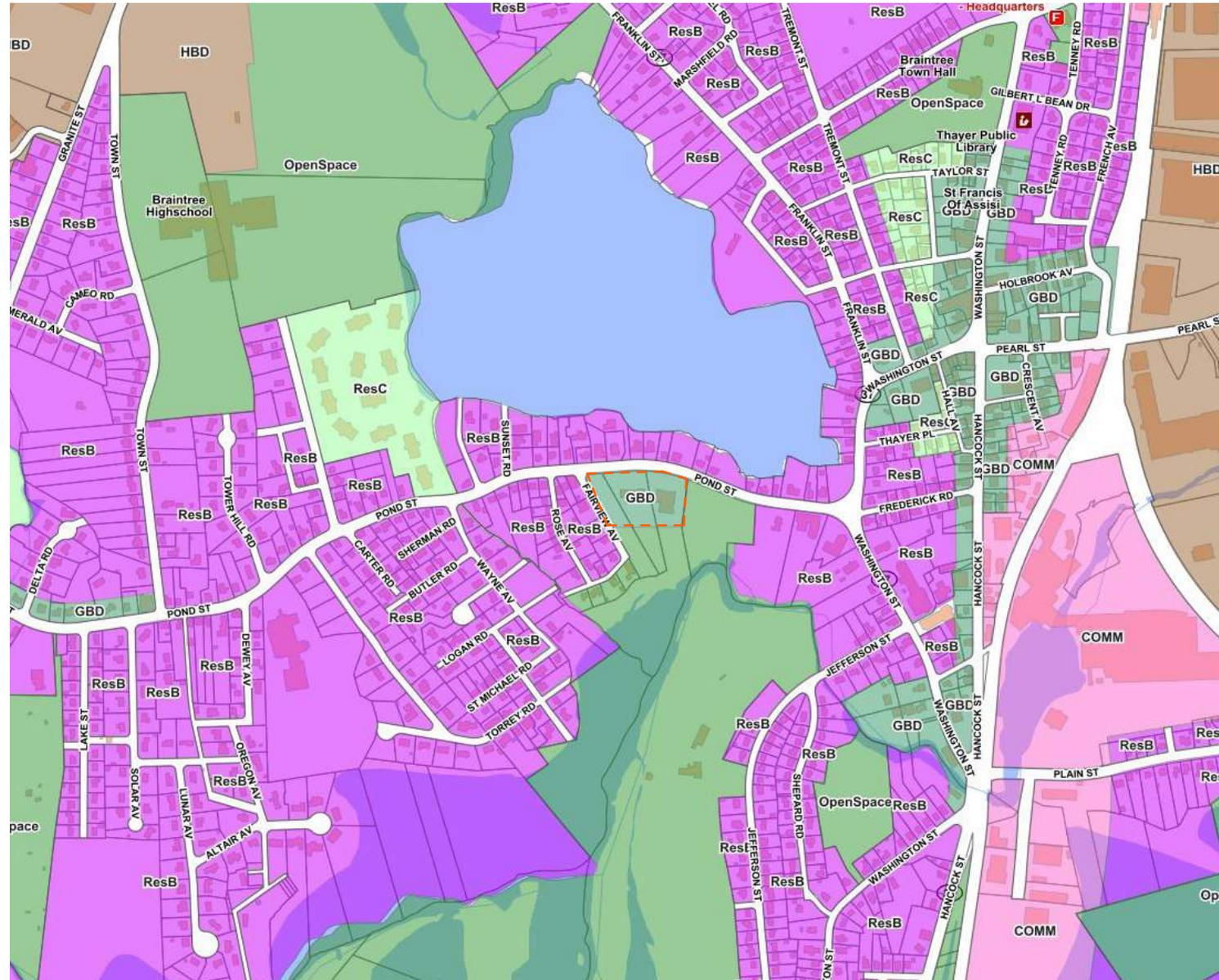
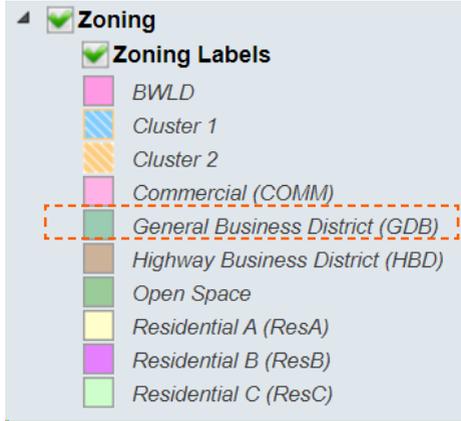
#### Pointknown

Jim Foster  
*Owner*

# SCHEDULE

| TOWN OF BRAINTREE AFFORDABLE HOUSING STUDY  |               |                          | JAN  |     | FEB  |      |      |     |      | MAR  |      |     |     | APR  |      |      |     | MAY  |      |      |     | JUN  |      |      |  |
|---|---------------|--------------------------|------|-----|------|------|------|-----|------|------|------|-----|-----|------|------|------|-----|------|------|------|-----|------|------|------|--|
| PROPOSED SCHEDULE   | DURATION      | DATE RANGE               | 1/29 | 2/5 | 2/12 | 2/19 | 2/26 | 3/4 | 3/11 | 3/18 | 3/25 | 4/1 | 4/8 | 4/15 | 4/22 | 4/29 | 5/6 | 5/13 | 5/20 | 5/27 | 6/3 | 6/10 | 6/17 | 6/24 |  |
| <b>PHASE 1: Information Gathering</b>   | 10 wks        | 1/29/24 - 4/8/24         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| <b>1 Project Kick-off: Understand Project Goals &amp; Collect Relevant Documents</b>  |               |                          |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| Meet with Mayor & Town Staff to understand study goals. (virtual meeting)   |               |                          |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| Identify key stakeholders and relevant ongoing Town initiatives. Confirm project schedule and deliverables.                                   |               |                          |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| Collect & review existing building, site & regulatory documents   |               |                          |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| <b>2 Assessment: Visit Site &amp; Summarize Conditions</b>  |               |                          |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| Meet on site to perform visual exploration of the existing buildings & site. (in-person meeting)  |               |                          |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| Assess the findings to identify existing conditions which may impact housing feasibility and construction costs.                              |               |                          |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| <b>2A Assessment: Create Measured Drawings</b>  |               |                          |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| Create measured base drawings for buildings and site.   |               |                          |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| <b>3 Feasibility Analysis: Housing Opportunities &amp; Market Conditions</b>  |               |                          |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| Meet with the Town's affordable housing organizations/advocates to collect info on community's housing needs and resources. (virtual meeting) |               |                          |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| Analyze Housing Opportunities for the building & site   |               |                          |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| Analyze market conditions & funding opportunities   |               |                          |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| <b>4 Summary of Opportunities: Share Findings &amp; Engage Public</b>   |               |                          |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| Meet with Town project team (virtual meeting)   |               |                          |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| Public meeting to share initial findings & elicit feedback. (virtual meeting)   |               |                          |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| Online polls and options for additional public feedback.  |               |                          |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| <b>PHASE 2: Conceptual Design &amp;</b>   | 11 wks        | 4/8/24 - 6/24/24         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| <b>1 Initial Conceptual Design</b>  |               |                          |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| Identify what housing options w/in existing buildings and/or new construction. Present initial funding options.                               |               |                          |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| Meet with Town project team to review conceptual design report.(virtual meeting)  |               |                          |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| <b>2 Final Conceptual Design</b>  |               |                          |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| Identify what housing options w/in existing buildings and/or new construction. Present initial funding options.                               |               |                          |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| Meet with Town project team to review conceptual design report.(virtual meeting)  |               |                          |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| <b>3 Financial Feasibility of Design</b>  |               |                          |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| Construction cost estimate for buildings & site   |               |                          |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| Proforma  |               |                          |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| <b>4 Final Report</b>   |               |                          |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| Meet with Town project team to review conceptual design report.(virtual meeting)  |               |                          |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| Compiled Study report with deliverables from each task above + executive summary  |               |                          |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| <b>OVERALL PROPOSED SCHEDULE</b>  | <b>21 wks</b> | <b>1/29/24 - 6/24/24</b> |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |

# SITE CONTEXT - ZONING



## Notes:

1. Are there any overlay districts we should be aware of?
2. Are there any restrictions to building in Open Space zone? (beyond wetlands & floodplain restrictions).
3. Combined site:  
368,953 SF;  
5,000 sf per one bedroom unit = 73 units (zoning sec 705)





# MASTERPLAN DOCUMENTS

## HOUSING AND DEMOGRAPHICS

Braintree's population is projected to reach between 42,000 and 50,000 residents by 2040. Population growth from 2010 to 2020 outpaced housing unit growth, with a 9.51 percent increase in population compared to a 5.42 percent increase in housing units, according to the Census 2020.

The percentage of Black, Indigenous and People of Color (BIPOC) populations has doubled from 15 percent in 2010 to nearly 30 percent in 2020, driven mainly by an increase in the Asian population. Around 23 percent of Braintree residents speak a language other than English at home, with Chinese and Vietnamese being the most common.

Most of Braintree's housing (64 percent) is single-family detached units, and about 74 percent of housing units are owner-occupied. However, there's a mismatch between household size and the number of bedrooms available. While 56 percent of households have one or two members, only 12 percent of housing units are studios or one-bedroom, and 25 percent are studio, one-, or two-bedroom units.

Median household income in Braintree has risen by 7.41 percent since 2000. Average residents could afford to purchase a \$405,300 home, but the median home sales price in 2020 was \$615,250. Seventy-three percent of low- and moderate-income households are considered cost-burdened, paying more than 30 percent of their income on housing, which is not unique to Braintree and is common throughout the Boston area.

BRAINTREE IN CONTEXT -

## ECONOMIC DEVELOPMENT

Despite the fastest-growing population group is the 65-74 age group, there are young people coming to Braintree which is making the population wealthier and more educated. In addition, an influx of workers increases the town's daytime population by over 7,000.

Braintree is strategically positioned to benefit from regional economic trends and transit-accessible development due to its proximity to the Red Line and commuter rail. The Town's relatively low property tax rates make it appealing for residents and businesses. Braintree has opportunities for redevelopment, adaptive reuse, and infill development. Industrial lands, office parks, and locally-oriented developments hold the potential to accommodate growth and enhance amenities and services for residents.

BRAINTREE IN CONTEXT -

## FACILITIES AND SERVICES

Braintree's town-owned buildings are aging, requiring future upgrades or replacements, and several departments have expressed this need. The Town needs more comprehensive facility assessments for building maintenance planning aligned with a five-year capital plan.

In 2018, East Middle School underwent renovations to add a new wing and in 2023, the brand new state of the art South Middle School opened. However, most educational buildings are outdated and in need of modernization and newer technologies.

Despite the Department of Veterans Services provides assistance for senior veterans, the growing population of older adults poses space, staffing, and funding challenges for the Department of Elder Affairs. Housing costs and limited transportation options affect the quality of life for older adults and veterans. Also, the Police Department requires a new facility and the Department of Public Works needs a modernized facility.

Braintree Electric Light Department (BELD) provides an excellent service to the Town, particularly related to IT services.

## CHAPTER 9

# RESIDENTIAL NEIGHBORHOODS AND HOUSING OPTIONS



### Theme Vision

In 2033, Braintree will have a reasonable supply of diverse housing, including affordable housing options, that are compatibly scaled and well-designed to harmonize with the context of the surrounding neighborhood. The Town has carefully and strategically established growth policies that preserve, protect, and improve existing residential neighborhoods.

### Goal 1

Protecting Neighborhoods and Enhance Community Engagement

### Goal 2

Diverse Housing Options

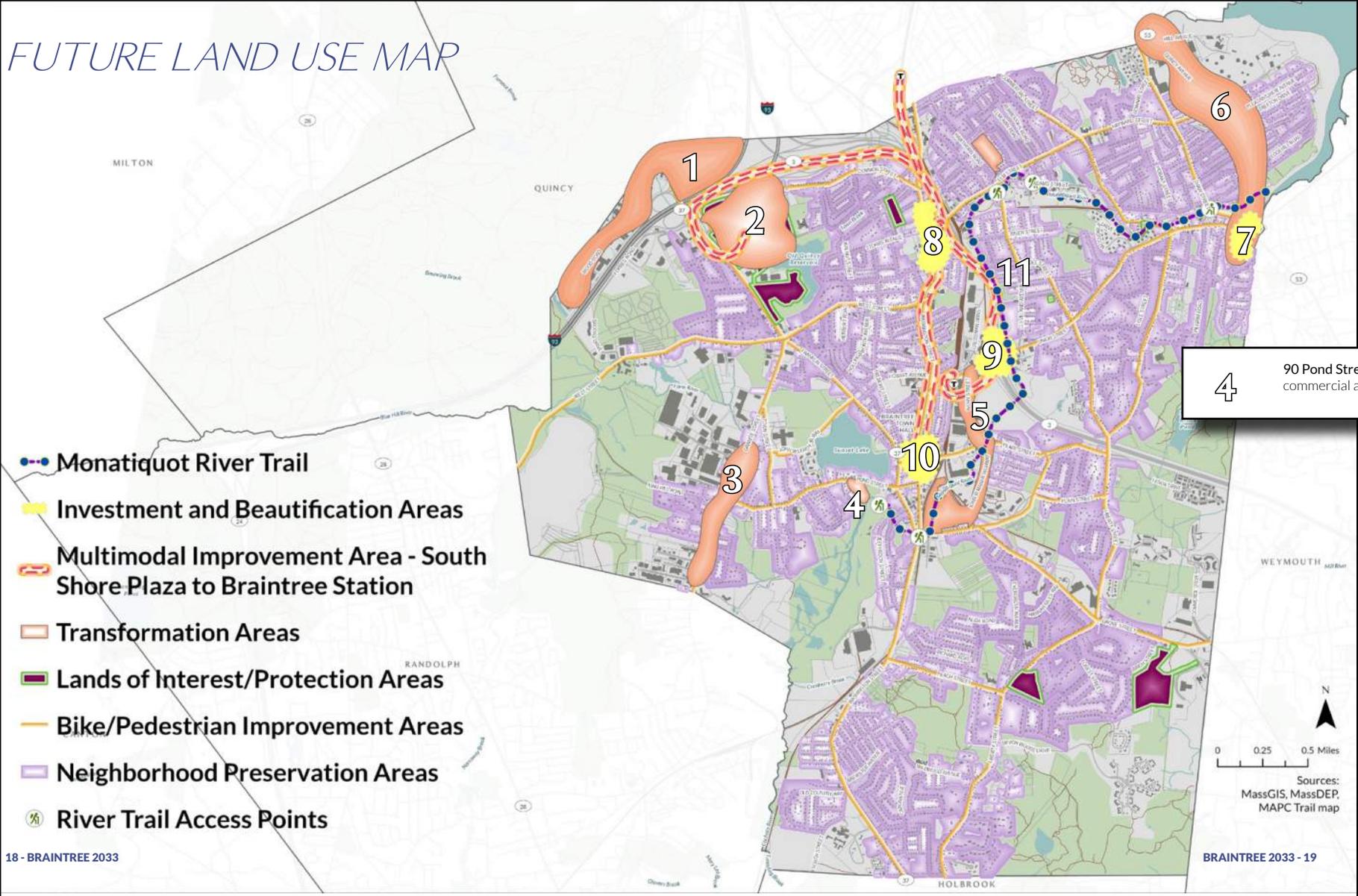
### Goal 3

Locations Accessible to Transit

### Goal 4

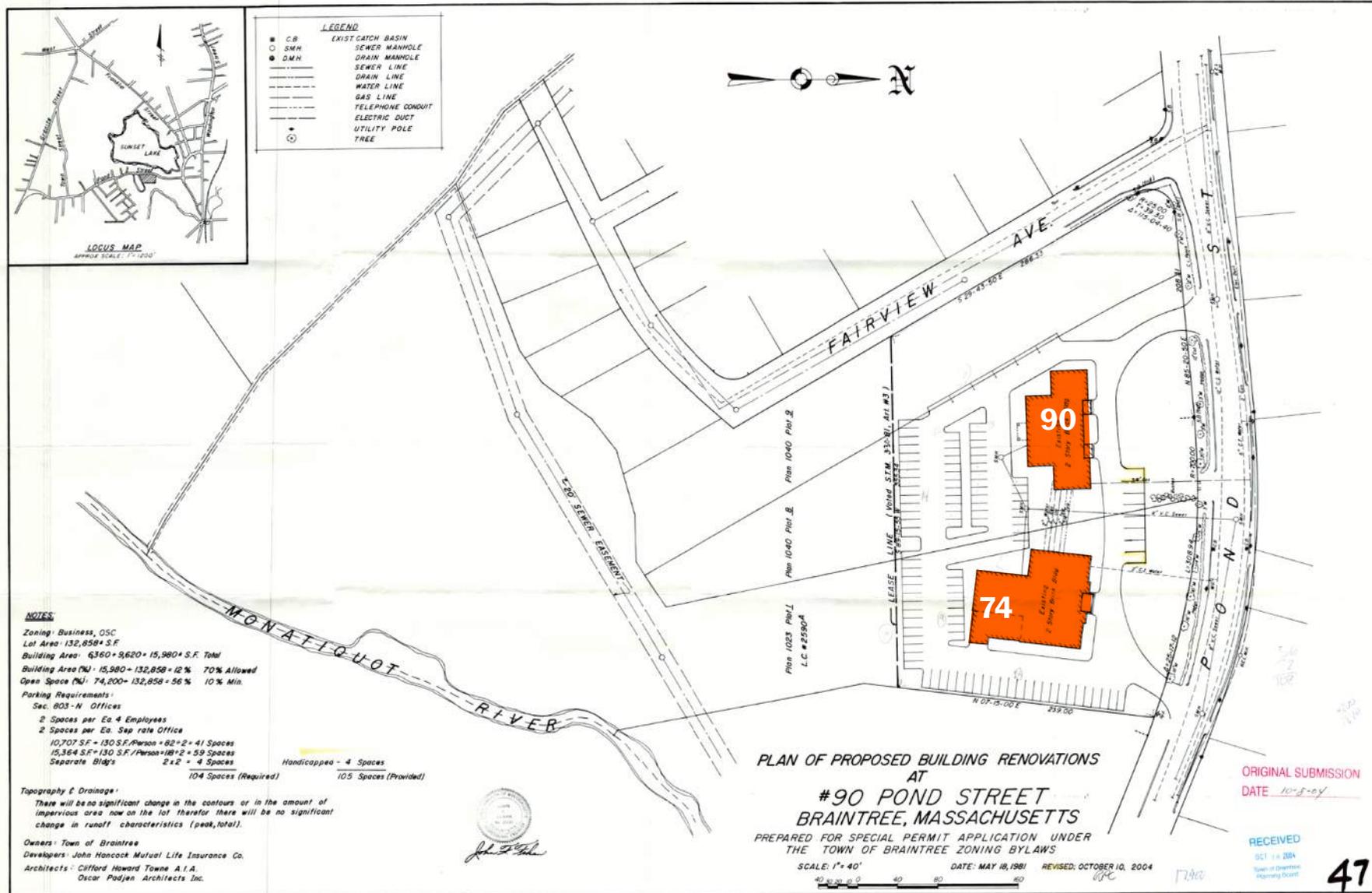
Maintain State's Current Housing Goals

# MASTERPLAN DOCUMENTS



4      90 Pond Street offers the opportunity for mixed-use development that incorporates commercial and residential uses.

# SITE PLAN & EXISTING BUILDINGS



## Notes:

1. Measured survey to be completed.
2. Any required setback from Sewer Easement?
3. Zoning (sec 806) requires 2 parking spaces/unit for multifamily. Possible adjustment for senior/veteran housing?

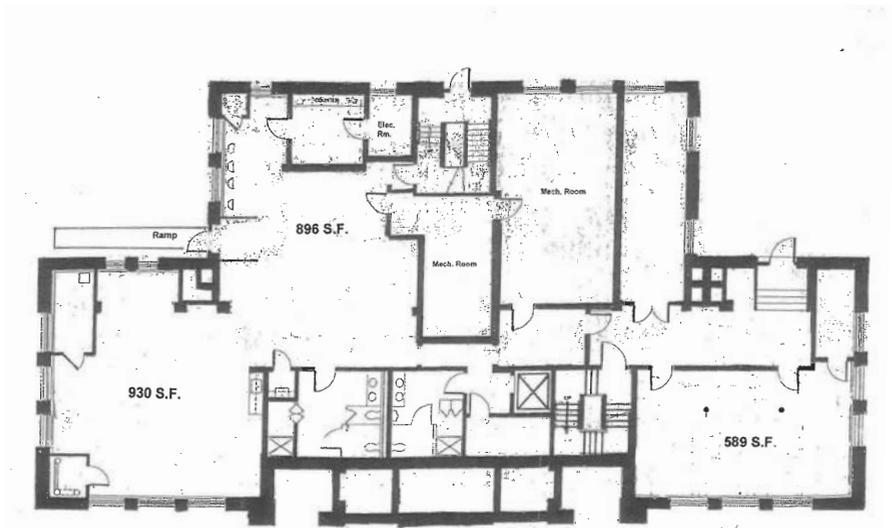
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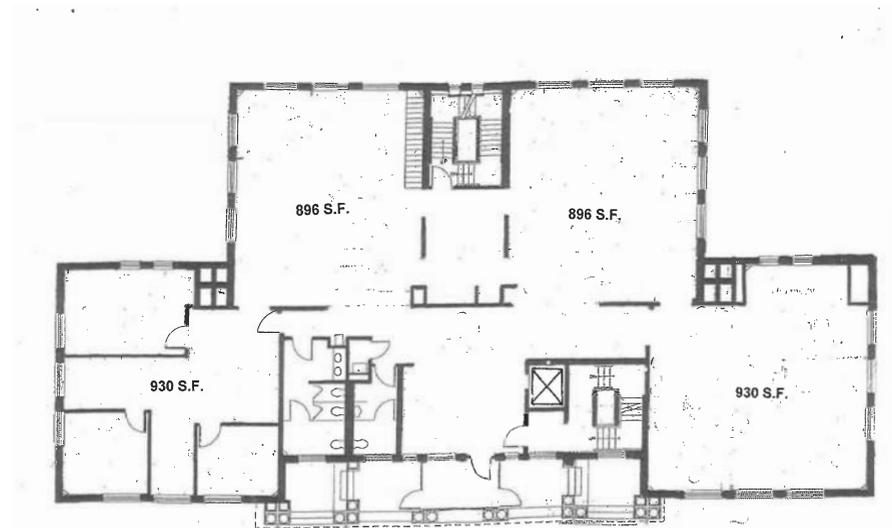
# 90 POND STREET



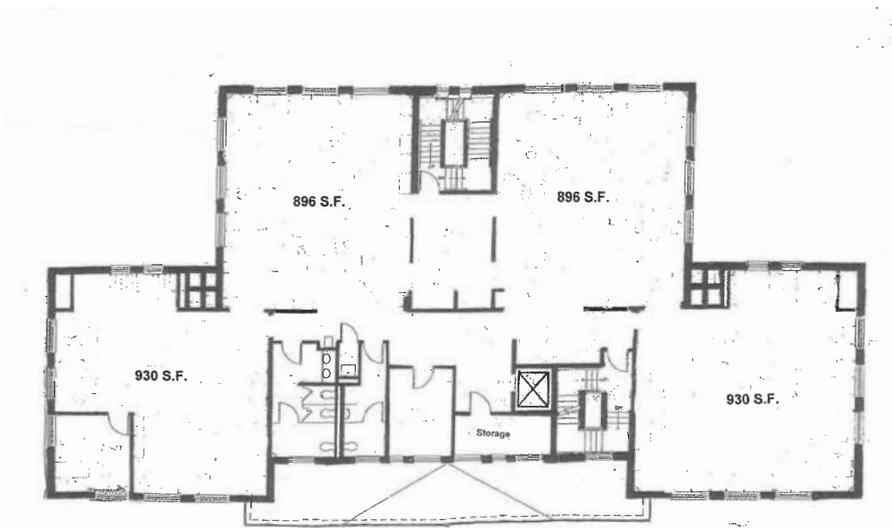
# 90 POND STREET



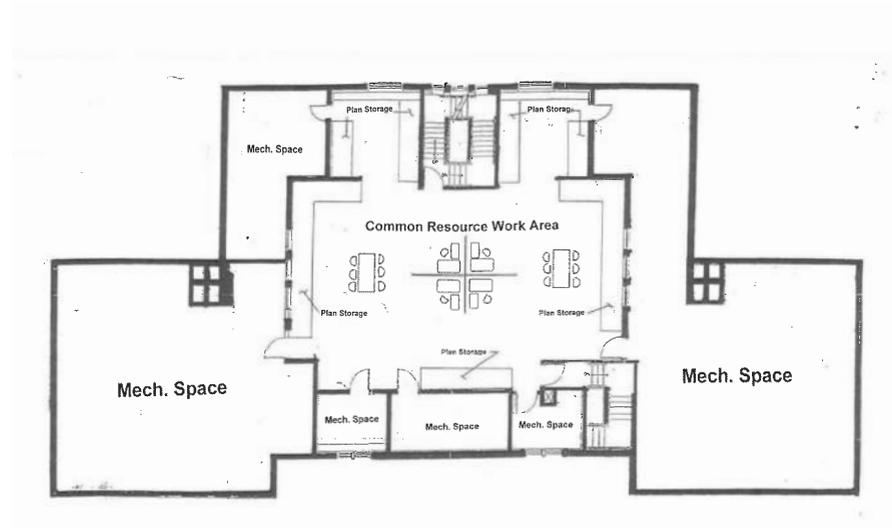
BASEMENT PLAN



FIRST FLOOR PLAN



SECOND FLOOR PLAN



THIRD FLOOR PLAN

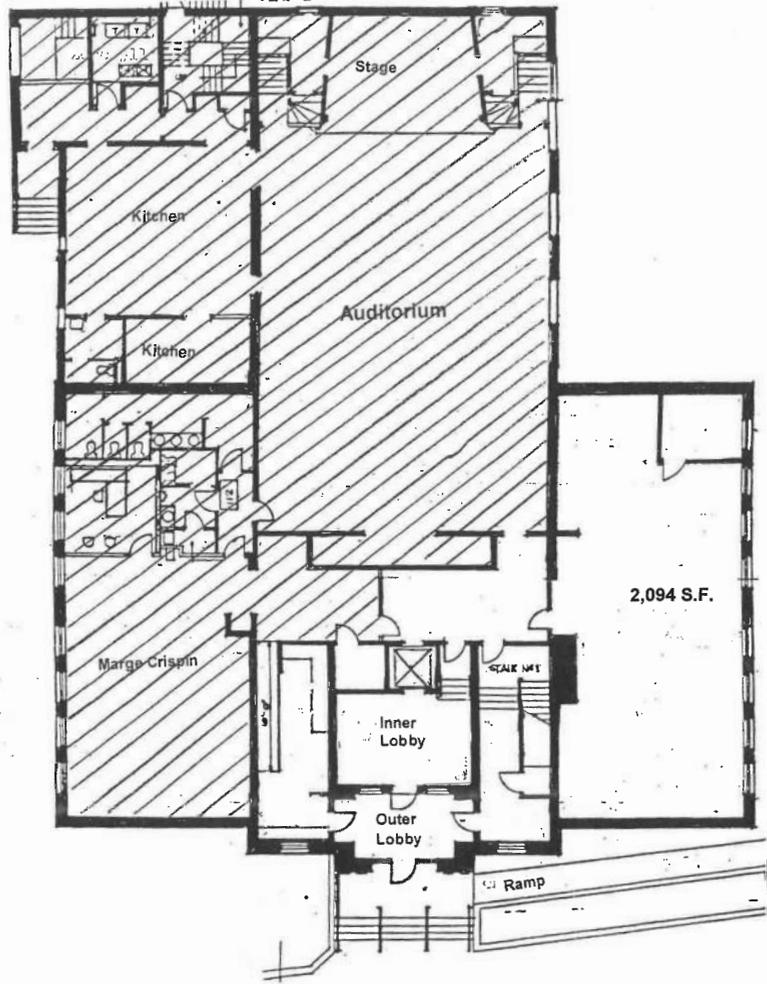
## Notes:

1. Lower Level has ramp (to be reviewed for compliance). Had previously flooded (may not have been stormwater).
2. Existing elevator to be reviewed for vertical circulation.
3. Existing windows are not operable.

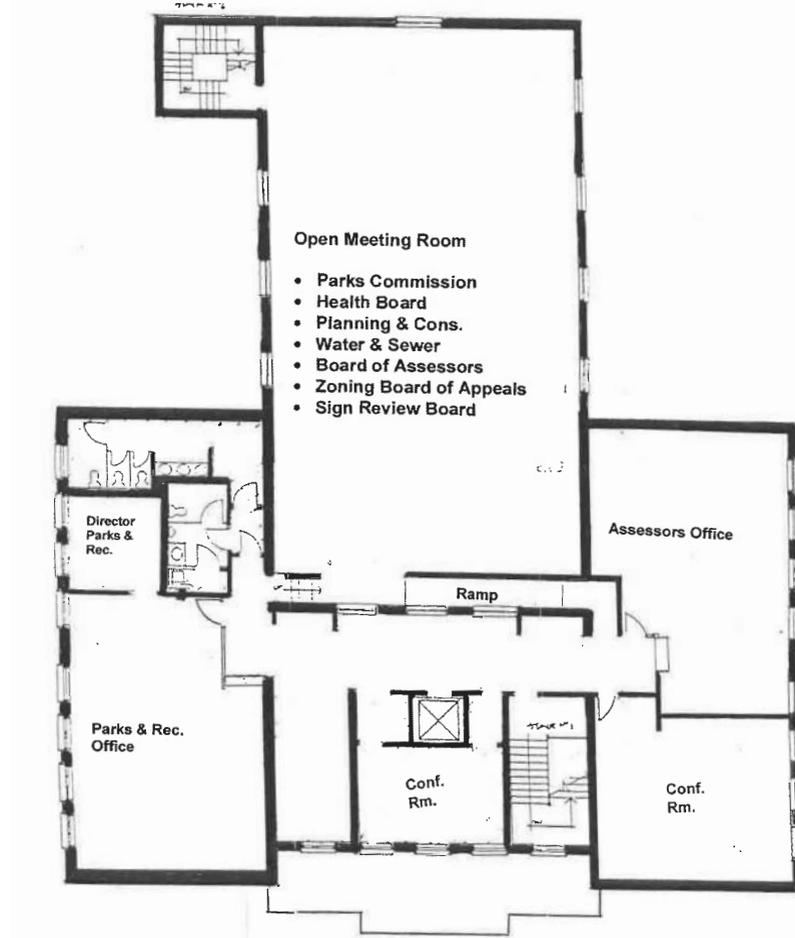
# 74 POND STREET



# 74 POND STREET



FIRST FLOOR PLAN



SECOND FLOOR PLAN

## Notes:

1. First Floor has ramp (to be reviewed for compliance).
2. Existing elevator to be reviewed for vertical circulation.
3. Currently occupied.

# NEXT STEPS

| TOWN OF BRAINTREE AFFORDABLE HOUSING STUDY  |               |                          | JAN  |     | FEB  |      |      | MAR |      |      |      | APR |     |      |      | MAY  |     |      |      | JUN  |     |      |      |      |
|---|---------------|--------------------------|------|-----|------|------|------|-----|------|------|------|-----|-----|------|------|------|-----|------|------|------|-----|------|------|------|
| PROPOSED SCHEDULE   | DURATION      | DATE RANGE               | 1/29 | 2/5 | 2/12 | 2/19 | 2/26 | 3/4 | 3/11 | 3/18 | 3/25 | 4/1 | 4/8 | 4/15 | 4/22 | 4/29 | 5/6 | 5/13 | 5/20 | 5/27 | 6/3 | 6/10 | 6/17 | 6/24 |
| <b>PHASE 1: Information Gathering</b>   | 10 wks        | 1/29/24 - 4/8/24         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| <b>1 Project Kick-off: Understand Project Goals &amp; Collect Relevant Documents</b>  |               |                          |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Meet with Mayor & Town Staff to understand study goals. (virtual meeting)   |               |                          |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Identify key stakeholders and relevant ongoing Town initiatives. Confirm project schedule and deliverables.                                   |               |                          |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Collect & review existing building, site & regulatory documents   |               |                          |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| <b>2 Assessment: Visit Site &amp; Summarize Conditions</b>  |               |                          |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Meet on site to perform visual exploration of the existing buildings & site. (in-person meeting)  |               |                          |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Assess the findings to identify existing conditions which may impact housing feasibility and construction costs.                              |               |                          |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| <b>2A Assessment: Create Measured Drawings</b>  |               |                          |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Create measured base drawings for buildings and site.   |               |                          |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| <b>3 Feasibility Analysis: Housing Opportunities &amp; Market Conditions</b>  |               |                          |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Meet with the Town's affordable housing organizations/advocates to collect info on community's housing needs and resources. (virtual meeting) |               |                          |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Analyze Housing Opportunities for the building & site   |               |                          |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Analyze market conditions & funding opportunities   |               |                          |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| <b>4 Summary of Opportunities: Share Findings &amp; Engage Public</b>   |               |                          |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
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| Online polls and options for additional public feedback.  |               |                          |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| <b>PHASE 2: Conceptual Design &amp;</b>   | 11 wks        | 4/8/24 - 6/24/24         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| <b>1 Initial Conceptual Design</b>  |               |                          |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Identify what housing options w/in existing buildings and/or new construction. Present initial funding options.                               |               |                          |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
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| <b>2 Final Conceptual Design</b>  |               |                          |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
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| <b>3 Financial Feasibility of Design</b>  |               |                          |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Construction cost estimate for buildings & site   |               |                          |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Proforma  |               |                          |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| <b>4 Final Report</b>   |               |                          |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Meet with Town project team to review conceptual design report.(virtual meeting)  |               |                          |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Compiled Study report with deliverables from each task above + executive summary  |               |                          |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| <b>OVERALL PROPOSED SCHEDULE</b>  | <b>21 wks</b> | <b>1/29/24 - 6/24/24</b> |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |



**TOWN OF BRAINTREE**

**FEASIBILITY & INITIAL DESIGN STUDY FOR  
AFFORDABLE HOUSING STUDY AT 74 & 90 POND STREET**

**MEETING #2: HOUSING NEEDS DISCUSSION**

**MARCH 15, 2024**



# INTRODUCTIONS

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## Agenda

### 1. PROJECT TEAM

### 2. PROJECT SCHEDULE

### 3. EXISTING CONDITIONS - 74 & 90 POND STREET

### 4. REVIEW OF AVAILABLE EXISTING DOCUMENTATION REGARDING BRAINTREE'S HOUSING NEEDS

- » What we've found
- » Where else we should look

### 5. STAKEHOLDER'S PERSPECTIVE ON LOCAL HOUSING INITIATIVES THAT ARE WORKING WELL & WHERE GAPS EXIST

### 6. DISCUSSION OF HOW POND STREET HOUSING MAY BE ABLE TO FILL THOSE GAPS

- » Senior Housing
- » Senior Center Services
- » Veteran's Housing
- » Veteran's Services

### 7. NEXT STEPS

- » Analyze Housing Opportunities
- » Share Findings & Engage Public
- » Initial Conceptual Design

## Goals

- » Collect info on community's housing needs & resources.
- » Identify any additional documents the team should review.

# PROJECT TEAM

## BRAINTREE TEAM

**DEPARTMENT OF PLANNING & COMMUNITY DEVELOPMENT**

|   |  |
|---|--|
| Melissa M. SantucciRozzi<br><i>Director</i> | Connor Murphy<br><i>Assistant Director</i> |
|---|--|

**MAYOR'S OFFICE**

|                               |  |
|-------------------------------|--|
| Erin V. Joyce<br><i>Mayor</i> | Kara Nyman<br><i>Chief of Staff &amp; Director of Operations</i> |
|-------------------------------|--|

**VETERAN SERVICES**

Vincent Fountaine  
*Veteran Service Officer*

**INSPECTIONAL SERVICES**

Russell Forsberg  
*Inspector of Buildings / Code Compliance Officer*

**ELDER AFFAIRS**

Sharmila Biswas  
*Director*

**FACILITIES**

Michael McGourty  
*Public Works Director*

## DESIGN TEAM

**ARCHITECTURE & PLANNING**

**LDa Architecture & Interiors**

|  |  |  |
|--|--|--|
| Kimberly Barnett, AIA, LEED AP<br><i>Principal in Charge</i> | Gillian Baresich<br><i>Snr. Associate, Project Manager</i> | Sabrina Afrin<br><i>Architectural Designer</i> |
|--|--|--|

**REAL ESTATE ANALYSIS, AFFORDABLE HOUSING DEVELOPMENT, & FINANCE**

|  |   |
|--|---|
| <b>Kirk &amp; Company</b><br>Brett N. Pelletier, CRE, MRA, FRICS<br><i>COO &amp; Real Estate Analyst</i> | <b>Esquire Advisors LLC</b><br>Milton D. Baxter, Esq.<br><i>Principal</i> |
|--|---|

**MEP/FP ENGINEERING**

**Consulting Engineering**

Scott Sullivan, PE, LEED AP  
*Principal in Charge*

**STRUCTURAL ENGINEERING**

**RSE Associates**

Jennifer McClain, PE  
*Principal*

**CIVIL ENGINEERING & SURVEYOR**

**Nitsch Engineering**

Deborah M. Danik, PE, LEED AP BD+C  
*Director of Civil Engineering*

**LANDSCAPE ARCHITECTURE**

**Crowley Cottrell**

Naomi, RLA, ASLS  
*Principal & Owner*

**COST CONSULTING**

**Ellana, Inc.**

Clive Tysoe, MRICS  
*Sr. Cost Manager*

**CODE CONSULTING**

**Code Red Consultants**

Jeff Perras, PE  
*Snr. Project Manager*

**3D BUILDING SCAN**

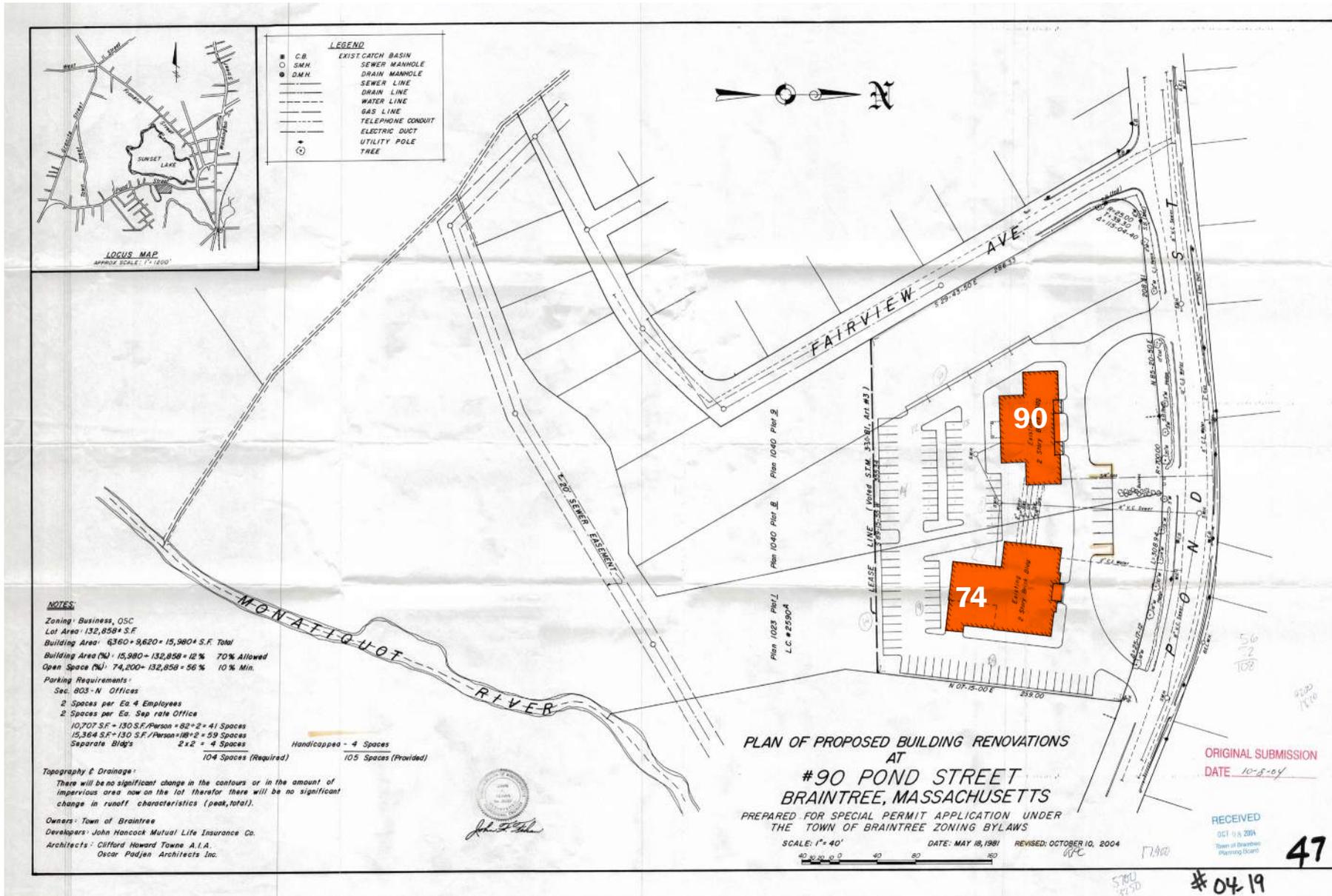
**Pointknown**

Jim Foster  
*Owner*

# SCHEDULE

| TOWN OF BRAINTREE AFFORDABLE HOUSING STUDY  |               |                         | JAN  | FEB |      |      |      |     | MAR  |      |      |     | APR |      |      |      | MAY |      |      |      | JUN |      |      |      |
|---|---------------|-------------------------|------|-----|------|------|------|-----|------|------|------|-----|-----|------|------|------|-----|------|------|------|-----|------|------|------|
| PROPOSED SCHEDULE   | DURATION      | DATE RANGE              | 1/29 | 2/5 | 2/12 | 2/19 | 2/26 | 3/4 | 3/11 | 3/18 | 3/25 | 4/1 | 4/8 | 4/15 | 4/22 | 4/29 | 5/6 | 5/13 | 5/20 | 5/27 | 6/3 | 6/10 | 6/17 | 6/24 |
| <b>PHASE 1: Information Gathering</b>   | 11 wks        | 1/29/24 - 4/15/24       |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| <b>1 Project Kick-off: Understand Project Goals &amp; Collect Relevant Documents</b>  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Meet with Mayor & Town Staff to understand study goals. (virtual meeting)   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Identify key stakeholders and relevant ongoing Town initiatives. Confirm project schedule and deliverables.                                   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Collect & review existing building, site & regulatory documents   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| <b>2 Assessment: Visit Site &amp; Summarize Conditions</b>  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Meet on site to perform visual exploration of the existing buildings & site. (in-person meeting)  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Assess the findings to identify existing conditions which may impact housing feasibility and construction costs.                              |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| <b>2A Assessment: Create Measured Drawings</b>  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Create measured base drawings for buildings and site.   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| <b>3 Feasibility Analysis: Housing Opportunities &amp; Market Conditions</b>  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Meet with the Town's affordable housing organizations/advocates to collect info on community's housing needs and resources. (virtual meeting) |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Analyze Housing Opportunities for the building & site   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Analyze market conditions & funding opportunities   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| <b>4 Summary of Opportunities: Share Findings &amp; Engage Public</b>   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Meet with Town project team (virtual meeting)   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Public meeting to share initial findings & elicit feedback. (virtual meeting)   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Online polls and options for additional public feedback.  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| <b>PHASE 2: Conceptual Design &amp;</b>   | 11 wks        | 4/15/24 - 7/1/24        |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| <b>1 Initial Conceptual Design</b>  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Identify what housing options w/in existing buildings and/or new construction. Present initial funding options.                               |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
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| <b>2 Final Conceptual Design</b>  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Identify what housing options w/in existing buildings and/or new construction. Present initial funding options.                               |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Meet with Town project team to review conceptual design report.(virtual meeting)  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| <b>3 Financial Feasibility of Design</b>  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Construction cost estimate for buildings & site   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Proforma  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| <b>4 Final Report</b>   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Meet with Town project team to review conceptual design report.(virtual meeting)  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Compiled Study report with deliverables from each task above + executive summary  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| <b>OVERALL PROPOSED SCHEDULE</b>  | <b>22 wks</b> | <b>1/29/24 - 7/1/24</b> |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |

# SITE PLAN & EXISTING BUILDINGS



# 90 POND STREET

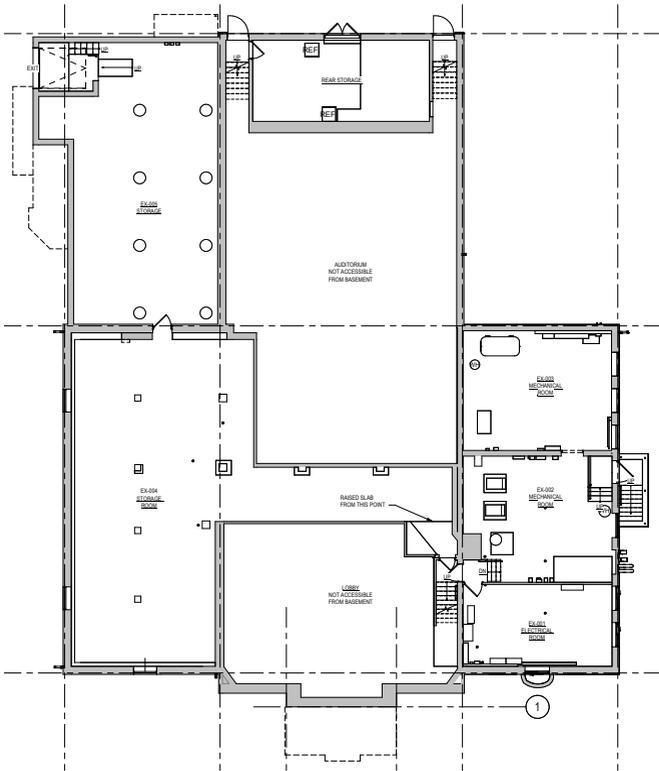




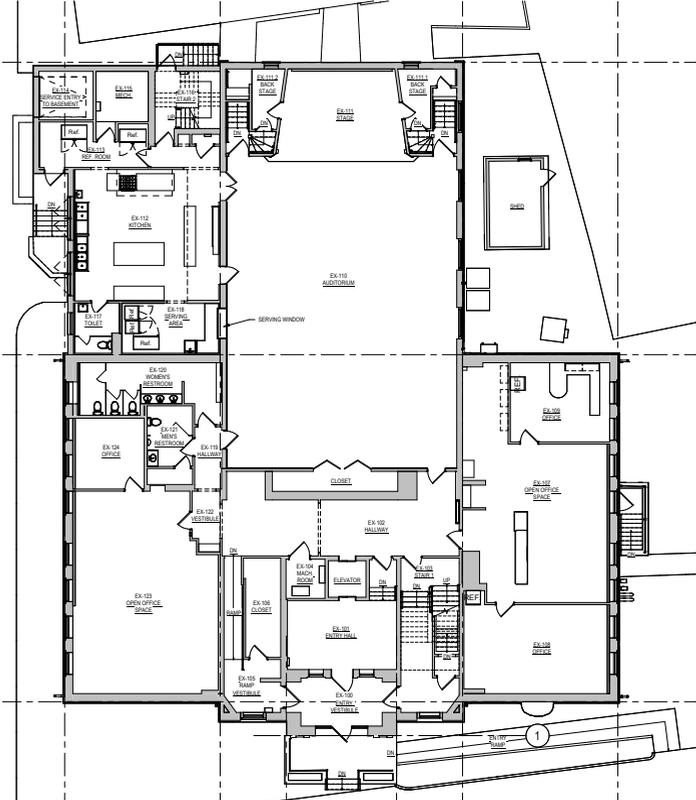
# 74 POND STREET



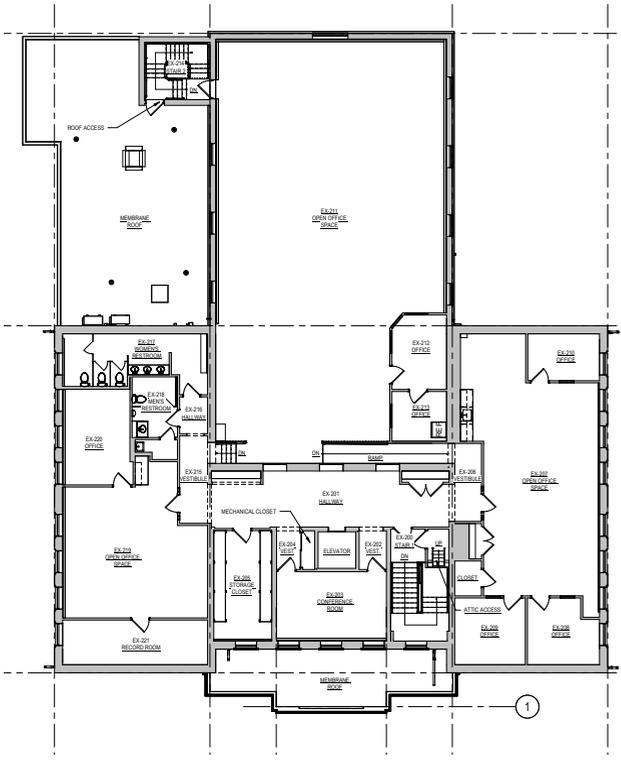
# 74 POND STREET



BASEMENT PLAN



FIRST FLOOR PLAN



SECOND FLOOR PLAN

# BRAINSTORMING EXISTING DOCUMENTATION

## HOUSING AND DEMOGRAPHICS

Braintree's population is projected to reach between 42,000 and 50,000 residents by 2040. Population growth from 2010 to 2020 outpaced housing unit growth, with a 9.51 percent increase in population compared to a 5.42 percent increase in housing units, according to the Census 2020.

The percentage of Black, Indigenous and People of Color (BIPOC) populations has doubled from 15 percent in 2010 to nearly 30 percent in 2020, driven mainly by an increase in the Asian population. Around 23 percent of Braintree residents speak a language other than English at home, with Chinese and Vietnamese being the most common.

Most of Braintree's housing (64 percent) is single-family detached units, and about 74 percent of housing units are owner-occupied. However, there's a mismatch between household size and the number of bedrooms available. While 56 percent of households have one or two members, only 12 percent of housing units are studios or one-bedroom, and 25 percent are studio, one-, or two-bedroom units.

Median household income in Braintree has risen by 7.41 percent since 2000. Average residents could afford to purchase a \$405,300 home, but the median home sales price in 2020 was \$615,250. Seventy-three percent of low- and moderate-income households are considered cost-burdened, paying more than 30 percent of their income on housing, which is not unique to Braintree and is common throughout the Boston area.

## ECONOMIC DEVELOPMENT

Despite the fastest-growing population group is the 65-74 age group, there are young people coming to Braintree which is making the population wealthier and more educated. In addition, an influx of workers increases the town's daytime population by over 7,000.

Braintree is strategically positioned to benefit from regional economic trends and transit-accessible development due to its proximity to the Red Line and commuter rail. The Town's relatively low property tax rates make it appealing for residents and businesses. Braintree has opportunities for redevelopment, adaptive reuse, and infill development. Industrial lands, office parks, and locally-oriented developments hold the potential to accommodate growth and enhance amenities and services for residents.

## FACILITIES AND SERVICES

Braintree's town-owned buildings are aging, requiring future upgrades or replacements, and several departments have expressed this need. The Town needs more comprehensive facility assessments for building maintenance planning aligned with a five-year capital plan.

In 2018, East Middle School underwent renovations to add a new wing and in 2023, the brand new state of the art South Middle School opened. However, most educational buildings are outdated and in need of modernization and newer technologies.

Despite the Department of Veterans Services provides assistance for senior veterans, the growing population of older adults poses space, staffing, and funding challenges for the Department of Elder Affairs. Housing costs and limited transportation options affect the quality of life for older adults and veterans. Also, the Police Department requires a new facility and the Department of Public Works needs a modernized facility.

Braintree Electric Light Department (BELD) provides an excellent service to the Town, particularly related to IT services.

## CHAPTER 9

# RESIDENTIAL NEIGHBORHOODS AND HOUSING OPTIONS



### Theme Vision

In 2033, Braintree will have a reasonable supply of diverse housing, including affordable housing options, that are compatibly scaled and well-designed to harmonize with the context of the surrounding neighborhood. The Town has carefully and strategically established growth policies that preserve, protect, and improve existing residential neighborhoods.

### Goal 1

Protecting Neighborhoods and Enhance Community Engagement

### Goal 2

Diverse Housing Options

### Goal 3

Locations Accessible to Transit

### Goal 4

Maintain State's Current Housing Goals

# DISCUSSION

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## **1. REVIEW OF AVAILABLE EXISTING DOCUMENTATION REGARDING BRAINTREE'S HOUSING NEEDS**

- » **What we've found**
- » **Where else we should look**

## **2. STAKEHOLDER'S PERSPECTIVE ON LOCAL HOUSING INITIATIVES THAT ARE WORKING WELL & WHERE GAPS EXIST**

## **3. DISCUSSION OF HOW POND STREET HOUSING MAY BE ABLE TO FILL THOSE GAPS**

- » **Senior Housing**
- » **Senior Center Services**
- » **Veteran's Housing**
- » **Veteran's Services**

# NEXT STEPS

| TOWN OF BRAINTREE AFFORDABLE HOUSING STUDY  |               |                         | JAN  | FEB |      |      |      |     | MAR  |      |      |     | APR |      |      |      |     | MAY  |      |      |     | JUN  |      |      |  |
|---|---------------|-------------------------|------|-----|------|------|------|-----|------|------|------|-----|-----|------|------|------|-----|------|------|------|-----|------|------|------|--|
| PROPOSED SCHEDULE   | DURATION      | DATE RANGE              | 1/29 | 2/5 | 2/12 | 2/19 | 2/26 | 3/4 | 3/11 | 3/18 | 3/25 | 4/1 | 4/8 | 4/15 | 4/22 | 4/29 | 5/6 | 5/13 | 5/20 | 5/27 | 6/3 | 6/10 | 6/17 | 6/24 |  |
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| Meet with Mayor & Town Staff to understand study goals. (virtual meeting)   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| Identify key stakeholders and relevant ongoing Town initiatives. Confirm project schedule and deliverables.                                   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| Collect & review existing building, site & regulatory documents   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| <b>2 Assessment: Visit Site &amp; Summarize Conditions</b>  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| Meet on site to perform visual exploration of the existing buildings & site. (in-person meeting)  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| Assess the findings to identify existing conditions which may impact housing feasibility and construction costs.                              |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| <b>2A Assessment: Create Measured Drawings</b>  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| Create measured base drawings for buildings and site.   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| <b>3 Feasibility Analysis: Housing Opportunities &amp; Market Conditions</b>  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| Meet with the Town's affordable housing organizations/advocates to collect info on community's housing needs and resources. (virtual meeting) |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| Analyze Housing Opportunities for the building & site   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| Analyze market conditions & funding opportunities   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| <b>4 Summary of Opportunities: Share Findings &amp; Engage Public</b>   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| Meet with Town project team (virtual meeting)   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
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| Identify what housing options w/in existing buildings and/or new construction. Present initial funding options.                               |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
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| <b>3 Financial Feasibility of Design</b>  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| Construction cost estimate for buildings & site   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| Proforma  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| <b>4 Final Report</b>   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
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| <b>OVERALL PROPOSED SCHEDULE</b>  | <b>22 wks</b> | <b>1/29/24 - 7/1/24</b> |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |



74 Pond



90 Pond

## TOWN OF BRAINTREE - AFFORDABLE HOUSING STUDY 74/90 POND STREET

### EXISTING CONDITIONS FINDINGS

APRIL 11, 2024



# INTRODUCTION

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## Meeting Agenda

1. **PROJECT SCHEDULE**
2. **HOUSING NEEDS**
3. **EXISTING CONDITIONS DRAWINGS**
4. **SITE - CIVIL & LANDSCAPE**
5. **EXISTING CONDITIONS OBSERVATIONS REVIEW**
  - » **ARCHITECTURAL - EXTERIOR**
  - » **ARCHITECTURAL - INTERIOR**
  - » **MEPFP**
  - » **STRUCTURAL**
6. **CODE RESEARCH**
  - » **ACCESSIBILITY**
  - » **WORK AREA COMPLIANCE**
  - » **EGRESS**
  - » **VERTICAL OPENINGS**
  - » **STAIRS**
7. **NEXT STEPS**
  - » **DESIGN LAYOUTS**
  - » **PUBLIC MEETING**

## Meeting Goals

- » **Determine what existing conditions repair/ replacements and code compliance scope should be included in the project's renovation.**

# SCHEDULE

| TOWN OF BRAINTREE AFFORDABLE HOUSING STUDY  |               |                         | JAN  | FEB |      |      |      |     | MAR  |      |      |     | APR |      |      |      |     | MAY  |      |      |     | JUN  |      |      |  |
|---|---------------|-------------------------|------|-----|------|------|------|-----|------|------|------|-----|-----|------|------|------|-----|------|------|------|-----|------|------|------|--|
| PROPOSED SCHEDULE   | DURATION      | DATE RANGE              | 1/29 | 2/5 | 2/12 | 2/19 | 2/26 | 3/4 | 3/11 | 3/18 | 3/25 | 4/1 | 4/8 | 4/15 | 4/22 | 4/29 | 5/6 | 5/13 | 5/20 | 5/27 | 6/3 | 6/10 | 6/17 | 6/24 |  |
| <b>PHASE 1: Information Gathering</b>   | 11 wks        | 1/29/24 - 4/15/24       |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| <b>1 Project Kick-off: Understand Project Goals &amp; Collect Relevant Documents</b>  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| Meet with Mayor & Town Staff to understand study goals. (virtual meeting)   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| Identify key stakeholders and relevant ongoing Town initiatives. Confirm project schedule and deliverables.                                   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| Collect & review existing building, site & regulatory documents   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| <b>2 Assessment: Visit Site &amp; Summarize Conditions</b>  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| Meet on site to perform visual exploration of the existing buildings & site. (in-person meeting)  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| Assess the findings to identify existing conditions which may impact housing feasibility and construction costs.                              |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| <b>2A Assessment: Create Measured Drawings</b>  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| Create measured base drawings for buildings and site.   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| <b>3 Feasibility Analysis: Housing Opportunities &amp; Market Conditions</b>  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| Meet with the Town's affordable housing organizations/advocates to collect info on community's housing needs and resources. (virtual meeting) |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| Analyze Housing Opportunities for the building & site   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| Analyze market conditions & funding opportunities   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| <b>4 Summary of Opportunities: Share Findings &amp; Engage Public</b>   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| Meet with Town project team (virtual meeting)   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
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| <b>PHASE 2: Conceptual Design &amp;</b>   | 11 wks        | 4/15/24 - 7/1/24        |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
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| Identify what housing options w/in existing buildings and/or new construction. Present initial funding options.                               |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
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| Construction cost estimate for buildings & site   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
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# HOUSING NEEDS (MEETING 3/15)

## KEY TAKEAWAYS

### PROCESS & FUNDING

- » Multi-source funding stack: LIHTC, HIF, CEDAC, ARPA funding, private funding & more.

### STATUS OF EXISTING REGIONAL HOUSING

- » Ongoing collaboration with TOB Planning Department.
- » Wide range of AMI throughout regional housing (from 30% AMI to 120% AMI) - but more is needed.
- » Desirable unit sizes: studio, 1 bed, 2 bed.
- » Wait lists for all existing housing (1-5 years).
- » Residents applying are younger than in previous years. (65-70 yrs).
- » Seniors are fastest growing shelter population, while the veteran needs seems to be dropping b/c of targeted development by the VA.
- » Ongoing maintenance is critical to consider.

### CONSIDERATIONS - BUILDING FOR SENIORS

- » Units designed for aging in place: no bathtubs, grab bars, fire suppression at cooktop, designated smoking area
- » Important to have social gathering space, social programming, spaces for outside agents to meet with residents.
- » Access to resident service coordinator.
- » Access to meals/meal program.
- » Accommodate outside assistants that may be visiting/serving residents.
- » Access to transportation, especially medical.
- » Residents want to stay in the community they know.

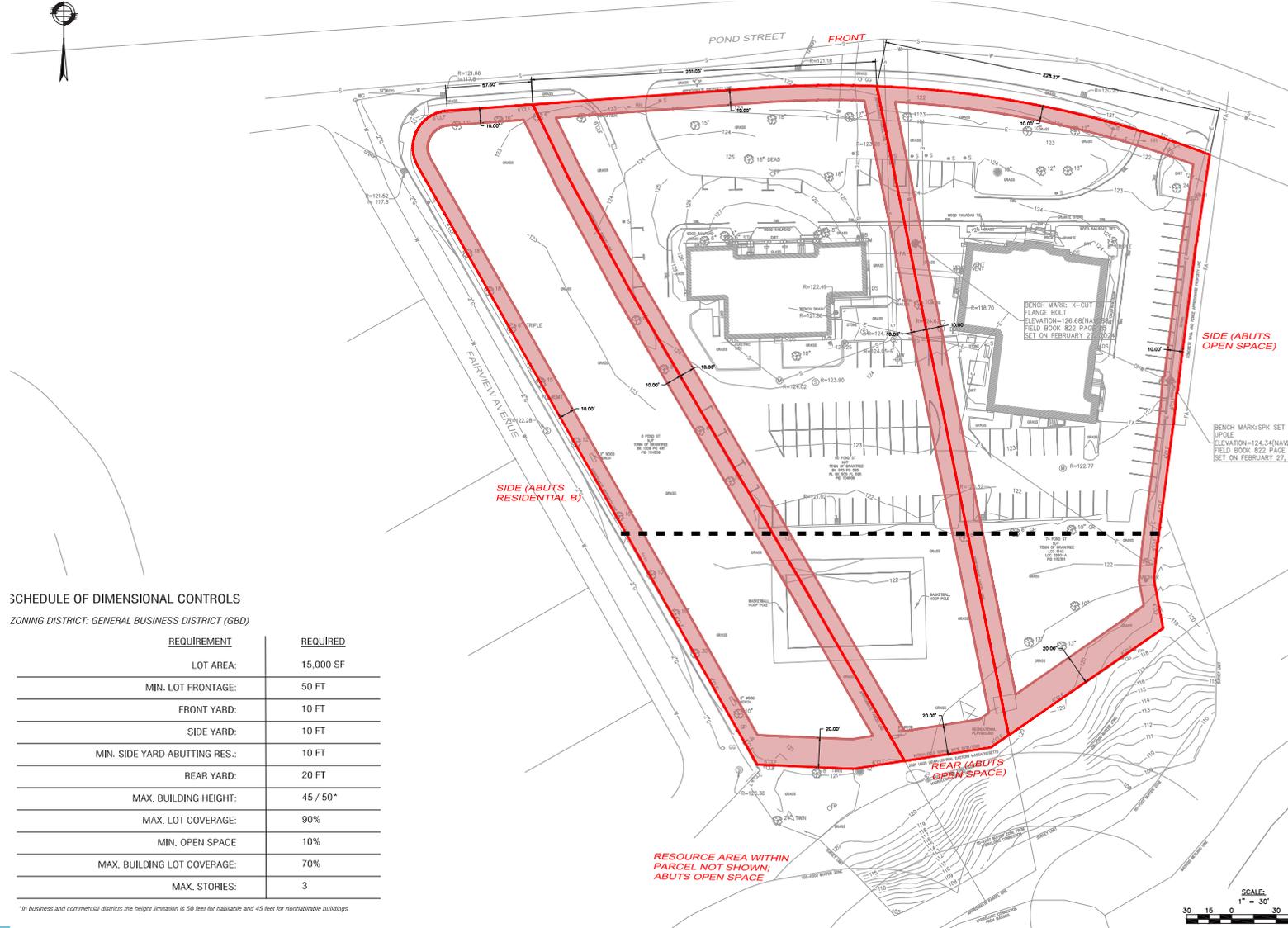
### CONSIDERATIONS - BUILDING FOR VETS

- » Need supportive services to be successful.
- » Residents want to stay in the community they know.





## ZONING SETBACKS DIAGRAM



SCHEDULE OF DIMENSIONAL CONTROLS  
ZONING DISTRICT: GENERAL BUSINESS DISTRICT (GBD)

| REQUIREMENT                   | REQUIRED  |
|-------------------------------|-----------|
| LOT AREA:                     | 15,000 SF |
| MIN. LOT FRONTAGE:            | 50 FT     |
| FRONT YARD:                   | 10 FT     |
| SIDE YARD:                    | 10 FT     |
| MIN. SIDE YARD ABUTTING RES.: | 10 FT     |
| REAR YARD:                    | 20 FT     |
| MAX. BUILDING HEIGHT:         | 45 / 50'  |
| MAX. LOT COVERAGE:            | 90%       |
| MIN. OPEN SPACE               | 10%       |
| MAX. BUILDING LOT COVERAGE:   | 70%       |
| MAX. STORIES:                 | 3         |

\*In business and commercial districts the height limitation is 50 feet for habitable and 45 feet for nonhabitable buildings

## SOIL SURVEY

- » Most of the site is classified as Urban Land and hydrologic soil group A based on the Natural Resources Conservation Service (NRCS).
- » The southern area is wetland, classified as silt loams and hydrologic soil groups B/D.

## PERMITTING

- » Existing wetland resource area is at the southern part of the site. The site is not within the ACEC (areas of critical environmental concerns), Natural Heritage Priority Habitat or Endangered Species Areas, or Wellhead Protection Areas.
- » The southern part of the site is in the AE zone of FEMA floodplain.

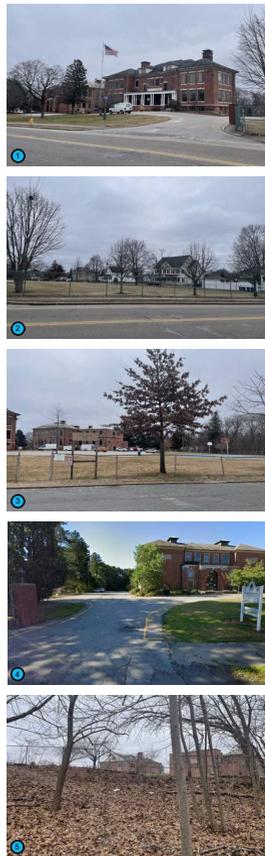
## EXISTING UTILITIES DIAGRAM



## UTILITY INFRASTRUCTURE

- » Three catch basin inlets are visible.
- » The sewer line enters the site from the north side from an existing sewer main that runs in Pond St. then it runs west.
- » Two manholes on site.
- » Existing sewer easement at the south lower grade of the site.
- » Existing 2" water line enters from Pond St. One fire hydrant between two buildings. The hydrant water connection is unsure.
- » No visible gas utility on-site.
- » Utility poles at east property line for Electric/telecom.

## VIEWS INTO THE SITE DIAGRAM



## VIEWS FROM THE SITE DIAGRAM



## EXISTING CONDITIONS SITE PLAN

| KEY       |                  |
|-----------|------------------|
| - - - - - | PROPERTY LINE    |
| ■         | ASPHALT          |
| ■         | CONCRETE         |
| ■         | GRAVEL           |
| ■         | GRASS            |
| ■         | WOODED           |
| ■         | PLANTING BED     |
| ■         | WETLAND          |
| ○         | DECIDUOUS TREE   |
| ○         | EVERGREEN TREE   |
| ●         | SHRUB            |
| - - - - - | CHAIN LINK FENCE |



### FRONT DRIVE

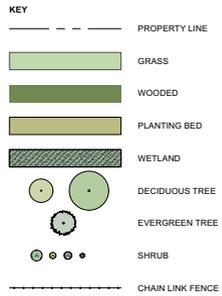
- » Adequate space for drop off and pick up.
- » Bus pull-off is functional with car pass-by space.
- » Fair condition of asphalt and granite curbs with a few missing ones.

### PARKING LOTS

- » 85 parking spaces altogether on site.
- » The asphalt condition is fair with a few cracks to repair.



## VEGETATION DIAGRAM



### LAWN

- » One larger evergreen tree and small oaks, side lawns are open with small oaks.
- » Perimeter along Fairview Ave and Cemetery – chain link fence between the cemetery and the property.
- » **Consider the removal of the fence.**
- » The connection path between two buildings needs shade and screening.



## PEDESTRIAN CIRCULATION DIAGRAM



### SPORTS/PLAY AREA

- » Located behind the back parking area, a basketball court, metal swing set, and metal slide.
- » Equipments are in poor condition with no accessible connection.



## ELEVATION AND SLOPE DIAGRAM



### EDGE CONDITIONS OF WOODS

- » A chain link fence about six feet tall separates the lawn from the woods.
- » » Directly behind the fence is a steep decline that slopes down towards the river.

## ARCHITECTURAL - EXTERIOR

### ROOFING - 74

- » Slate roofing on main structure in fair to good condition. Some wear and damage visible. Membrane flat roofing at auditorium & kitchen in fair to good condition. **Repair slate as required, assess membrane roofing for leaks and replace membrane roof. New flashing as required. Modify roof insulation as required to meet energy code.**
- » Both vent stacks appear plumb with standing seam metal roofing, unknown divot visible on NW stack. Access not available. **Review flashing for damage, repair as required.**
- » Metal gutter mostly in good shape, some damage visible. Existing gutters drain to perimeter drain. **Replace flashing around gutters as required, repair dented gutters.**
- » Painted wood eave has some peeling visible. **Repair and paint as required.**

## ROOFING - 90

- » Asphalt roofing throughout in poor to fair condition. Access not available. **Replace asphalt shingle & roof flashing. Modify roof insulation as required to meet energy code.**
- » Chimneys appear plumb, some spalling visible. **Repoint both chimneys. Install new fitted caps.**
- » Some damage visible at metal gutter. Existing gutters drain to perimeter drain. **Replace flashing around gutters as required, repair dented gutters & disconnected downspouts.**
- » Painted wood eave trim peeling and visibly damaged. **Replace or repair as required.**



## ARCHITECTURAL - EXTERIOR

### WALLS - 74

- » Brick masonry exterior showing cracking and significant spalling, especially around window and door openings. **Rebuild and repoint masonry as required. Modify exterior wall insulation to meet energy code.**
- » No flashing at corbelled building base. **Recommend to add flashing over corbelling.**

### WALLS - 90

- » Brick masonry on granite block foundations. Masonry in fair to good shape, some spalling visible. **Repoint masonry as required. Modify exterior wall insulation to meet energy code.**

### DOORS & WINDOWS - 74

- » Exterior wood window trim is in poor shape. Windows are fixed glass units, some broken. Exterior doors have inappropriate hardware. **Replace exterior window trim and window units with operable units. Install new door hardware.**

Reflash & seal openings.

### DOORS & WINDOWS - 90

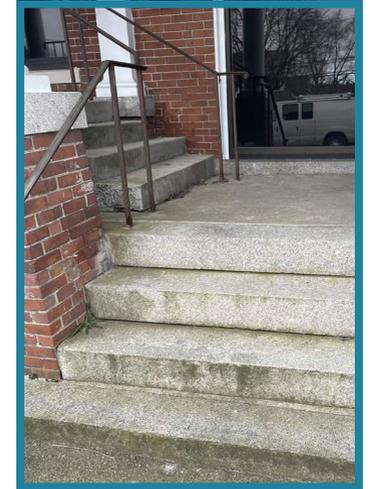
- » Exterior wood window trim is in poor shape, existing steel lintels at lower level are rusted and failing. Stone sills and headers are in decent shape, some cracking visible. Windows are fixed glass units, some broken. Exterior doors have inappropriate hardware. **Replace exterior window trim and window units with operable units. Replace steel lintels, cracked stone sills and headers. Install new door hardware. Reflash & seal openings.**



## ARCHITECTURAL - EXTERIOR

### ENTRY VESTIBULE - 74

- » Brick and stone cap stairs and accessible sloped path lead to front entry vestibule. Railing at stair not to code. **Code: Replace railings with code compliant.**
- » Vestibule interior in good condition, some paint finishes peeling, front entry door not to code. **Repair and repaint wood trim. New compliant door with closing hardware.**



### ENTRY VESTIBULE - 90

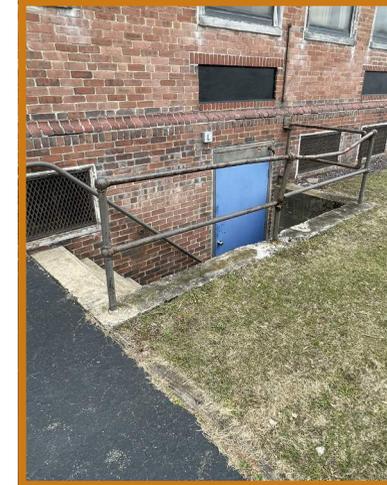
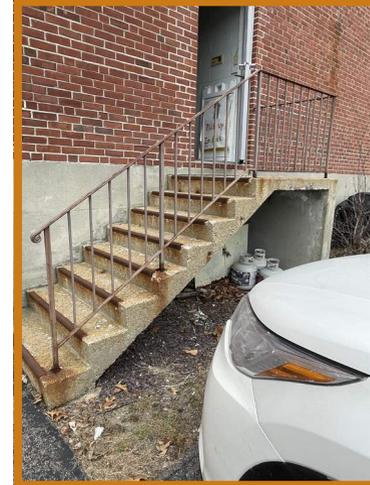
- » Granite stone steps and metal railing. Inaccessible entry from sidewalk. **Code: Provide accessible route to front door.**
- » Railings & guardrail not to code. **Code: Replace railings with code compliant.**
- » Peeling paint at wood finishes, brick spalling visible. **Repair and repaint wood trim. Replace missing column. Repoint brick as required.**



## ARCHITECTURAL - EXTERIOR

### ADDITIONAL POINTS OF ENTRY - 74

- » Existing entry points are not accessible. **Make accessibility upgrades as required if intended for public use.**
- » Railings at all stairs are damaged or not to code. **Replace with code compliant railing.**
- » Rear door not level with egress. **Adjust entry for flush entry.**



### ADDITIONAL POINTS OF ENTRY - 90

- » Existing entry points are not accessible. **Make accessibility upgrades as required if intended for public use.**
- » Railing at rear ramp is damaged. **Replace with code compliant railing.**
- » Rear door not level with egress. **Adjust entry for flush entry.**



# ASSESSMENT OBSERVATIONS & RECOMMENDATIONS

74 Pond

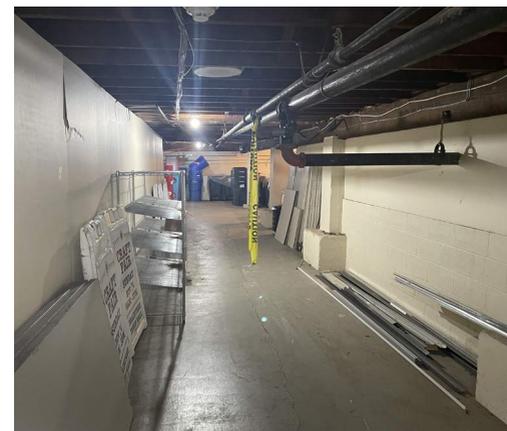
## ARCHITECTURAL - INTERIOR

### BASEMENT - 74 - OBSERVATIONS

- » Level change at center section of structure and auditorium stage, ramp without railing.
- » Existing brick masonry have visible spalling & deterioration.
- » Existing piping limits accessibility through southeast corner of basement level.

### BASEMENT - 74 - RECOMMENDATIONS

- » Repoint masonry walls & chimney where required.
- » See MEP & Structural recommendations.



# ASSESSMENT OBSERVATIONS & RECOMMENDATIONS

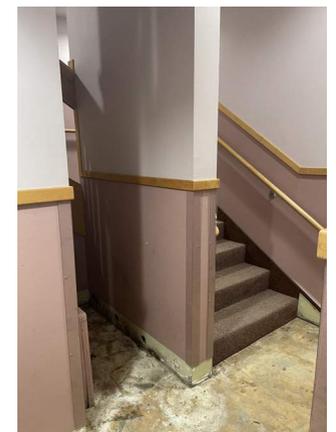
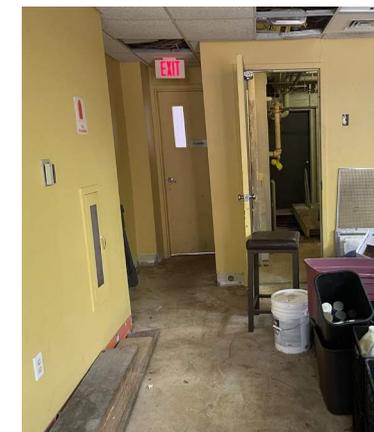
## ARCHITECTURAL - INTERIOR

### BASEMENT - 90 - OBSERVATIONS

- » Both sets of stairs & railings are not to code. Railing height, extensions noncompliant. Main stair width tight.
- » Interior finishes are damaged and outdated.
- » Cracked concrete slab on grade.
- » Obsolete mechanical equipment throughout.

### BASEMENT - 90 - RECOMMENDATIONS

- » **Code:** Multiple issues with existing railings & stairs, extent of changes will be based on final scope of work.
- » Repoint masonry walls and new finishes as required.
- » See MEP & Structural recommendations.



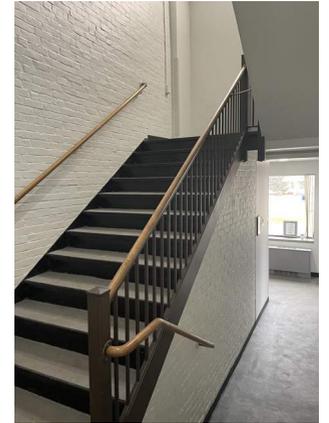
## ARCHITECTURAL - INTERIOR

### FIRST FLOOR - 74 - OBSERVATIONS

- » Ramp railings are not to code at both stairs and ramps.
- » Interior finishes throughout in fair to good condition.
- » Level changes at center section of structure and auditorium stage.
- » Kitchen finishes, equipment and fixtures in fair to good condition. See MEP recommendations.

### FIRST FLOOR - 74 - RECOMMENDATIONS

- » **Code: Accessibility layout changes and upgrades to all public spaces.**
- » **Consider how to best mitigate level change with new design.**
- » **Consider: reusing existing kitchen layout and equipment, replace finishes as required.**
- » **See MEP & Structural Recommendations**



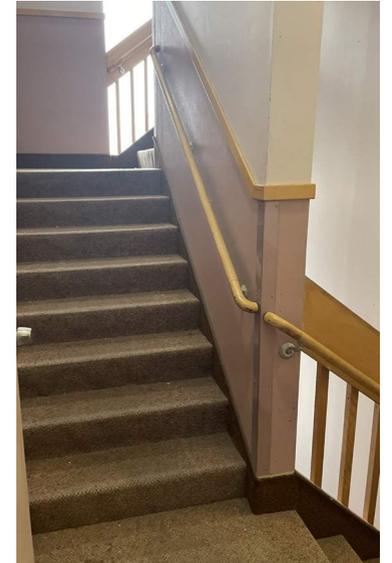
## ARCHITECTURAL - INTERIOR

### FIRST FLOOR - 90 - OBSERVATIONS

- » Both sets of stairs & railings are not to code. Railing height, extensions noncompliant. Main stair width tight.
- » ACT suspended system damaged.
- » Plumbing fixtures & interior finishes are damaged and outdated.

### FIRST FLOOR - 90 - RECOMMENDATIONS

- » Code: Multiple issues with existing railings & stairs, extent of changes will be based on final scope of work.
- » Replace interior finishes throughout.



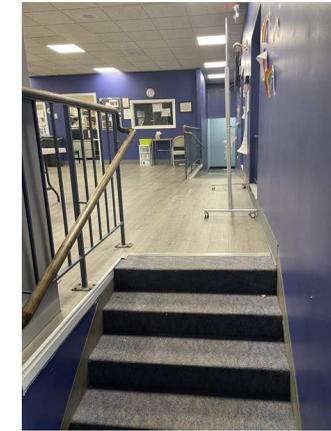
## ARCHITECTURAL - INTERIOR

### SECOND FLOOR - 74 - OBSERVATIONS

- » Ramp railings are not to code.
- » Bathroom finishes are outdated.
- » Level change above auditorium.

### SECOND FLOOR - 74 - RECOMMENDATIONS

- » Code: Multiple issues with existing railings, extent of changes will be based on final scope of work.
- » Consider how to best mitigate level change with new design.
- » Replace interior finishes as required.



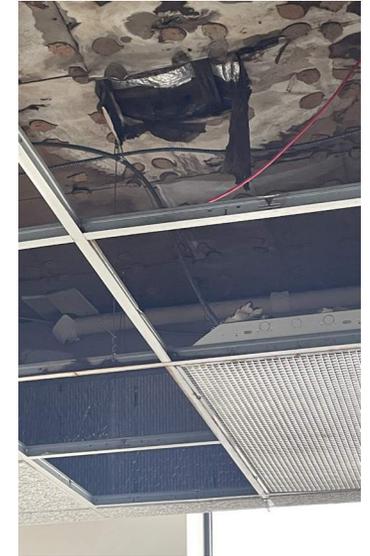
## ARCHITECTURAL - INTERIOR

### SECOND FLOOR - 90 - OBSERVATIONS

- » Both sets of stairs and railings are not to code. Railing height, extensions noncompliant. Main stair width tight.
- » Interior finishes are damaged and outdated.
- » Water infiltration from southwest roof valley leak has damaged finishes.
- » ACT suspended system damaged.

### SECOND FLOOR - 90 - RECOMMENDATIONS

- » **Code: Multiple issues with existing railings & stairs, extent of changes will be based on final scope of work.**
- » **Replace interior finishes throughout.**



## ARCHITECTURAL - INTERIOR

### ATTIC - 74 - OBSERVATIONS

- » Entire attic unfinished. Cold attic does not include insulation visible at roof framing. Batt insulation at attic floor framing.
- » Only attic access requires use of fixed vertical ladder.
- » Both brick masonry ventilation stacks & top of exterior walls have visible spalling.
- » Ventilation and ductwork systems

### ATTIC - 74 - RECOMMENDATIONS

- » Install insulation at roof structure per energy code.
- » See structural recommendations.
- » Repoint brick masonry and top of exterior wall.
- » Consider new stair and extension of elevator shaft, and addition of dormers to make livable space in attic.



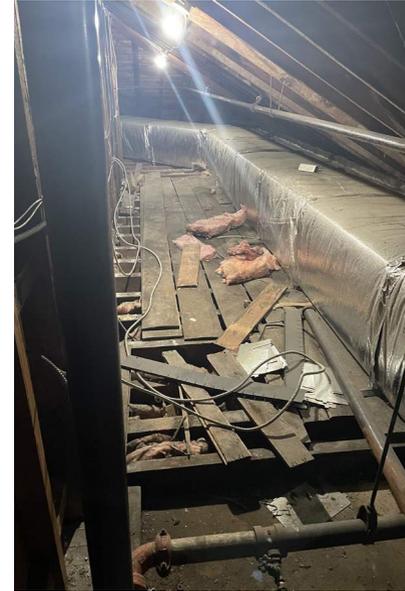
## ARCHITECTURAL - INTERIOR

### ATTIC - 90 - OBSERVATIONS

- » Center structure finished interior attic space. Finishes damaged throughout. Ductwork and ventilation access through dormer windows.
- » Roof leak at southwest valley - damaged interior finishes.
- » Side wings of attic unfinished. Cold attic does not include insulation visible at roof framing.
- » Both chimneys have some visible spalling.

### ATTIC - 90 - RECOMMENDATIONS

- » Replace interior finishes throughout.
- » Investigate roof penetrations for water infiltrations.
- » Install insulation at roof structure per energy code.
- » See structural recommendations.
- » Repoint chimneys and top of exterior wall.



## STRUCTURAL

### BASEMENT - MINIMAL SCOPE - REPAIRS

#### Foundation

- » 74 - The existing structure is supported on a shallow foundation in good condition. The slab on grade had visible cracking but no evidence of settling (good condition). Rusting visible at supporting steel columns and some spalling at the mechanical room. Sonotubes supporting first floor framing in great condition.
- » **Recommend: evaluate existing damaged structural members to determine required reinforcement or replacement if needed. Repair spalling in mechanical room.**
- » 90 - The existing structure construction appears to match 74 Pond. Existing foundation walls are brick on granite blocks with no signs of settlement from exterior (not visible from interior). Slab on grade has extensive cracking and is assumed from poor concrete mix or lack of welded wire mesh in the

slab. Other than cracks, slab is in good condition without any signs of settlement. Steel lintels at basement windows are rusted and in poor condition.

- » **Recommend replacing rusted steel window lintels. Repair / seal cracks in basement as required.**



## STRUCTURAL

### 1ST, 2ND, & 3RD FLOORS - MINIMAL SCOPE - REPAIRS

- » 74 - First Floor framing visible in basement in good condition. Framing below auditorium and front lobby not accessible, but no significant signs of deflection or distressed. Second floor framing was not visible. Gypsum covering framing shows no signs of cracking or deflection. Floor finishes and walls above in good condition indicating decent condition.
- » **Recommend:** Majority of the structural framing members visible in good condition and can remain in place. Current framing will be able to carry live load of 40 PSF (living spaces). Reinforce / replace any notched or damaged structure.
- » 90 - Majority of first floor framing not visible from basement. Dropped 9" wood beams visible, supported on steel or cast-iron posts. Some locations where finishes removed indicate framing is in good condition. Same visibilities on 2nd &

3rd floor framing. Significant water infiltration observed in northeast corner below southwest roof valley.

- » **Recommend:** Majority of the structural framing members visible in good condition and can remain in place. Remove all finishes around water infiltration area to determine condition of wood framing. Current framing will be able to carry live load of 40 PSF (living spaces). Reinforce / replace any notched or damaged structure.

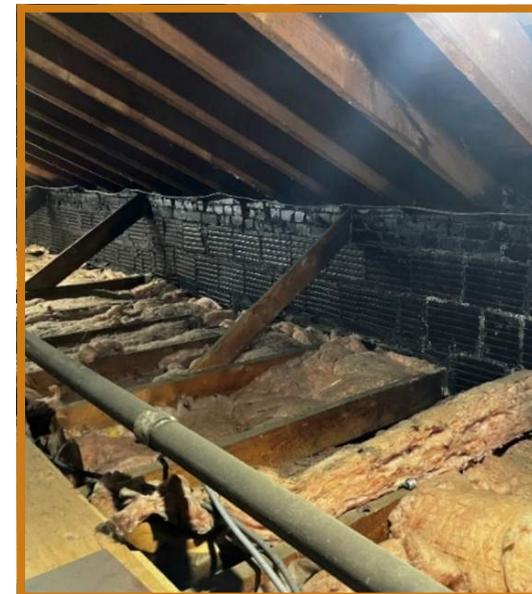


## STRUCTURAL

### ATTIC - MINIMAL SCOPE - REPAIRS

- » 74 - The roof at the kitchen area includes steel beams supporting tectum roof panels. The original building includes hip and gable roof framing visible from the attic space, found to be in good condition. The roof above the auditorium was not visible but there was no visible signs of deflection.
- » **Recommend: any existing structural members found to be damaged will need to be evaluated for reinforcement or replacement, but otherwise good condition.**
- » 90 - Roof framing at center of building was mostly covered with finishes and not visible. Finishes show no sign of significant cracks. Framing includes 2x8 wood rafters framing to a 2x10 valley beam. Framing visible at both building ends in good condition. Rafters and beam in good condition with no sign of deflection or distress.

- » **Recommend: any existing structural members found to be damaged will need to be evaluated for reinforcement or replacement, but otherwise good condition.**



## MEPFP

### PLUMBING - MINIMAL SCOPE - REPAIRS

#### Sanitary Drainage

- » 74 - Piping is cast iron and includes original and subsequent renovation installations. Original piping in fair condition, first reno in good condition; second reno in excellent condition. Sump pump in boiler room appears to be used for basement, groundwater, foundation drainage but condition not verified.
- » 90 - Piping was mostly concealed, but assumed cast iron and likely to be in good condition for re-use.

#### Interceptor

- » 74 - Basement interceptor in fair condition, grease interceptor use assumed from kitchen floor drain.
- » **Recommend: Replace interceptor if required to remain per final design.**

#### Natural Gas

- » 74 & 90 - Gas entrance for both buildings located at NE corner of 90 Pond St.

- » **Recommend: If separate entrances are required, a new gas entrance would need to be established at 90 Pond St. Should we assume all-electric?**

#### Water heater

- » 74 - Electric resistance tank type water heater in excellent condition. Recirculation pump appears to be in fair condition.
- » **Recommend: Replace existing recirculation pump. Provide water heaters for each residential unit; existing to remain for shared amenity spaces.**
- » 90 - Electric resistance tank type water heater in fair condition, but 20 years old and beyond it's life. Water heating plant includes recirculation pump in poor to fair condition.
- » **Recommend: Replace existing recirculation pump and water heater for amenity spaces. Provide water heaters for each residential unit.**



## Plumbing Fixtures

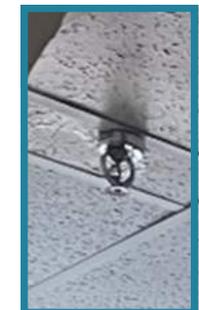
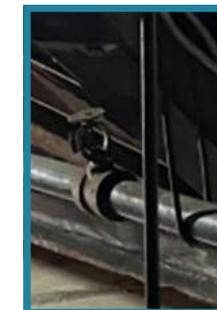
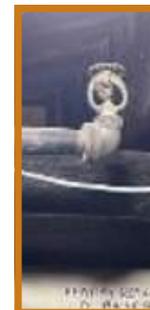
- » 74 - Bathroom fixtures generally appear to be in good to excellent condition. Janitor's closet sinks in fair to poor condition. Kitchen fixtures are in fair to good condition and include a dedicated grease trap for the triple pot sink.
- » **Recommend: Fixtures in good condition to remain can serve shared spaces. New distribution and plumbing fixtures for new residential layout.**
- » 90 - Bathroom fixtures generally appear to be in fair condition, several have been demolished or damaged beyond repair.
- » **Recommend: All new distribution and plumbing fixtures for new residential layout.**



## **FIRE PROTECTION**

### Sprinklers

- » 74 - Wet type sprinkler system with sprinklers in basement & attic only. 4" fire protection service is visible and in fair condition. Sprinkler piping is steel and sprinklers are exposed upright type - both in good condition.
- » **Code: sprinkler system required on all floors.**
- » 90 - Combination of wet and dry type sprinkler systems. Wet standpipes in stairwells and dry sprinklers serving the top floor and attic spaces. Fire protection service was not accessible for review. Sprinklers on the top floor and attic spaces are in fair to good condition.
- » **Code: sprinkler system required on all floors.**



## MEPFP

### MECHANICAL

#### Heating, Cooling and Ventilation

- » 74 & 90 - Primary heat source is natural gas fired boiler connected to heat pumps located at 74 and serving both buildings.
- » 74 - Air conditioning via 5 multi-zone heat pumps with one outdoor compressor serving several indoor fan coil units. Units are in good to excellent condition.
- » 74 - Ventilation via air handling unit in attic. System does not include heat recovery.
- » 90 - Air conditioning system abandoned and in poor condition.
- » 90 - Ventilation via two air handling systems in attic. System in fair to poor condition.
- » **74 Option 1: Reuse existing boilers and heat pumps, modify baseboard heaters for shared community spaces and new residential layout. Reuse existing air conditioning system and modify distribution**

ductwork for new residential layout. Replace air handling units to include ERV for ventilation; will require new ductwork.

- » **90 Option 1: Reuse existing boilers, heat pumps and baseboard heaters for shared common spaces. New electric mini-split for heating and cooling in each space. New ERV and modified ductwork for ventilation.**
- » **74 & 90 Option 2: New all-electric heating & cooling, with ERV ventilation to eliminate fossil fuels.**



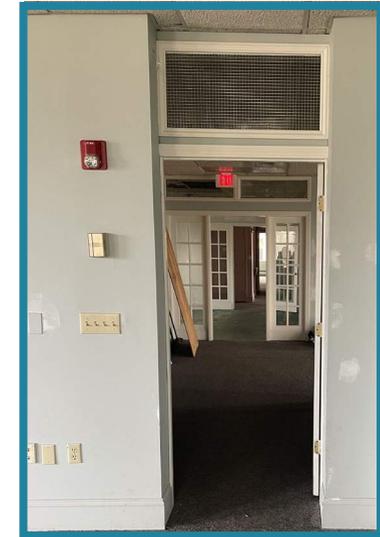
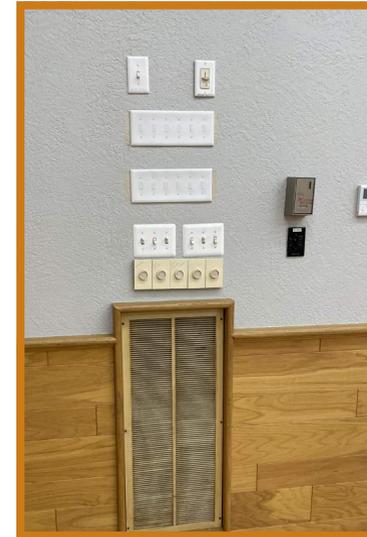
## Kitchen Ventilation

- » 74 - Kitchen ventilation provided by Type 1 grease hood in fair condition with dry chemical type fire suppression system. Exhaust fan in fair to poor condition located on the flat roof above, likely not listed for grease exhaust. Make up air provided by an air handling unit in the basement pulling air from basement.
- » **Recommend: Replace kitchen exhaust fan and grease hood.**



## Controls

- » 74 & 90 - Controls for heating, cooling and ventilation systems are independent of each other and without building automation or monitoring systems in place. This results in a less-than efficient system where heating and cooling may be occurring simultaneously.
- » **74 & 90 Recommend: New integrated controls and monitoring for shared spaces. Individual controls for residential spaces.**



## MEPFP

### ELECTRICAL

#### Electrical Service

- » 74 & 90 - Layout changes will require demolishing all the devices and rewiring all new residential spaces. Some of the common space devices and wiring may be able to remain.

#### Backup Power System

- » 74 - Generator on site not in service or connected to the building power system.
- » **Recommend: Reconnect generator for life-safety requirements.**

#### Fire Alarm

- » 74 - Fire alarm panel is an addressable Honeywell Model 5820XL fire system control panel, recently installed in excellent condition. Ceiling-mounted detectors located throughout the building in good condition. Alarm devices both old (fair to good condition) and new (excellent condition) found throughout.

- » 90 - Fire alarm system connected to 74 Pond with a remote annunciator installed at 90 Pond. Ceiling-mounted detectors in good condition throughout the building. Alarm devices both old (fair to good condition) and new (excellent condition) found throughout.
- » 74 & 90: Reuse existing fire alarm panel, ceiling-mounted detectors, and good / new alarm devices. System will need to be modified for new layout and residential spaces. Carbon Monoxide detection will need to be added.

Pole  
Transformer  
Generator



## Emergency Lighting

- » 74 & 90 - Existing fixtures include wall-mounted battery powered emergency and combination exit and emergency fixtures.
- » **Recommend: Emergency lights & LED exit signs to be installed throughout. Exterior emergency lights provided at all points of entry.**

## Interior Lighting

- » 74 - Majority of fixtures consists of 2'x2' fixtures in suspended lay-in ceilings, auditorium includes 1'x4' fixtures, all controlled by manual wall-mounted switches.
- » **Recommend: Install new LED lighting throughout building, include energy saving lighting controls to meet energy code.**
- » 90 - Majority fixtures consists of 2'x2' and 2'x4' fixtures in suspended lay-in ceilings on the lower floors. Top floor includes surface mounted and recessed can type fixtures. All fixtures controlled by manual wall-mounted switches.

- » **Recommend: Install new LED lighting throughout building, include energy saving lighting controls to meet energy code.**



## CODE OBSERVATIONS

### EXISTING BUILDING CODE SCOPING REQUIREMENTS

- » New work to existing buildings is required to be performed in accordance with 780 CMR for new construction unless otherwise specified by the MEBC.

### MEBC ANALYSIS

- » Classification of Work: Amount of work expected will fall into MEBC Level 3 Alteration & Change of Occupancy.

### HISTORICAL BUILDING ANALYSIS

- » The buildings are listed by MHC as eligible to be on the state historic register and are therefore considered historic for the MEBC analysis. MEBC allows some provisions where historical buildings do not need to comply with all new construction codes.

### USE AND OCCUPANCIES:

- » Primary occupancy of new construction will be Group R-2.

### CONSTRUCTION CLASSIFICATIONS

- » Both Buildings are constructed with masonry exterior wall and interior wood framing which is Type IIIB construction.
- » The fire-resistance ratings of any new or altered structure are required to meet new construction requirements.
- » Building Height and area of both buildings comply with building height and area requirements of occupancy change in an existing building.
- » If a third building is added, maximum footprint and aggregate area are to be considered per building to comply with the MEBC.

## CODE OBSERVATIONS

### VERTICAL OPENINGS

- » As the building will undergo change of occupancy to a higher hazard category for egress, interior stairs & other vertical shafts are required to be enclosed.

### AUTOMATIC SPRINKLER SYSTEM

- » Sprinkler coverage is only in the Basement and Attic of the 74 pond St. And Third floor of the 90 pond st.
- » Group R buildings are required to have an automatic sprinkler system throughout.

### ALTERNATE SUPPRESSION SYSTEM

- » The 90 Pond St. Building has a Halon system serving multiple defunct computer server room.
- » New occupancy group does not require this and can be removed after consulting with the Braintree Fire Department.

### STANDPIPE SYSTEM

- » 74 Pond street does not contain a standpipe system. 90 Pond st. has a hose connection within one exit stair.
- » Class 1 standpipe system piping is required in the building in certain locations including stair landings, remote floor locations and more per 780 CMR 905.4.

### FIRE ALARM AND DETECTION SYSTEM

- » Both buildings are provided with fire alarm systems consisting of audible/visual notification devices, manual pull stations, smoke detectors and sprinkler monitoring devices.
- » All new fire alarm devices and modifications to the existing fire alarm system are required to meet new construction requirements of NFPA.
- » The buildings are required to be provided with carbon monoxide detection per CMR.

## CODE OBSERVATIONS

### MEANS OF EGRESS

- » The available egress capacity in the two buildings is sufficient with the occupancy group change to R-2.
- » The number of exits provided in the existing buildings are sufficient for the planned occupant load of the buildings.
- » Both buildings' existing exit stairs configuration is compliant.
- » **74 Pond St's exit door is recommended to make them self-closing and operational during emergencies.**

### ELEVATOR

- » Both buildings are provided with one elevator.
- » If either elevator cab and shaft is replaced, it will be required to meet the requirements of new construction.

- » **Having an elevator audit performed on each of the elevators was recommended by the code consultants.**

### ACCESSIBILITY

- » Both Buildings are generally not accessible.
- » 74 Pond St has abrupt stair nosing and non-continuous handrails.
- » 74 Pond St Accessible ramps in the interior are too steep and have non continuous handrails. Exterior ramp slope is compliant but does not have handrails.
- » 74 Pond St The elevator cab is acceptable in existing condition.
- » 90 Pond St's exterior ramp to basement handrail is non compliant.
- » 90 Pond St's Elevator Cab and Shaft was not measured.

## CODE OBSERVATIONS

### 521 CMR APPLICATION

- » Study assumption is that the renovation costs for both buildings will exceed 30% of the assessed value of the building and will therefore require full accessibility throughout.
- » 74 Pond Street:
- » The assessed building value is \$1,902,000, as shown on the Town of Braintree Assessor's website.
- » The Massachusetts Department of Revenue has assigned Braintree an assessment ratio of 0.99. The 30% threshold is therefore:  $\$1,902,000 / 0.99 \times 30\% = \$576,363.63$ .

- » 90 Pond Street:
- » The assessed building value is \$1,517,000, as shown on the Town of Braintree Assessor's website.
- » The Massachusetts Department of Revenue has assigned Braintree an assessment ratio of 0.99. The 30% threshold is therefore:  $\$1,517,000 / 0.99 \times 30\% = \$459,696.97$ .

### ADA APPLICATION

- » ADA only applies to the common areas of the building and does not apply to the residential units.

### FAIR HOUSING ACT

- » FHA accessibility requirements will also apply to both buildings.

# NEXT STEPS

- » Incorporate existing conditions assessment feedback into full report for review.
- » Develop proposed designs. Develop 3 options for Review by Town of Braintree. Options to include renovations to existing buildings, addition to one or both buildings with possible connector, new stand-alone building on site.
- » Meet to Review design options.
- » Public Meeting.
- » Prepare SD Documents for pricing.

| TOWN OF BRAINTREE AFFORDABLE HOUSING STUDY  |               |                         | JAN  |     | FEB  |      |      |     |      | MAR  |      |     |     | APR  |      |      |     |      | MAY  |      |     |      | JUN  |      |  |  |
|---|---------------|-------------------------|------|-----|------|------|------|-----|------|------|------|-----|-----|------|------|------|-----|------|------|------|-----|------|------|------|--|--|
| PROPOSED SCHEDULE   | DURATION      | DATE RANGE              | 1/29 | 2/5 | 2/12 | 2/19 | 2/26 | 3/4 | 3/11 | 3/18 | 3/25 | 4/1 | 4/8 | 4/15 | 4/22 | 4/29 | 5/6 | 5/13 | 5/20 | 5/27 | 6/3 | 6/10 | 6/17 | 6/24 |  |  |
| <b>PHASE 1: Information Gathering</b>   | 11 wks        | 1/29/24 - 4/15/24       |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |  |
| <b>4 Summary of Opportunities: Share Findings &amp; Engage Public</b>   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |  |
| Meet with Town project team (virtual meeting)   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |  |
| Public meeting to share initial findings & elicit feedback. (virtual meeting)                                   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |  |
| Online polls and options for additional public feedback.  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |  |
| <b>PHASE 2: Conceptual Design &amp;</b>   | 11 wks        | 4/15/24 - 7/1/24        |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |  |
| <b>1 Initial Conceptual Design</b>  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |  |
| Identify what housing options w/in existing buildings and/or new construction. Present initial funding options. |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |  |
| Meet with Town project team to review conceptual design report.(virtual meeting)                                |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |  |
| <b>2 Final Conceptual Design</b>  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |  |
| Identify what housing options w/in existing buildings and/or new construction. Present initial funding options. |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |  |
| Meet with Town project team to review conceptual design report.(virtual meeting)                                |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |  |
| <b>3 Financial Feasibility of Design</b>  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |  |
| Construction cost estimate for buildings & site   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |  |
| Proforma  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |  |
| <b>4 Final Report</b>   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |  |
| Meet with Town project team to review conceptual design report.(virtual meeting)                                |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |  |
| Compiled Study report with deliverables from each task above + executive summary                                |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |  |
| <b>OVERALL PROPOSED SCHEDULE</b>  | <b>22 wks</b> | <b>1/29/24 - 7/1/24</b> |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |  |



**STEP BY STEP STUDY:  
II. CONCEPTUAL DESIGN**



74 Pond



90 Pond

## TOWN OF BRAINTREE - AFFORDABLE HOUSING STUDY 74/90 POND STREET

### INITIAL CONCEPTUAL DESIGN MEETING

MAY 02, 2024



# INTRODUCTION

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## Meeting Agenda

### 1. PROJECT SCHEDULE

### 2. CONCEPTUAL DESIGN LAYOUTS

- » OPTION 1 - EXISTING FOOTPRINT
- » OPTION 2 - CONNECTOR
- » OPTION 3 - THIRD BUILDING

### 3. EXISTING CONDITIONS DRAWINGS

### 4. QUESTIONS FOR PUBLIC MEETING

### 5. NEXT STEPS

- » PUBLIC MEETING

## Meeting Goals

- » Review 3 conceptual layouts with the intent to refine to a single design.
- » Prepare for Public Meeting on May 9, 2024.

# SCHEDULE

| TOWN OF BRAINTREE AFFORDABLE HOUSING STUDY  |               |                         | JAN  |     | FEB  |      |      |     | MAR  |      |      |     | APR |      |      |      |     | MAY  |      |      |     | JUN  |      |      |  |
|---|---------------|-------------------------|------|-----|------|------|------|-----|------|------|------|-----|-----|------|------|------|-----|------|------|------|-----|------|------|------|--|
| PROPOSED SCHEDULE   | DURATION      | DATE RANGE              | 1/29 | 2/5 | 2/12 | 2/19 | 2/26 | 3/4 | 3/11 | 3/18 | 3/25 | 4/1 | 4/8 | 4/15 | 4/22 | 4/29 | 5/6 | 5/13 | 5/20 | 5/27 | 6/3 | 6/10 | 6/17 | 6/24 |  |
| <b>PHASE 1: Information Gathering</b>   | 12 wks        | 1/29/24 - 4/22/24       |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| <b>1 Project Kick-off: Understand Project Goals &amp; Collect Relevant Documents</b>  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| Meet with Mayor & Town Staff to understand study goals. (virtual meeting)   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| Identify key stakeholders and relevant ongoing Town initiatives. Confirm project schedule and deliverables.                                   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| Collect & review existing building, site & regulatory documents   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| <b>2 Assessment: Visit Site &amp; Summarize Conditions</b>  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| Meet on site to perform visual exploration of the existing buildings & site. (in-person meeting)  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| Assess the findings to identify existing conditions which may impact housing feasibility and construction costs.                              |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| <b>2A Assessment: Create Measured Drawings</b>  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| Create measured base drawings for buildings and site.   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| <b>3 Feasibility Analysis: Housing Opportunities &amp; Market Conditions</b>  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| Meet with the Town's affordable housing organizations/advocates to collect info on community's housing needs and resources. (virtual meeting) |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| Analyze Housing Opportunities for the building & site   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| Analyze market conditions & funding opportunities   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| <b>4 Summary of Opportunities: Share Findings</b>   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| Meet with Town project team (virtual meeting)   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| <b>PHASE 2: Conceptual Design &amp; Financial Viability</b>   | 10 wks        | 4/22/24 - 7/1/24        |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| <b>1 Initial Conceptual Design &amp; Engage Public</b>  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| Identify what housing options w/in existing buildings and/or new construction. Present initial funding options.                               |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| Meet with Town project team to review conceptual design report.(virtual meeting)  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| Public meeting to share initial findings & elicit feedback. (virtual meeting)   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| Online polls and options for additional public feedback.  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| <b>2 Final Conceptual Design</b>  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| Identify what housing options w/in existing buildings and/or new construction. Present initial funding options.                               |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| Meet with Town project team to review conceptual design report.(virtual meeting)  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| <b>3 Financial Feasibility of Design</b>  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| Construction cost estimate for buildings & site   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| Proforma  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| <b>4 Final Report</b>   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| Meet with Town project team to review conceptual design report.(virtual meeting)  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| Compiled Study report with deliverables from each task above + executive summary  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |
| <b>OVERALL PROPOSED SCHEDULE</b>  | <b>22 wks</b> | <b>1/29/24 - 7/1/24</b> |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |

# CONCEPTUAL DESIGN ASSUMPTIONS & METHODOLOGY

---

## Site Assumptions

### Open Space

- » Keeping the open space at the back and make it useful to the resident and/or community.

### Site Entrance

- » Maintain the historic front of the site from the Pond Street.

### Site Entrance

- » The parking spots are counted in the multifamily parking count requirement. Two parking spots per residential unit.

### Accessible walkways

- » Accessible walkways throughout the site connecting the building entrances. The pedestrian and vehicular circulation are separated.

## Initial Programming Assumptions

### Building unit sizes

- » Unit sizes are assumed to be minimum following this GSFs.
  - » Studio : 500-550 SF
  - » 1 Bedroom : 650-700 SF
  - » 2 Bedroom : 950-1,000 SF
  - » 3Bedroom : 1,200-1,250 SF

### Unit Size distribution

- » Higher percentage of studio and one bedroom units. Low percentage of two and three bedroom units.
- » Reuse the existing vertical circulations.
- » Supportive services and amenity spaces.
- » Reusing the existing kitchen.

# CONCEPTUAL DESIGN LAYOUTS

## EXISTING SITE



**PARKING COUNT**  
TOTAL UNITS: 95

### SITE PLAN - OPTION 1

- KEY**
- PROPERTY LINE
  - ASPHALT
  - CONCRETE
  - GRAVEL
  - GRASS
  - WOODED
  - PLANTING BED
  - WETLAND
  - DECIDUOUS TREE
  - EVERGREEN TREE
  - SHRUB
  - CHAIN LINK FENCE



### PARKING COUNT

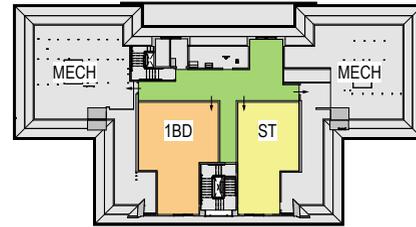
|                  |          |
|------------------|----------|
| TOTAL UNITS:     | 33       |
| 2X SPACES/UNIT:  | 66       |
| SF OFFICE:       | 1,026 SF |
| 1 SPACE/250 SF:  | 5        |
| REQUIRED SPACES: | 71       |
| PROPOSED SPACES: | 82       |

# CONCEPTUAL DESIGN LAYOUTS

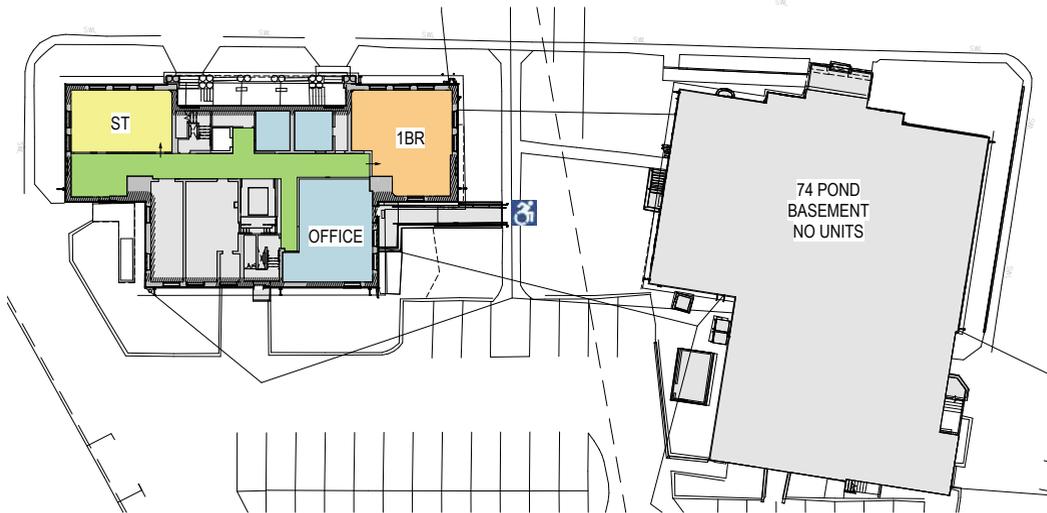
# OPTION 1 - EXISTING FOOTPRINT



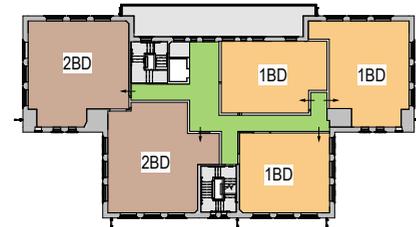
FIRST FLOOR PLAN



THIRD FLOOR PLAN



BASEMENT PLAN



SECOND FLOOR PLAN



### COLOR KEY

- ST: 500-550 SF
- 1BD: 650-700 SF
- 2BD: 950-1,000 SF
- 3BD: 1,200-1,250 SF

- CIRCULATION
- AMENITY
- ADDITION

### GROSS SF

- EXISTING: 47,407 SF
- ADDED: 6,487 SF
- PROPOSED: 53,894 SF

### UNIT COUNT

- STUDIO: 8
- 1 BED: 18
- 2 BED: 6
- 3 BED: 1
- TOTAL UNITS: 33

# CONCEPTUAL DESIGN LAYOUTS

## OPTION 1 - EXISTING FOOTPRINT



NORTHWEST BIRDSEYE VIEW



SOUTHEAST BIRDSEYE VIEW



SOUTHWEST VIEW FROM FAIRVIEW AVE



NORTH VIEW FROM POND STREET

## SITE PLAN - OPTION 2

- KEY**
- PROPERTY LINE
  - ASPHALT
  - CONCRETE
  - GRAVEL
  - GRASS
  - WOODED
  - PLANTING BED
  - WETLAND
  - DECIDUOUS TREE
  - EVERGREEN TREE
  - SHRUB
  - CHAIN LINK FENCE



### PARKING COUNT

TOTAL RES. UNITS: 53  
 2X SPACES/UNIT: 106

OFFICE SF: 1,026 SF  
 1 SPACE/250 SF: 5

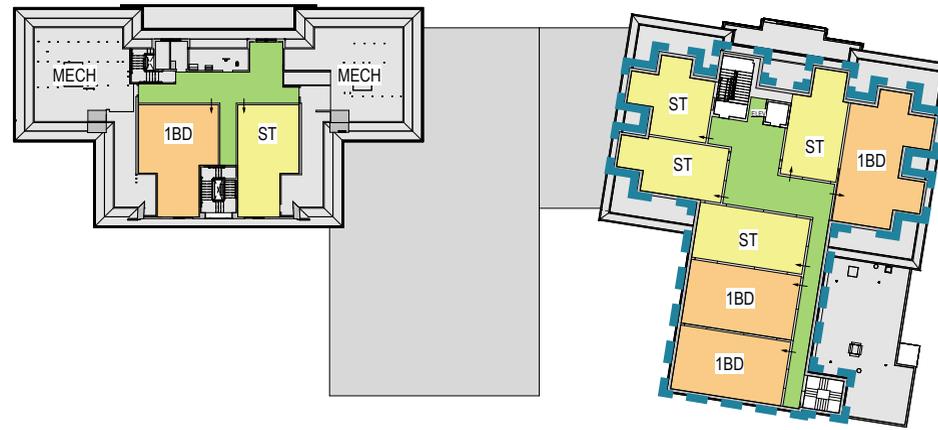
REQUIRED SPACES: 111  
 PROPOSED SPACES: 107

# CONCEPTUAL DESIGN LAYOUTS

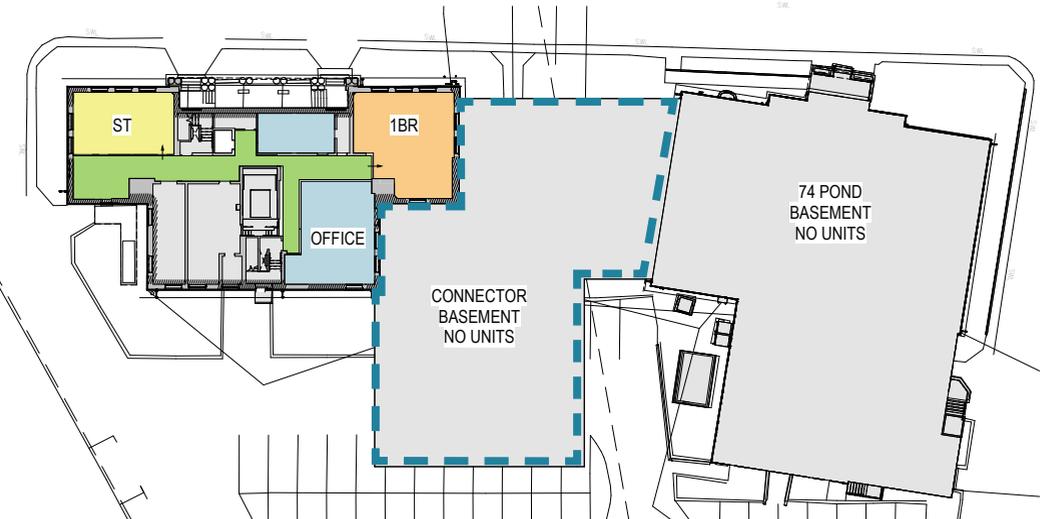
## OPTION 2 - CONNECTOR



FIRST FLOOR PLAN



THIRD FLOOR PLAN



BASEMENT PLAN



SECOND FLOOR PLAN

### COLOR KEY

- ST: 500-550 SF
- 1BD: 650-700 SF
- 2BD: 950-1,000 SF
- 3BD: 1,200-1,250 SF

- CIRCULATION
- AMENITY
- ADDITION

### GROSS SF

- EXISTING: 47,407 SF
- ADDED: 22,245 SF
- PROPOSED: 69,652 SF

### UNIT COUNT

- STUDIO: 27
- 1 BED: 19
- 2 BED: 6
- 3 BED: 1
- TOTAL UNITS: 53



NORTHWEST BIRDSEYE VIEW



SOUTHEAST BIRDSEYE VIEW



SOUTHWEST VIEW FROM FAIRVIEW AVE



NORTH VIEW FROM POND STREET

## SITE PLAN - OPTION 3A

- KEY**
- PROPERTY LINE
  - ASPHALT
  - CONCRETE
  - GRAVEL
  - GRASS
  - WOODED
  - PLANTING BED
  - WETLAND
  - DECIDUOUS TREE
  - EVERGREEN TREE
  - SHRUB
  - CHAIN LINK FENCE



### PARKING COUNT

TOTAL UNITS: 66  
 2X SPACES/UNIT: 132

SF OFFICE: 1,026 SF  
 1X SPACE/250 SF: 5

REQUIRED SPACES: 137  
 PROPOSED SPACES: 132

## SITE PLAN - OPTION 3B

- KEY**
- PROPERTY LINE
  - ASPHALT
  - CONCRETE
  - GRAVEL
  - GRASS
  - WOODED
  - PLANTING BED
  - WETLAND
  - DECIDUOUS TREE
  - EVERGREEN TREE
  - SHRUB
  - CHAIN LINK FENCE



### PARKING COUNT

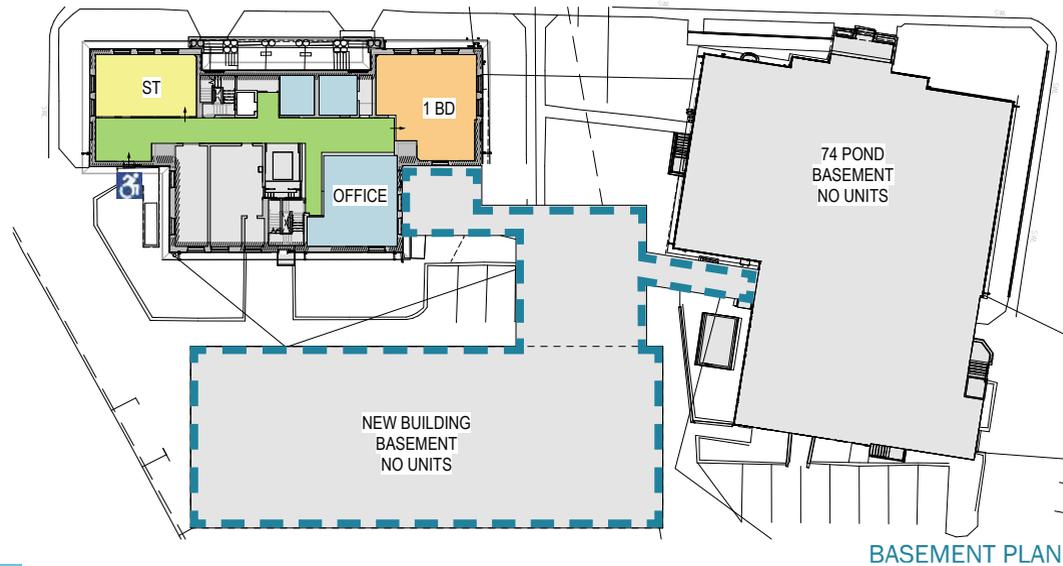
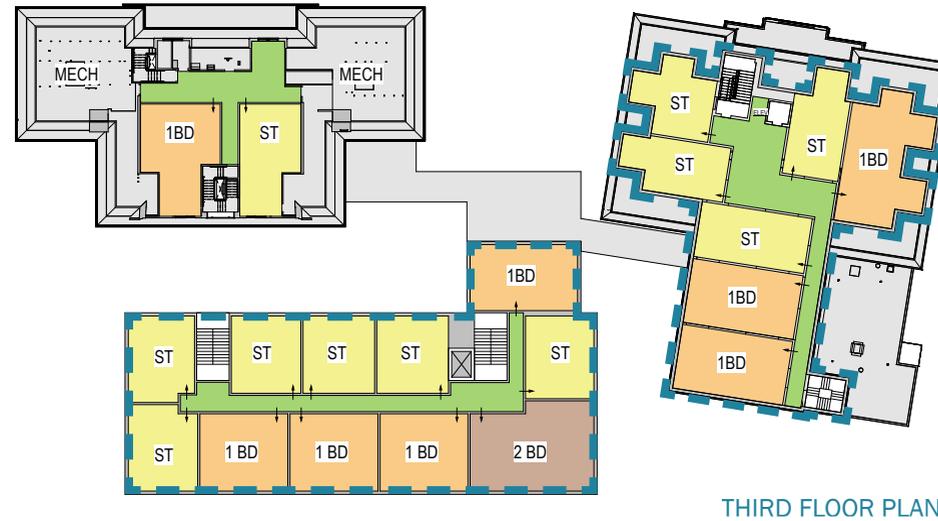
TOTAL UNITS: 66  
 2X SPACES/UNIT: 132

SF OFFICE: 1,026 SF  
 1X SPACE/250 SF: 5

REQUIRED SPACES: 137  
 PROPOSED SPACES: 133

# CONCEPTUAL DESIGN LAYOUTS

# OPTION 3 - THIRD BUILDING



**COLOR KEY**

|      |                |
|------|----------------|
| ST:  | 500-550 SF     |
| 1BD: | 650-700 SF     |
| 2BD: | 950-1,000 SF   |
| 3BD: | 1,200-1,250 SF |

- CIRCULATION
- AMENITY
- ADDITION

**GROSS SF**

|           |           |
|-----------|-----------|
| EXISTING: | 47,407 SF |
| ADDED:    | 35,089 SF |
| PROPOSED: | 82,496 SF |

**UNIT COUNT**

|                     |           |
|---------------------|-----------|
| STUDIO:             | 30        |
| 1 BED:              | 26        |
| 2 BED:              | 9         |
| 3 BED:              | 1         |
| <b>TOTAL UNITS:</b> | <b>66</b> |



NORTHWEST BIRDSEYE VIEW



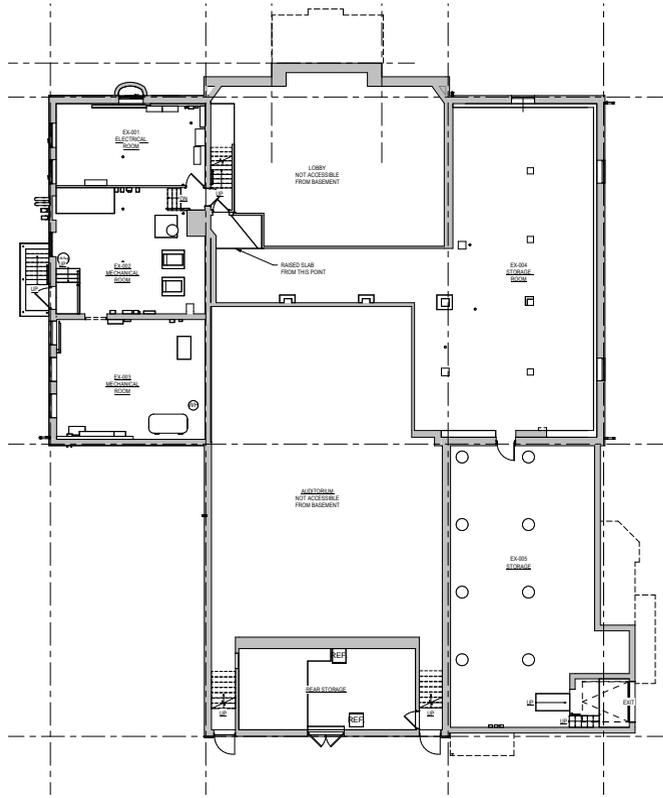
SOUTHWEST VIEW FROM FAIRVIEW AVE



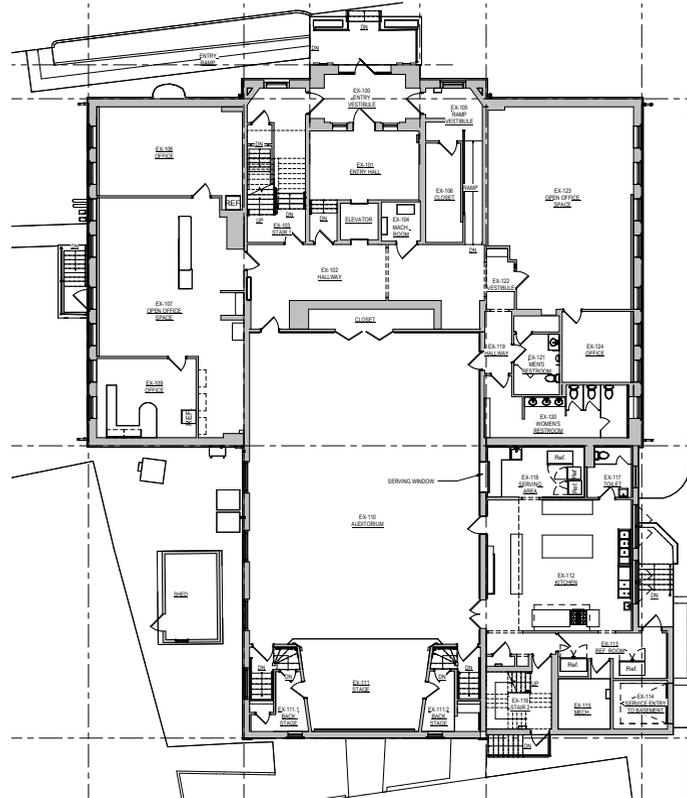
SOUTHEAST BIRDSEYE VIEW



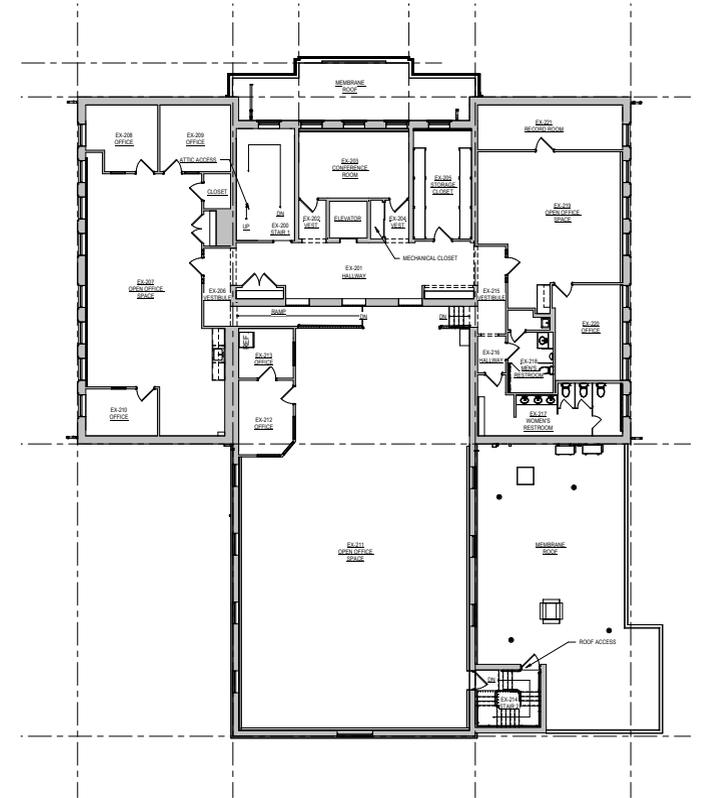
NORTH VIEW FROM POND STREET



BASEMENT PLAN



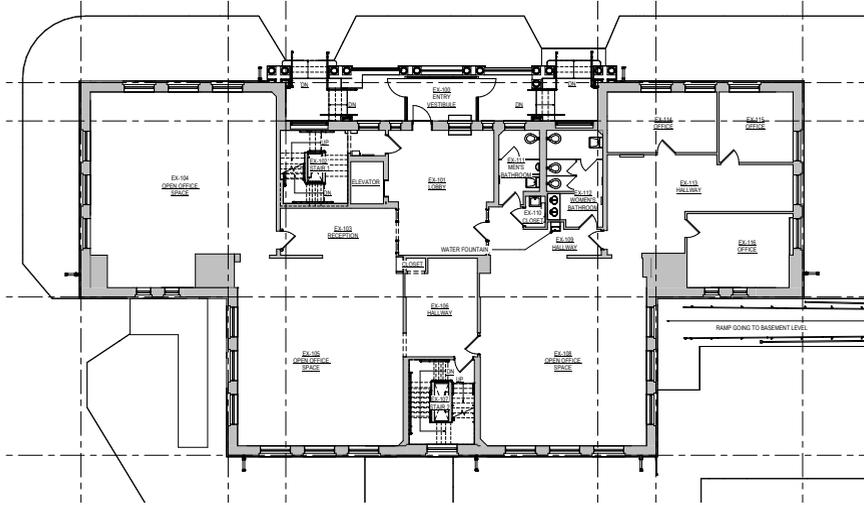
FIRST FLOOR PLAN



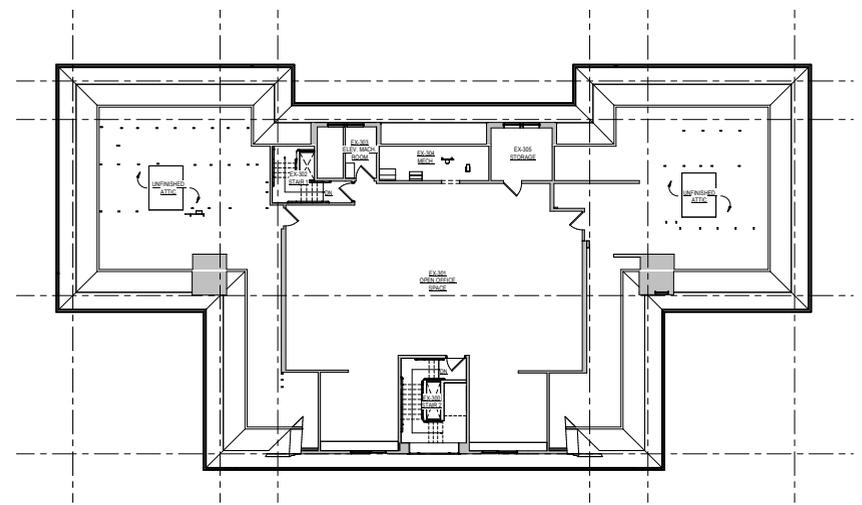
SECOND FLOOR PLAN

# EXISTING CONDITIONS DRAWINGS

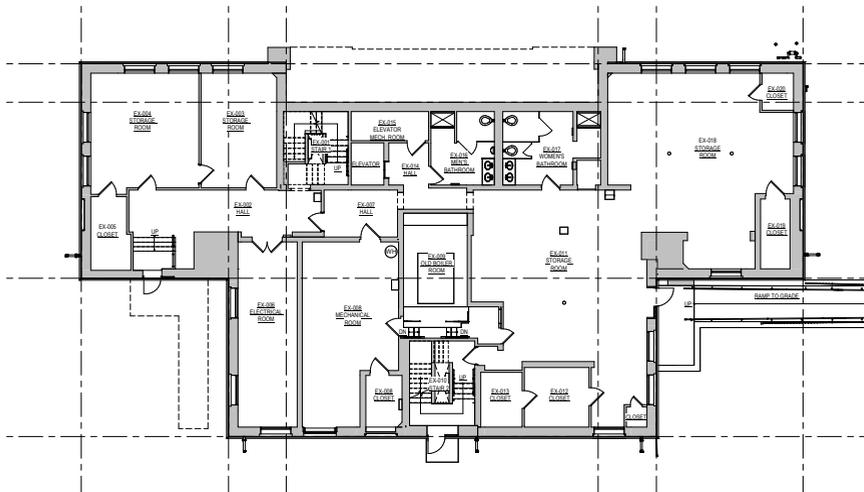
90 POND STREET



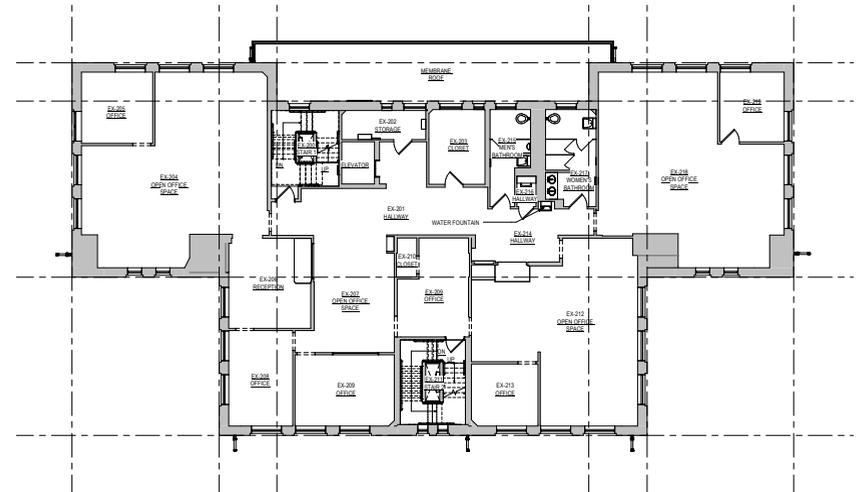
FIRST FLOOR PLAN



THIRD FLOOR PLAN



BASEMENT PLAN



SECOND FLOOR PLAN

# QUESTIONS FOR PUBLIC MEETING

## Q1: Which of the following populations do you feel the Town should consider the Highest / Lowest priority for housing?

- » 1: High priority to Veteran Housing, low to Senior Housing.
- » 2: High priority to Senior Housing, low to Veteran Housing.
- » 3: Balance both Veteran & Senior Housing per Town needs.
- » 4. Comments

## Q2: What level of affordable housing should the Town prioritize?

- » 1: The town should maximize affordable housing for those most in need: 100% affordable housing at Average Mean Income (AMI) less than 60%.
- » 2: The town should try to provide affordable housing options for a wide range of needs: 100% affordable housing for AMI ranging from 120% - 60%.
- » 3: The town should develop affordable housing alongside market rate development: 75% market rate, 25% affordable for AMI 80%-120%.
- » 4. Other, please comment.

## Q3: For Veteran & Senior Housing, do you feel there is a necessity for a bus stop closer to the project site?

- » 1: Yes, add a public bus stop.
- » 2: No, do not add a public bus stop.
- » 3: Comments

## Q4: How do you and your family use the play area or sports court behind these two buildings?

- » 1: I use it all the time and would continue to use it.
- » 2: No I don't use it but I would consider using it.
- » 3: No I don't use it and I likely would not use it.
- » 4. Comments

## Q5: Would you like to have access to the Veteran/Senior Housing's Public Amenities as a community member? Examples include social service offices, community meeting rooms and dining areas.

- » 1: Yes, that would be beneficial.
- » 2: No, the amenities should be focused for the residents only.
- » 3. Comments

## Q6: How important is maintaining the original historic appearance of these buildings?

- » 1: Extremely important.
- » 2: Somewhat important.
- » 3: Less important.
- » 4. Not important.
- » 5. Comments

# EXAMPLE PUBLIC POLL RESPONSE

## STAKEHOLDER FEEDBACK

### » Question 1: What should be the most important priority to the Town for these sites?

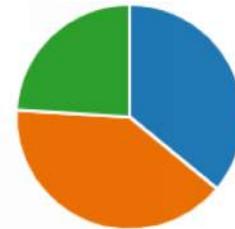
- » **100% affordable housing (9)**
- » **Mixed income with market rate units (10)**
- » **Mixed use with ground floor retail (6)**
- » **(25 Responses)**

#### Select Public Poll Comments: (12 Comments total)

- » *The type of development depends on the location. Mixed use is needed at the town center but not at site C, Bedford lot.*
- » *The town center does not need ground floor retail/commercial space. Also retail will be hard to finance.*
- » *100% affordable will be socially isolating, so a mixed development will be more preferable for any site.*
- » *Accessible unit counts needs to be considered.*

1. Which of the following do you feel that the Town should consider the HIGHEST priority?

- 100% affordable housing 9
- Mixed income with market rat... 10
- Mixed use with ground floor r... 6



2. Which of the following do you feel that the Town should consider the LOWEST priority?

- 100% affordable housing 8
- Mixed income with market rat... 7
- Mixed use with ground floor r... 9



# NEXT STEPS

- » **Public Meeting.**
- » **Online Poll for Public Meeting to Elicit Feedback**
- » **Prepare SD Documents for pricing.**

| TOWN OF BRAINTREE AFFORDABLE HOUSING STUDY  |               |                         | JAN  |     | FEB  |      |      | MAR |      |      |      | APR |     |      |      | MAY  |     |      | JUN  |      |     |      |      |
|---|---------------|-------------------------|------|-----|------|------|------|-----|------|------|------|-----|-----|------|------|------|-----|------|------|------|-----|------|------|
|   |               |                         | 1/29 | 2/5 | 2/12 | 2/19 | 2/26 | 3/4 | 3/11 | 3/18 | 3/25 | 4/1 | 4/8 | 4/15 | 4/22 | 4/29 | 5/6 | 5/13 | 5/20 | 5/27 | 6/3 | 6/10 | 6/17 |
| <b>PHASE 2: Conceptual Design &amp; Financial Viability</b>   | 10 wks        | 4/22/24 - 7/1/24        |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |
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| Identify what housing options w/in existing buildings and/or new construction. Present initial funding options. |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |
| Meet with Town project team to review conceptual design report.(virtual meeting)                                |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |
| Public meeting to share initial findings & elicit feedback. (virtual meeting)                                   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |
| Online polls and options for additional public feedback.  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |
| <b>2 Final Conceptual Design</b>  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |
| Identify what housing options w/in existing buildings and/or new construction. Present initial funding options. |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |
| Meet with Town project team to review conceptual design report.(virtual meeting)                                |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |
| <b>3 Financial Feasibility of Design</b>  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |
| Construction cost estimate for buildings & site   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |
| Proforma  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |
| <b>4 Final Report</b>   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |
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| Compiled Study report with deliverables from each task above + executive summary                                |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |
| <b>OVERALL PROPOSED SCHEDULE</b>  | <b>22 wks</b> | <b>1/29/24 - 7/1/24</b> |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |



74 Pond



90 Pond

## TOWN OF BRAINTREE - AFFORDABLE HOUSING STUDY 74/90 POND STREET

### PUBLIC CONCEPTUAL DESIGN MEETING

MAY 09, 2024



# STUDY INTRODUCTION



## Affordable Housing Study Goals

- » Feasibility & Initial Design Study for the construction of Affordable Housing units at 74 & 90 Pond Street.

PROJECT LOCATION - 74 & 90 POND STREET

MONATIQUOT RIVER

BRAINTREE MUNICIPAL GOLF COURSE

### TOWN OF BRAINTREE

Mayor's Office  
 Department of Planning & Community Development  
 Veteran Services  
 Inspectional Services  
 Elder Affairs

### STUDY TEAM

LDA Architecture & Interiors, Architecture & Planning  
 Hiraeth Community Advisors & Esquire Advisors  
 Crowley Cottrell Landscape Architects  
 CES Engineering, MEP/FP Engineers  
 RSE Associates, Structural Engineers  
 Nitsch Engineering, Civil Engineering  
 Ellana Inc, Cost Estimator  
 Code Red, Code Consultants

 EXISTING BUS STOP

# TODAY'S MEETING

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## Agenda

### 1. STUDY INTRODUCTION & PROCESS (5 MIN)

- » Mayor Erin Joyce - Town of Braintree
- » Kim Barnett, Principal - LDa Architecture & Interiors

### 2. HOUSING NEEDS & FEASIBILITY ANALYSIS (15 MIN)

- » Brett Pelletier, Real Estate Analyst - Hiraeth Community Advisors
- » Milton Baxter, Real Estate Analyst - Esquire Advisors
- » **Housing Needs**
- » **Review of Terms**
- » **Initial Affordable Housing Feasibility Analysis**
  - **Analysis Variables, Assumptions and Methodology**
  - **Rental Models Findings**
  - **Ownership Models Findings**
  - **Summary**

### 3. EXISTING CONDITIONS ASSESSMENT & INITIAL BUILDING PROGRAMMING (30 MIN)

- » Kim Barnett, Principal - LDa Architecture & Interiors
- » Gillian Baresich - LDa Architecture & Interiors
- » **Review Existing Conditions Assessment for 74 & 90 Pond**
- » **Initial Building Programming - 4 Conceptual Options**

### 4. STUDY TEAM QUESTIONS (15 MIN)

- » **Q1: Which populations do you feel the town should prioritize for housing?**
- » **Q2: What level of affordable housing should the Town prioritize?**
- » **Q3: Should the Town add a bus stop closer to the project site?**
- » **Q4: Do you use the existing play area / sports court on site?**
- » **Q5: Would you like access to the public amenities as a community member?**
- » **Q6: How important is maintaining the historic appearance of the two buildings?**
- » **Q7: What is your preference of unit types on the site?**
- » **Q8: Demographics: Senior, Veteran, Community?**

### 5. OPEN DISCUSSION (25 MIN)

- » Please hold questions until this discussion section, or post your questions in Q&A and we will address questions there during this section.

## Meeting Goals

- » Provide feedback for Study Team to help narrow focus.
- » Identify priorities for Town consideration.

# PROJECT SCHEDULE

| TOWN OF BRAINTREE AFFORDABLE HOUSING STUDY  |               |                         | JAN  |     | FEB  |      |      |     | MAR  |      |      |     | APR |      |      |      | MAY |      |      |      | JUN |      |      |      |
|---|---------------|-------------------------|------|-----|------|------|------|-----|------|------|------|-----|-----|------|------|------|-----|------|------|------|-----|------|------|------|
| PROPOSED SCHEDULE   | DURATION      | DATE RANGE              | 1/29 | 2/5 | 2/12 | 2/19 | 2/26 | 3/4 | 3/11 | 3/18 | 3/25 | 4/1 | 4/8 | 4/15 | 4/22 | 4/29 | 5/6 | 5/13 | 5/20 | 5/27 | 6/3 | 6/10 | 6/17 | 6/24 |
| <b>PHASE 1: Information Gathering</b>   | 12 wks        | 1/29/24 - 4/22/24       |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| <b>1 Project Kick-off: Understand Project Goals &amp; Collect Relevant Documents</b>  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Meet with Mayor & Town Staff to understand study goals. (virtual meeting)   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Identify key stakeholders and relevant ongoing Town initiatives. Confirm project schedule and deliverables.                                   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Collect & review existing building, site & regulatory documents   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| <b>2 Assessment: Visit Site &amp; Summarize Conditions</b>  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Meet on site to perform visual exploration of the existing buildings & site. (in-person meeting)  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Assess the findings to identify existing conditions which may impact housing feasibility and construction costs.                              |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| <b>2A Assessment: Create Measured Drawings</b>  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Create measured base drawings for buildings and site.   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| <b>3 Feasibility Analysis: Housing Opportunities &amp; Market Conditions</b>  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Meet with the Town's affordable housing organizations/advocates to collect info on community's housing needs and resources. (virtual meeting) |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Analyze Housing Opportunities for the building & site   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Analyze market conditions & funding opportunities   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| <b>4 Summary of Opportunities: Share Findings</b>   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Meet with Town project team (virtual meeting)   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| <b>PHASE 2: Conceptual Design &amp; Financial Viability</b>   | 10 wks        | 4/22/24 - 7/1/24        |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| <b>1 Initial Conceptual Design &amp; Engage Public</b>  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Identify what housing options w/in existing buildings and/or new construction. Present initial funding options.                               |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Meet with Town project team to review conceptual design report.(virtual meeting)  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Public meeting to share initial findings & elicit feedback. (virtual meeting)   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Online polls and options for additional public feedback.  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| <b>2 Final Conceptual Design</b>  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Identify what housing options w/in existing buildings and/or new construction. Present initial funding options.                               |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Meet with Town project team to review conceptual design report.(virtual meeting)  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| <b>3 Financial Feasibility of Design</b>  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Construction cost estimate for buildings & site   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Proforma  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| <b>4 Final Report</b>   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Meet with Town project team to review conceptual design report.(virtual meeting)  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Compiled Study report with deliverables from each task above + executive summary  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| <b>OVERALL PROPOSED SCHEDULE</b>  | <b>22 wks</b> | <b>1/29/24 - 7/1/24</b> |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |

# HOUSING NEEDS - REVIEW OF HOUSING TERMINOLOGY

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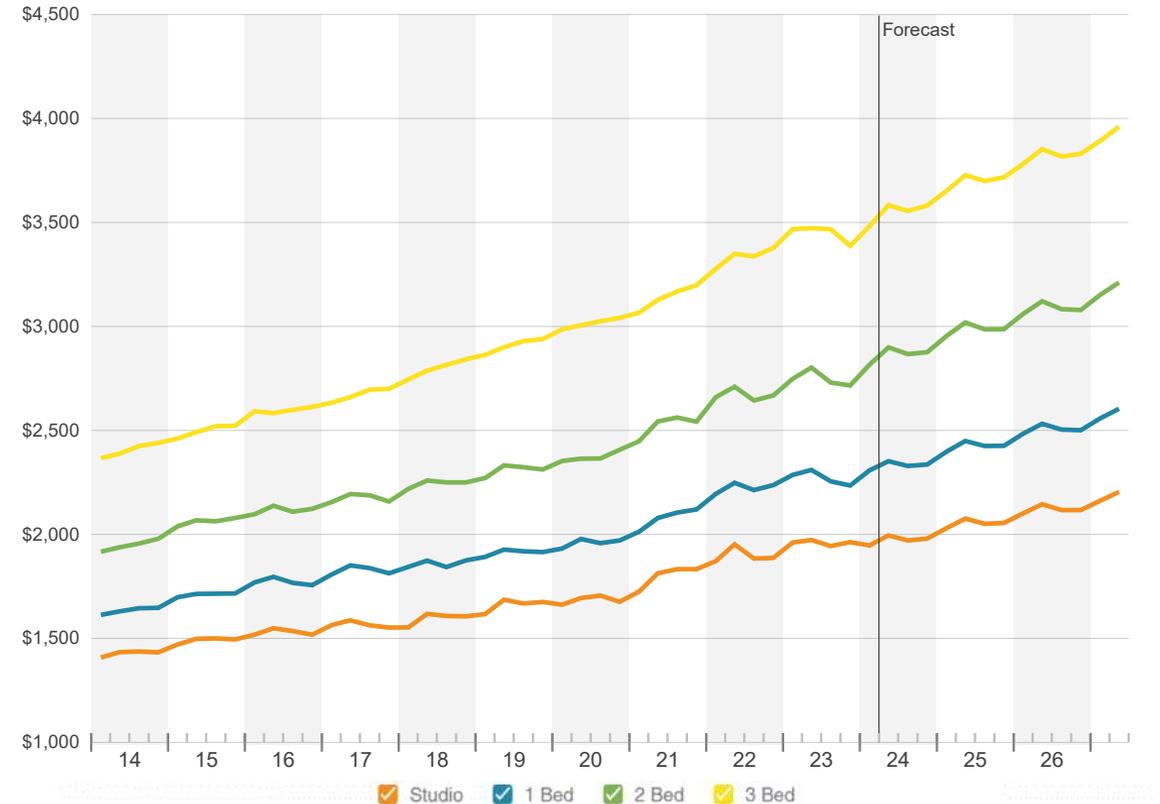
- » **SHI - Subsidized Housing Inventory (EOHLC 10% Affordable).**
- » **AMI - Area Mean Income**
- » **LIHTC - Low Income Housing Tax Credit**
- » **Housing Cost Burden**
  - **Housing Cost Burdened: Paying more than 30% of their income toward housing.**
  - **Severely Housing Cost Burdened: Paying more than 50% of their income toward housing.**

# HOUSING NEEDS - INFORMATION GATHERING REVIEW

## THERE IS A NEED AT ALL LEVELS: Braintree Statistics

- » Median single-family home price is **\$795,000**.
- » A family **must earn + \$200,000** to comfortably qualify and afford median-priced home in Braintree.
- » Rents are approx.: **\$2,000/studio**, **\$2,300/1-bed**, **\$2,900/2-bed**, and **\$3,500/3-bed**.
- » To afford those rents a household would need to earn approx. **\$80,000**, **\$93,000**, **\$115,000**, and **\$142,000**, respectively.
- » >25% of households earn + \$200,000 per year. This percentage will increase in future years. **Braintree is becoming increasingly more expensive.**
- » Approx. 40% of households fall into cohorts between **30% AMI (extremely low income)** and **120% AMI (moderate income)**.
- » Housing stock is **overwhelmingly weighted toward owner-occupied, single-family detached housing**, with 63% of the supply in this category.

Market Rent Per Unit By Bedroom



# HOUSING NEEDS - INFORMATION GATHERING REVIEW

## THERE IS A NEED AT ALL LEVELS: Braintree Statistics

- » 87% of housing stock was **built before 2000**.
- » 9.3% of housing stock is categorized as affordable under the SHI. (That number may be inflated as the SHI may count all housing units within developments where only a portion of the units are affordable.)
- » **38% of the town's households are housing cost-burdened** (47% of renters, 31% of owners). These percentages are higher than the Massachusetts averages.

### AMI by Household Size

| Income as % of Area Median Income | Household Size (Persons) |           |           |           |           |           |           |
|-----------------------------------|--------------------------|-----------|-----------|-----------|-----------|-----------|-----------|
|                                   | 1                        | 2         | 3         | 4         | 5         | 6         |           |
| Extremely Low Income              | 30%                      | \$31,260  | \$35,730  | \$40,200  | \$44,670  | \$48,240  | \$51,810  |
| Very Low Income                   | 50%                      | \$52,100  | \$59,550  | \$67,000  | \$74,450  | \$80,400  | \$86,350  |
| LIHTC Standard                    | 60%                      | \$62,520  | \$71,460  | \$80,400  | \$89,340  | \$96,480  | \$103,620 |
| Low Income                        | 80%                      | \$83,360  | \$95,280  | \$107,200 | \$119,120 | \$128,640 | \$138,160 |
| Median Income                     | 100%                     | \$104,200 | \$119,100 | \$134,000 | \$148,900 | \$160,800 | \$172,700 |
| Moderate Income                   | 120%                     | \$125,040 | \$142,920 | \$160,800 | \$178,680 | \$192,960 | \$207,240 |

\*FY2024 HUD Income Limits for Boston-Cambridge-Quincy, MA-NH HUD Metro FMR Area

### Market Rate Rent - Income Needs

| Market Rate Unit Type | Monthly |               |
|-----------------------|---------|---------------|
|                       | Rent    | Income Needed |
| Studio Unit           | \$1,963 | \$78,520      |
| One-Bedroom Unit      | \$2,317 | \$92,680      |
| Two-Bedroom Unit      | \$2,856 | \$114,240     |
| Three-Bedroom Unit    | \$3,528 | \$141,120     |

\*Source: Costar

### Market Rate For Sale - Income Needs

| Market Rate Unit Type | Median    | Income Needed | Down Payment Needed |
|-----------------------|-----------|---------------|---------------------|
|                       | Price     | 20% Down      |                     |
| Condominium           | \$595,000 | \$172,275     | \$119,000           |
| Single-Family House   | \$795,000 | \$228,967     | \$159,000           |

\*Source: Redfin Home Value Index

# HOUSING NEEDS - INFORMATION GATHERING REVIEW

## THERE IS A NEED AT ALL LEVELS: Braintree Statistics

- » There is a **significant feasibility gap between the cost to develop housing and the affordable housing pricing limits** for 2024 for 30%, 50%, 60% AMI and 80% AMI units. Emphasizing the need for subsidies to make those developments feasible.
- » In general, the demographic analysis shows that there is a **significant need for affordable units from 0%-120% AMI, and possibly beyond that.**
- » **Senior households face even tighter housing affordability pressures**, with lower median incomes than the population as a whole.
- » Younger households, non-family households, and elderly households typically have lower incomes, and are more likely to rent. They are also more likely to be cost burdened. **In Braintree, cost burden among elderly family households and non-elderly, non-family households is 26% and 40%, respectively.**

### Age 50+ Profile

Braintree Town city, MA  
 Braintree Town city, MA (2502107740)  
 Geography: County Subdivision

Prepared by Esri

|                     | 2023 Households by Income and Age of Householder 55+ |         |           |         |          |         | Total     | Percent |
|---------------------|--|---------|-----------|---------|----------|---------|-----------|---------|
|                     | 55-64  | Percent | 65-74     | Percent | 75+      | Percent |           |         |
| Total               | 2,928  | 100%    | 2,382     | 100%    | 2,419    | 100%    | 7,729     | 100%    |
| <\$15,000           | 144  | 4.9%    | 161       | 6.8%    | 268      | 11.1%   | 573       | 7.4%    |
| \$15,000-\$24,999   | 118  | 4.0%    | 186       | 7.8%    | 366      | 15.1%   | 670       | 8.7%    |
| \$25,000-\$34,999   | 78   | 2.7%    | 91        | 3.8%    | 230      | 9.5%    | 399       | 5.2%    |
| \$35,000-\$49,999   | 117  | 4.0%    | 155       | 6.5%    | 339      | 14.0%   | 611       | 7.9%    |
| \$50,000-\$74,999   | 173  | 5.9%    | 393       | 16.5%   | 334      | 13.8%   | 900       | 11.6%   |
| \$75,000-\$99,999   | 306  | 10.5%   | 341       | 14.3%   | 267      | 11.0%   | 914       | 11.8%   |
| \$100,000-\$149,999 | 532  | 18.2%   | 401       | 16.8%   | 202      | 8.4%    | 1,135     | 14.7%   |
| \$150,000-\$199,999 | 546  | 18.6%   | 249       | 10.5%   | 182      | 7.5%    | 977       | 12.6%   |
| \$200,000+          | 914  | 31.2%   | 405       | 17.0%   | 231      | 9.5%    | 1,550     | 20.1%   |
| Median HH Income    | \$149,465  |         | \$88,290  |         | \$50,340 |         | \$93,287  |         |
| Average HH Income   | \$180,563  |         | \$127,968 |         | \$89,064 |         | \$135,717 |         |

# HOUSING NEEDS - INFORMATION GATHERING REVIEW

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## NARROWING THE OPTIONS WILL BE OUR CHALLENGE

- » Looking for the Town & Stakeholders to **help us to refine parameters for the options.**
- » There are **developers who focus on all affordable developments** & there are **developers that focus on market-rate w/ minimal affordable** units only as required.
- » It is **harder to create a development between those two types.** The funding is more challenging and it does align with the focus of the housing developers.
- » **Developments for residents earning less than 50% of AMI are very difficult to finance** without significant project-based operating subsidies.
- » The **trend in affordable housing is to develop units that are accessible to all**, through universal design and flexible programming spaces to support seniors, veterans, and other populations with specific program or service needs.

# HOUSING NEEDS - FEASIBILITY ANALYSIS

## Housing Delivery Methods - HOW AFFORDABLE IS IT?

### » Dedicated Affordable Housing

- Maximize Affordable Housing delivery.
- Higher proportions of restricted units.
- Deeper level of affordability set aside.
- Lower AMI (<80% and <60%).
- Deeply subsidized (ex. LIHTC).
- **Specialized developers.**

### » Mixed Income

- Develop additional Affordable Housing alongside market-rate development.
- Developed under inclusionary zoning measures (ex. Chapter 40B).
- Higher AMI (80%-120%).
- Capital funding sources & operating subsidies support these properties.
- Subsidies may go unused due to administrative & technical burden.
- **Traditional market-rate developers.**

## Development Scenarios - RENTAL OR OWNERSHIP?

### » Rental Models

- Market Rate baseline
- 100% Affordable @ 60% AMI (typical LIHTC)
- 25% Affordable @ 80% AMI (typical 40B)

### » Ownership Models

- Market Rate baseline
- Affordable For Sale Condominium

# HOUSING NEEDS - FEASIBILITY ANALYSIS

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## MODELLING APPROACH

- » **Model development pro-formas for a variety of housing types** in order to determine where there might be opportunities for the market to recognize value.
- » Look at the **gap between what units cost to build and what units are able to generate** in an implied value based on restricted rent or sales price.
- » Look at the **gap analysis through the lens of capital funding sources** available to developers to close that gap and make the projects feasible.
- » Look at **specific program guidelines and limitations to identify opportunities and obstacles** for funding specific programmatic housing options.

# HOUSING NEEDS - FEASIBILITY ANALYSIS

## HOUSING FEASIBILITY ANALYSIS: RENTAL MODEL FINDINGS

- » Market Rate Baseline
  - Market rents are a function of: cost to operate, cost to construct, cost of land.
  - A project cost \$575,000/unit to build needs to generate rents \$3,731/month to justify the cost to develop the unit.
  - Rents at an average of \$3,731 /month support themselves but would have to be higher to provide a cross-subsidy to support Affordable Units.
  - A household would need to make \$150,000/year for \$3,731 rents to not cost burden them.
  - **Current market rates w/in Braintree fall short of \$3,731 on average, making market rental developments difficult to pencil in the current market.**

### Market Breakeven Rent

| Development Proforma                  |  | Per Unit  |
|---------------------------------------|--|-----------|
| <b>Cost to Develop</b>                |  |           |
| Land                                  |  | \$40,000  |
| Construction Cost                     |  | \$400,000 |
| Profit and Incentive                  |  | \$135,000 |
| <b>Total Development Cost (Value)</b> |  | \$575,000 |
| Capitalization Rate                   |  | 5.00%     |
| <b>Required NOI to Support Value</b>  |  | \$28,750  |

| Operating Proforma                |       | \$/Unit/Year | \$/Unit/Month  |
|-----------------------------------|-------|--------------|----------------|
| <b>Income</b>                     |       |              |                |
| Rental Income                     |       | \$44,769     | <b>\$3,731</b> |
| Vacancy Allowance                 | 5.00% | (\$2,238)    |                |
| <b>Expenses</b>                   |       |              |                |
| Operating Expenses                | 30%   | (\$13,431)   |                |
| Replacement Reserves              |       | (\$350)      |                |
| <b>Net Operating Income (NOI)</b> |       | \$28,750     |                |

# EXISTING SITE PLAN

# EXISTING SITE



- KEY**
- PROPERTY LINE
  - ASPHALT
  - CONCRETE
  - GRAVEL
  - GRASS
  - WOODED
  - PLANTING BED
  - WETLAND
  - DECIDUOUS TREE
  - EVERGREEN TREE
  - SHRUB
  - CHAIN LINK FENCE

**PARKING COUNT**  
TOTAL SPACES: 95

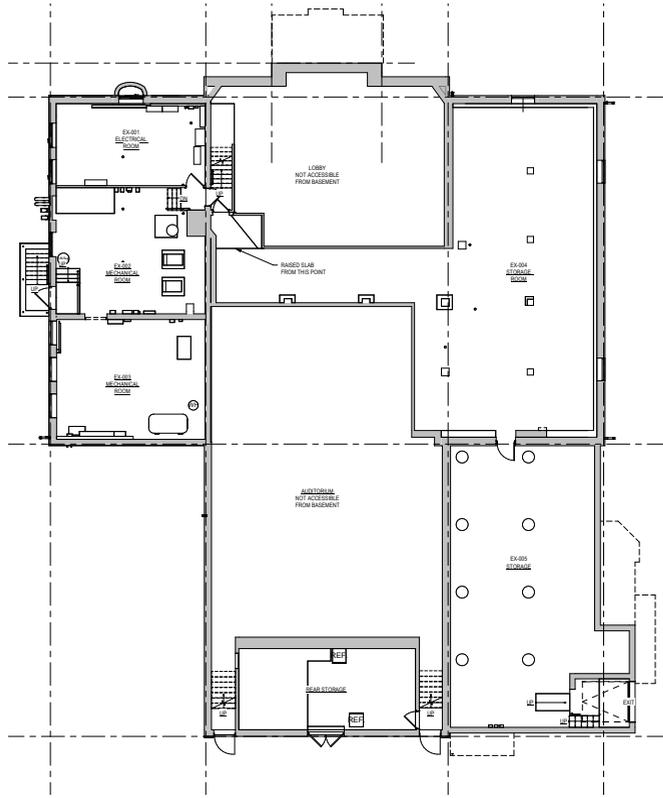
# EXISTING CONDITIONS DRAWINGS

# 74 POND STREET

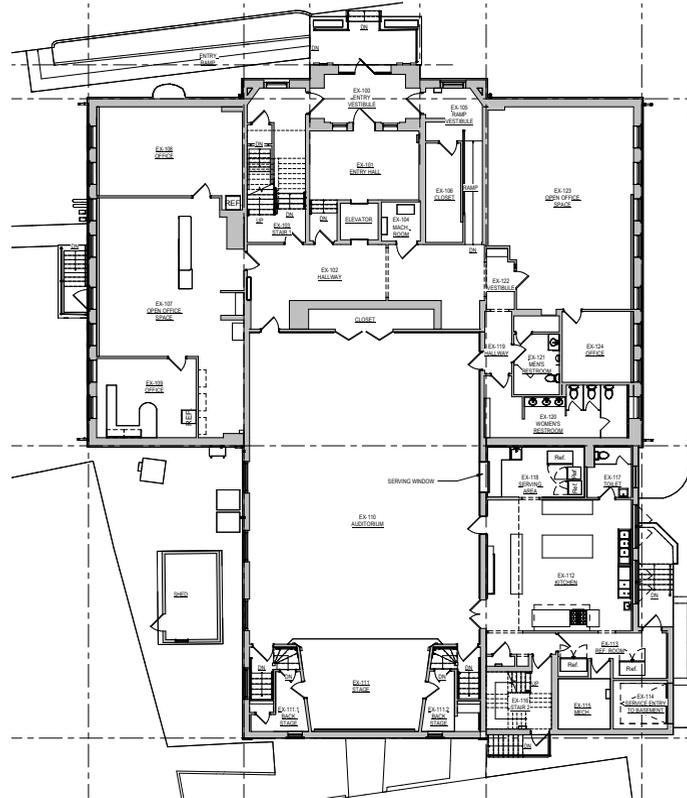
NOAH TORREY PRIMARY SCHOOL - PRIMARY SCHOOL

BUILT: 1926

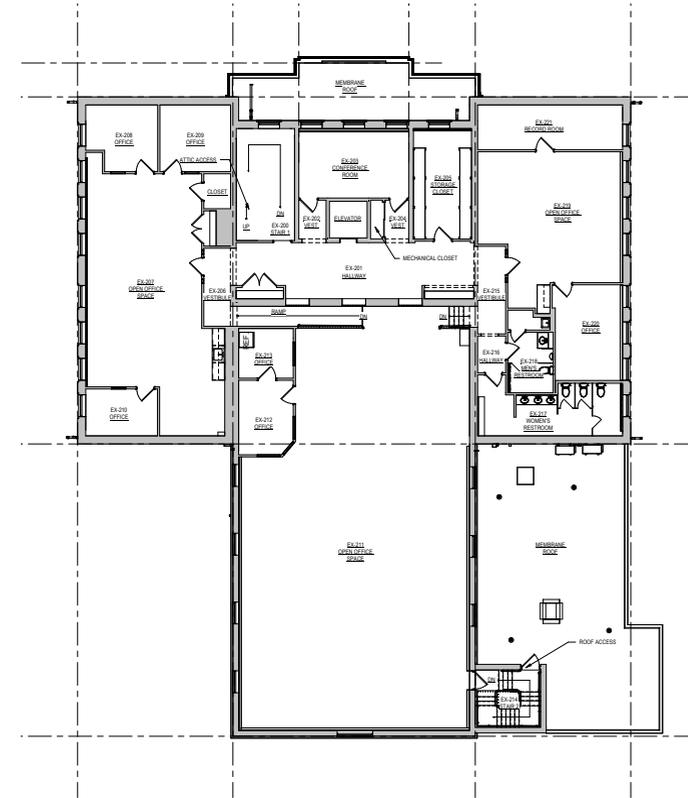
GROSS SF: 33,569 SF



BASEMENT PLAN



FIRST FLOOR PLAN



SECOND FLOOR PLAN

# EXISTING CONDITIONS PHOTOS

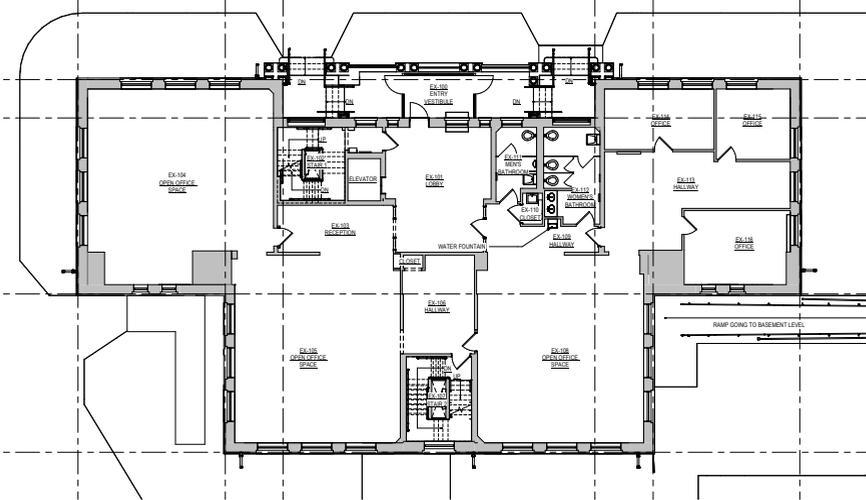
74 POND STREET



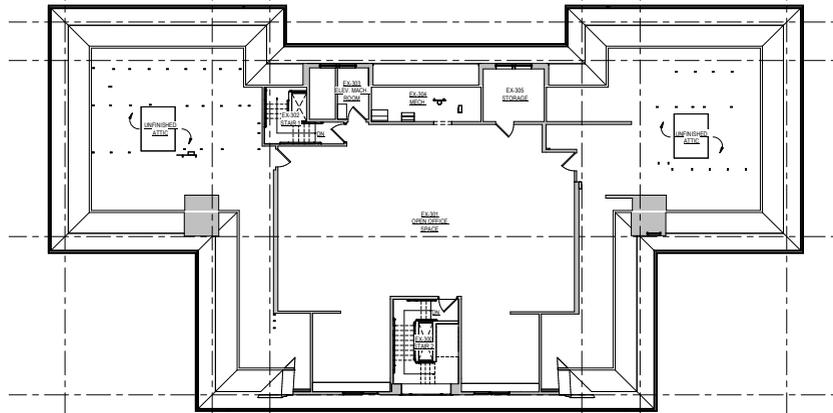
# EXISTING CONDITIONS DRAWINGS

90 POND STREET

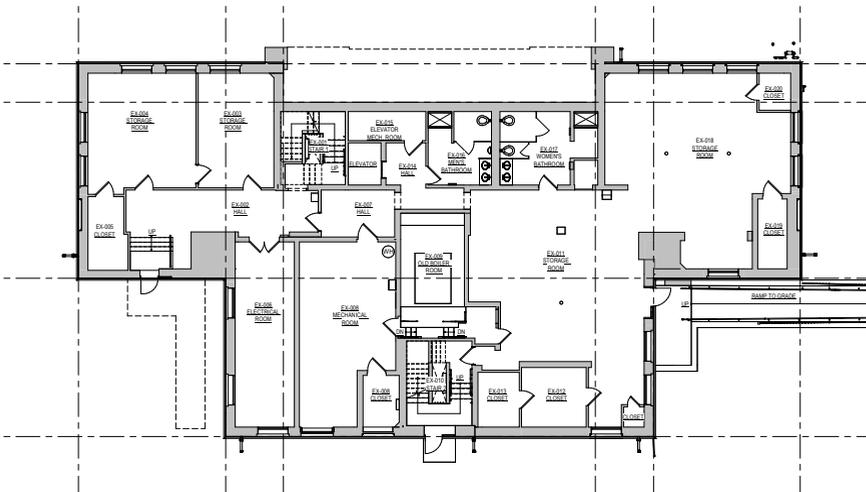
NOAH TORREY PRIMARY SCHOOL  
GRAMMAR SCHOOL  
BUILT: 1905  
GROSS SF: 20,231 SF



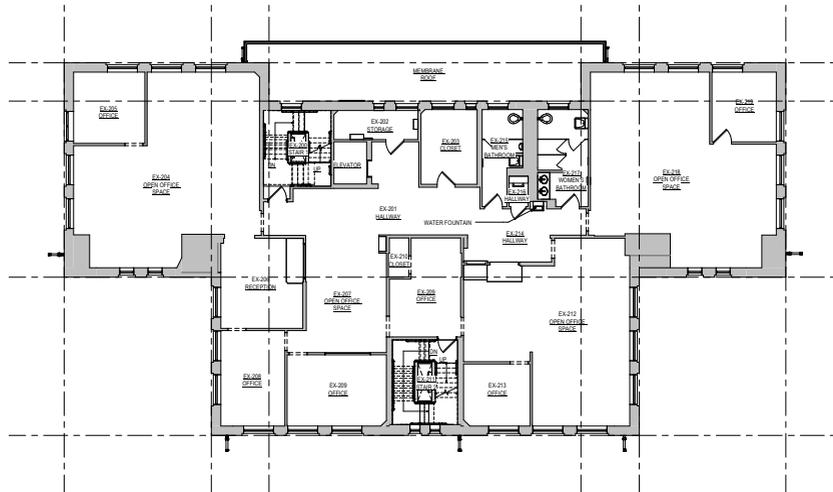
FIRST FLOOR PLAN



THIRD FLOOR PLAN



BASEMENT PLAN



SECOND FLOOR PLAN

# EXISTING CONDITIONS PHOTOS

90 POND STREET



# EXISTING CONDITIONS ASSESSMENT

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## 1. LANDSCAPE & SITE

- » Existing parking is adequate for current use, bus drop off access is functional.
- » Sidewalk and building accessibility is inconsistent.
- » The existing sports court and playground is in poor condition.

## 2. ARCHITECTURE

- » Exterior masonry is in fair condition at both buildings.
- » Painted wood trim and asphalt shingle roofing requires repair and replacement.
- » Both buildings will require new windows.
- » Improvements to exterior envelope required.
- » Existing stairs and elevators can be reused.
- » The existing kitchen at 74 Pond can be repurposed.
- » Interior finishes vary, 90 Pond being the worse of the two.

## 3. CODE

- » Existing buildings are not fully accessible. Accessibility updates are required for compliance both inside and out.

## 4. STRUCTURAL

- » Both structures are in good condition for reuse.

## 5. MECHANICAL, ELECTRICAL, PLUMBING & FIRE PROTECTION

- » New sprinklers are required throughout for proposed use.
- » Some of the existing mechanical system may be reused, but will need to be altered and additional equipment added.
- » New plumbing fixtures recommended throughout.
- » New electrical wiring and fixtures are recommended throughout.
- » Look for opportunities to add solar panels.

# CONCEPTUAL DESIGN ASSUMPTIONS & METHODOLOGY

## SITE ASSUMPTIONS

### OPEN SPACE

- » Keep the open space at the back of the site. Enhance the existing amenities and preserve open space adjacent to the Monatiquot River.

### HISTORIC EXTERIOR

- » Maintain the historic character of the front of the buildings along Pond Street.

### PARKING

- » Aim for 1.5 parking spaces per unit.
- » Provide building access from parking areas.

### SITE ACCESS

- » Provide accessible walkways throughout the site and connect to building entrances.
- » Separate pedestrian and vehicular circulation.

## BUILDING ASSUMPTIONS

### UNIT SIZES

- » Unit size GSFs.
  - Studio : 500-550 square feet (SF)
  - 1 Bedroom : 650-700 SF
  - 2 Bedroom : 950-1,000 SF
  - 3 Bedroom : 1,200-1,250 SF

### UNIT SIZE DISTRIBUTION

- » Higher percentage of studio and one bedroom units.
- » Lower percentage of two and three bedroom units.

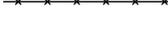
### REUSE OPPORTUNITIES

- » Reuse the existing vertical circulation - stairs & elevators.
- » Reuse the existing kitchen.

### PROPOSED PROGRAM

- » Provide supportive services and amenity spaces.

### KEY

-  PROPERTY LINE
-  ASPHALT
-  CONCRETE
-  GRAVEL
-  GRASS
-  WOODED
-  PLANTING BED
-  WETLAND
-  DECIDUOUS TREE
-  EVERGREEN TREE
-  SHRUB
-  CHAIN LINK FENCE



### PARKING COUNT

|                   |    |
|-------------------|----|
| TOTAL RES. UNITS: | 53 |
| 1.5X SPACES/UNIT  |    |
| REQUIRED SPACES:  | 80 |
| PROPOSED SPACES:  | 95 |



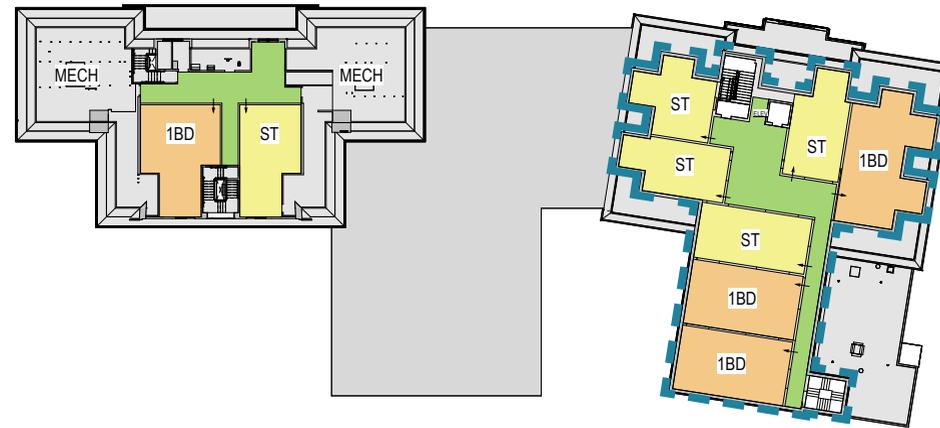
|                      |    |
|----------------------|----|
| <b>PARKING COUNT</b> |    |
| TOTAL RES. UNITS:    | 53 |
| 1.5X SPACES/UNIT     |    |
| REQUIRED SPACES:     | 80 |
| PROPOSED SPACES:     | 95 |

# CONCEPTUAL DESIGN LAYOUTS

## OPTION 1A - CONNECTOR



FIRST FLOOR PLAN



THIRD FLOOR PLAN

### COLOR KEY

- ST: 500-550 SF
- 1BD: 650-700 SF
- 2BD: 950-1,000 SF
- 3BD: 1,200-1,250 SF

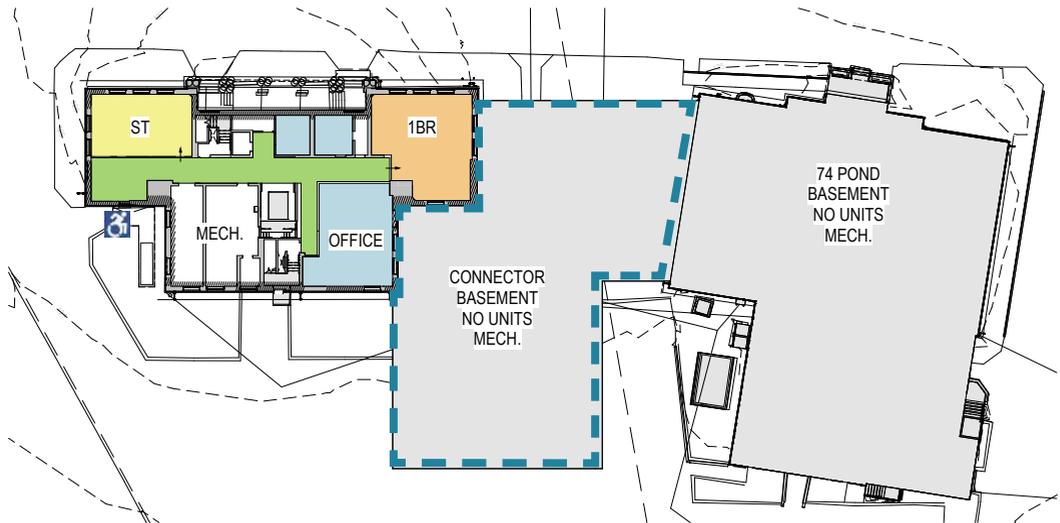
- CIRCULATION
- AMENITY
- ADDITION

### GROSS SF

- EXISTING: 47,407 SF
- ADDED: 30,012 SF
- PROPOSED: 77,419 SF

### UNIT COUNT

- STUDIO: 28
- 1 BED: 18
- 2 BED: 6
- 3 BED: 1
- TOTAL UNITS: 53



BASEMENT PLAN



SECOND FLOOR PLAN

# CONCEPTUAL DESIGN LAYOUTS

# OPTION 1A - CONNECTOR



NORTHWEST BIRDSEYE VIEW



NORTH VIEW FROM POND STREET



SOUTHEAST BIRDSEYE VIEW



SOUTHWEST VIEW FROM FAIRVIEW AVE

# CONCEPTUAL DESIGN LAYOUTS

# OPTION 1B - CONNECTOR + TOWNHOUSES



# CONCEPTUAL DESIGN LAYOUTS

# OPTION 1B - CONNECTOR + TOWNHOUSES



# CONCEPTUAL DESIGN LAYOUTS

## OPTION 1B - CONNECTOR + TOWNHOUSES



TOWNHOUSE PLAN



FIRST FLOOR PLAN

### COLOR KEY

- ST: 500-550 SF
- 1BD: 650-700 SF
- 2BD: 950-1,000 SF
- 3BD: 1,200-1,250 SF
- TOWNHOUSE: 1,200 SF

- CIRCULATION
- AMENITY
- ADDITION

### GROSS SF

|           |           |
|-----------|-----------|
| EXISTING: | 47,407 SF |
| ADDED:    | 40,812 SF |
| PROPOSED: | 88,219 SF |

### UNIT COUNT

|                     |           |
|---------------------|-----------|
| STUDIO:             | 28        |
| 1 BEDROOM:          | 18        |
| 2 BEDROOM:          | 6         |
| 3 BEDROOM:          | 1         |
| TOWNHOUSE:          | 9         |
| <b>TOTAL UNITS:</b> | <b>62</b> |

# CONCEPTUAL DESIGN LAYOUTS

# OPTION 1B - CONNECTOR + TOWNHOUSES



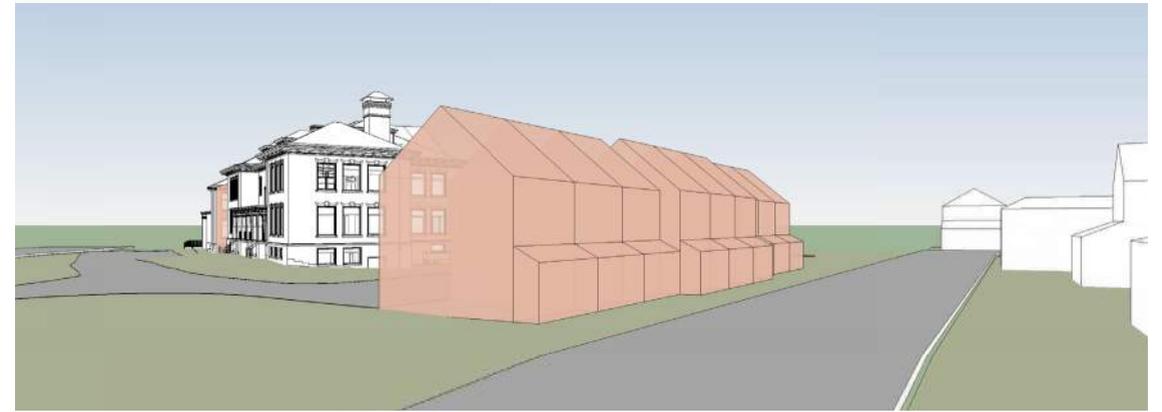
NORTHWEST BIRDSEYE VIEW



NORTH VIEW FROM POND STREET



SOUTHEAST BIRDSEYE VIEW



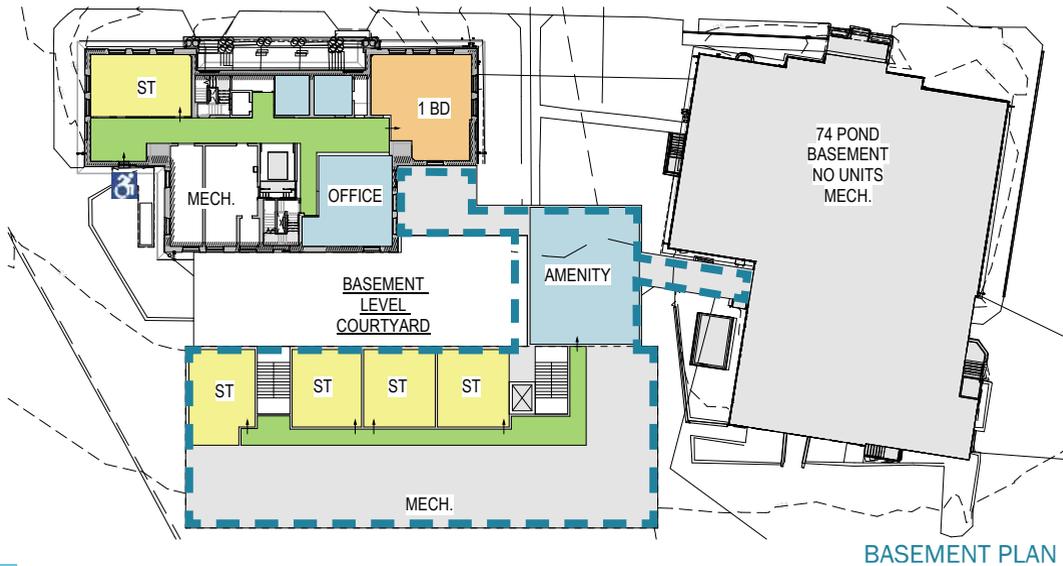
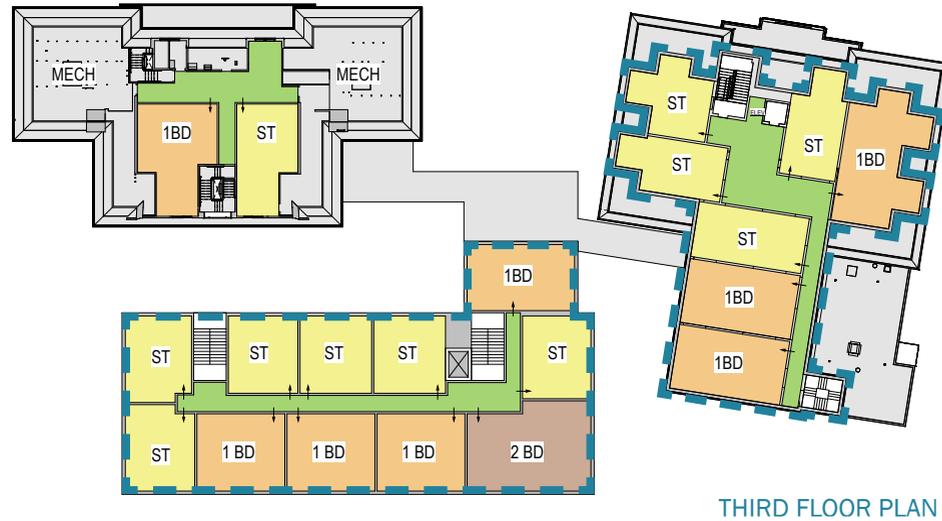
SOUTHWEST VIEW FROM FAIRVIEW AVE





# CONCEPTUAL DESIGN LAYOUTS

## OPTION 2A - THIRD BUILDING



### COLOR KEY

- ST: 500-550 SF
- 1BD: 650-700 SF
- 2BD: 950-1,000 SF
- 3BD: 1,200-1,250 SF

- CIRCULATION
- AMENITY
- ADDITION

### GROSS SF

- EXISTING: 47,407 SF
- ADDED: 45,706 SF
- PROPOSED: 93,113 SF

### UNIT COUNT

- STUDIO: 34
- 1 BED: 26
- 2 BED: 9
- 3 BED: 1
- TOTAL UNITS: 70



NORTHWEST BIRDSEYE VIEW



NORTH VIEW FROM POND STREET



SOUTHEAST BIRDSEYE VIEW



SOUTHWEST VIEW FROM FAIRVIEW AVE



# CONCEPTUAL DESIGN LAYOUTS

# OPTION 2B - THIRD BUILDING + TOWNHOUSES



- KEY**
- PROPERTY LINE
  - ASPHALT
  - CONCRETE
  - GRAVEL
  - GRASS
  - WOODED
  - PLANTING BED
  - WETLAND
  - DECIDUOUS TREE
  - EVERGREEN TREE
  - SHRUB
  - CHAIN LINK FENCE

|                      |     |
|----------------------|-----|
| <b>PARKING COUNT</b> |     |
| TOTAL RES. UNITS:    | 79  |
| 1.5X SPACES/UNIT     |     |
| REQUIRED SPACES:     | 119 |
| PROPOSED SPACES:     | 92  |

# CONCEPTUAL DESIGN LAYOUTS

## OPTION 2B - THIRD BUILDING + TOWNHOUSES



TOWNHOUSE PLAN



FIRST FLOOR PLAN

### COLOR KEY

- ST: 500-550 SF
- 1BD: 650-700 SF
- 2BD: 950-1,000 SF
- 3BD: 1,200-1,250 SF
- TOWNHOUSE: 1,200 SF

- CIRCULATION
- AMENITY
- ADDITION

### GROSS SF

|           |            |
|-----------|------------|
| EXISTING: | 47,407 SF  |
| ADDED:    | 56,506 SF  |
| PROPOSED: | 103,913 SF |

### UNIT COUNT

|                     |           |
|---------------------|-----------|
| STUDIO:             | 34        |
| 1 BEDROOM:          | 26        |
| 2 BEDROOM:          | 9         |
| 3 BEDROOM:          | 1         |
| TOWNHOUSE:          | 9         |
| <b>TOTAL UNITS:</b> | <b>79</b> |

# CONCEPTUAL DESIGN LAYOUTS

# OPTION 2B - THIRD BUILDING + TOWNHOUSES



NORTHWEST BIRDSEYE VIEW



NORTH VIEW FROM POND STREET



SOUTHEAST BIRDSEYE VIEW



SOUTHWEST VIEW FROM FAIRVIEW AVE

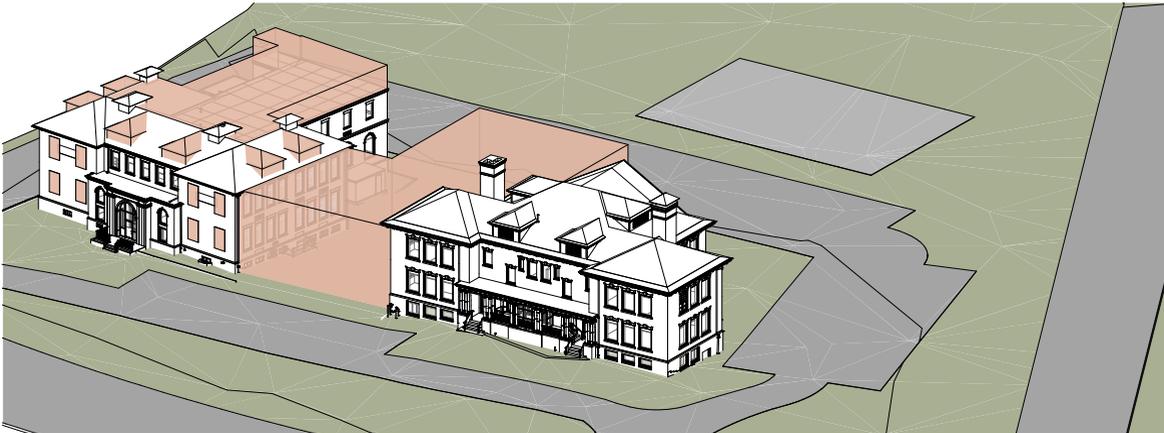
# CONCEPTUAL DESIGN LAYOUTS - 4 OPTIONS



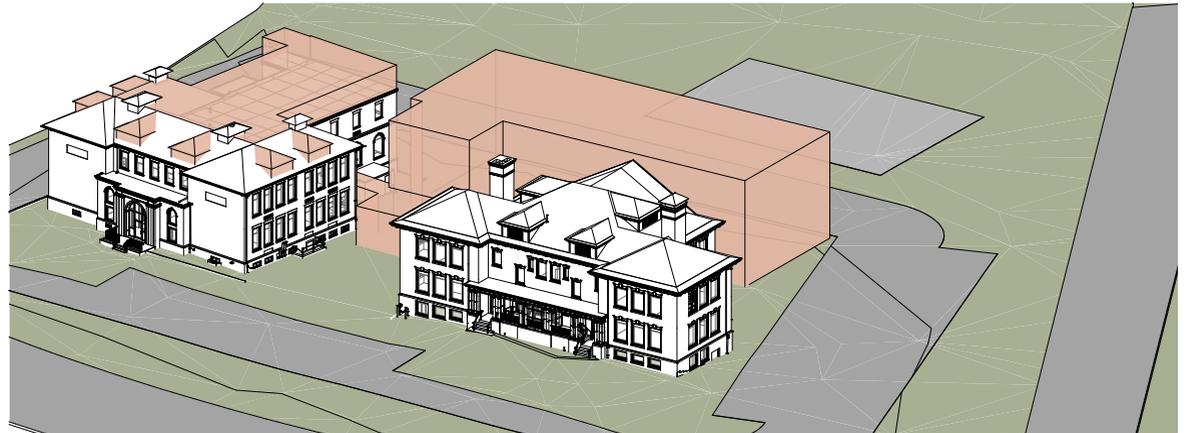
OPTION 1B - CONNECTOR + TOWNHOUSES  
62 RESIDENTIAL UNITS



OPTION 2B - THIRD BUILDING + TOWNHOUSES  
79 RESIDENTIAL UNITS



OPTION 1A - CONNECTOR  
53 RESIDENTIAL UNITS



OPTION 2A - THIRD BUILDING  
70 RESIDENTIAL UNITS

# POLL QUESTIONS

---

**Q1: Which of the following populations do you feel the Town should consider the highest priority for housing?**

- » 1: Veterans.
- » 2: Seniors.
- » 3: Both equal.
- » 4: Comments

# POLL QUESTIONS

---

## Q2: What level of affordable housing should the Town prioritize?

- » 1: The town should maximize affordable housing for those most in need.
- » 2: The town should try to provide affordable housing options for a wide range of income levels.
- » 3: The town should develop affordable housing alongside market rate development.
- » 4: Other, please comment.

## POLL QUESTIONS

---

### Q3: For Veteran & Senior Housing, do you feel there is a necessity for a bus stop closer to the project site?

- » 1: Yes, add a public bus stop.
- » 2: No, current bus access is sufficient.
- » 3: Comments.

## POLL QUESTIONS

---

### **Q4: Do you and your family use the play area or sports court behind the two buildings? Would you use it if it were upgraded?**

- » 1: I use it all the time and would continue to use it.
- » 2: No I don't use it but I would consider using it.
- » 3: No I don't use it and I likely would not use it.
- » 4: Comments.

## POLL QUESTIONS

---

**Q5: Would you like to have access to the Veteran/Senior Housing's Public Amenities as a community member?**

**Examples include social service offices, community meeting rooms and dining areas.**

- » 1: Yes, that would be beneficial.
- » 2: No, the amenities should be focused for the residents only.
- » 3: Comments.

## POLL QUESTIONS

---

### Q6: How important is maintaining the original historic appearance of these two buildings?

- » 1: Extremely important.
- » 2: Somewhat important.
- » 3: Less important.
- » 4: Not important.
- » 5: Comments.

## POLL QUESTIONS

---

### Q7: What is your preference of unit types on the site?

- » 1: I prefer the townhouse units.
- » 2: I do not prefer the townhouse units, keep the units concentrated at the main structure.
- » 3: Comments.

## POLL QUESTIONS

---

**Q8: We want to know more about you.**

**Which of these categories do you identify with?**

**Please select all that apply.**

- » 1: I am a Senior (55+).
- » 2: I am a Veteran.
- » 3: I currently live nearby - within walking distance.
- » 4: None of the above.
- » 5: Comments.

## DISCUSSION

---

- » **Please raise your hand in Zoom & we will try to call on people interested in speaking.**
- » **If we cannot get to your comment, please add it to the Zoom chat and we will do our best to address it.**
- » **Additional thoughts/questions? Please email: [msantucci@braintreema.gov](mailto:msantucci@braintreema.gov)**

Thank you for your time & feedback!



74 Pond



90 Pond

**TOWN OF BRAINTREE - AFFORDABLE HOUSING STUDY 74/90 POND STREET**

**PUBLIC CONCEPTUAL DESIGN MEETING**

**MAY 09, 2024**





74 Pond



90 Pond

## TOWN OF BRAINTREE - AFFORDABLE HOUSING STUDY 74/90 POND STREET

### FINAL CONCEPTUAL DESIGN MEETING

JUNE 6, 2024



# TODAY'S MEETING

---

## Agenda

### 1. SCHEDULE

### 2. PUBLIC MEETING DEBRIEF

- » Poll Results
- » Additional Feedback Received from Town
- » Groups to Reach out for Additional Information on Senior Needs

### 3. PREPARING INFORMATION FOR FINAL REPORT

- » Design Updates
- » Initial Cost Feedback
- » Update on Financial Analysis

### 4. NEXT STEPS

- » Review Format for Final Report

## Meeting Goals

- » Review Feedback from Town
- » Prepare for Final Report

# PROJECT SCHEDULE

| TOWN OF BRAINTREE AFFORDABLE HOUSING STUDY  |               |                         | JAN  |     | FEB  |      |      |     | MAR  |      |      |     | APR |      |      |      | MAY |      |      |      | JUN |      |      |      |
|---|---------------|-------------------------|------|-----|------|------|------|-----|------|------|------|-----|-----|------|------|------|-----|------|------|------|-----|------|------|------|
| PROPOSED SCHEDULE   | DURATION      | DATE RANGE              | 1/29 | 2/5 | 2/12 | 2/19 | 2/26 | 3/4 | 3/11 | 3/18 | 3/25 | 4/1 | 4/8 | 4/15 | 4/22 | 4/29 | 5/6 | 5/13 | 5/20 | 5/27 | 6/3 | 6/10 | 6/17 | 6/24 |
| <b>PHASE 1: Information Gathering</b>   | 12 wks        | 1/29/24 - 4/22/24       |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| <b>1 Project Kick-off: Understand Project Goals &amp; Collect Relevant Documents</b>  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Meet with Mayor & Town Staff to understand study goals. (virtual meeting)   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Identify key stakeholders and relevant ongoing Town initiatives. Confirm project schedule and deliverables.                                   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Collect & review existing building, site & regulatory documents   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| <b>2 Assessment: Visit Site &amp; Summarize Conditions</b>  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Meet on site to perform visual exploration of the existing buildings & site. (in-person meeting)  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Assess the findings to identify existing conditions which may impact housing feasibility and construction costs.                              |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| <b>2A Assessment: Create Measured Drawings</b>  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Create measured base drawings for buildings and site.   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| <b>3 Feasibility Analysis: Housing Opportunities &amp; Market Conditions</b>  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Meet with the Town's affordable housing organizations/advocates to collect info on community's housing needs and resources. (virtual meeting) |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Analyze Housing Opportunities for the building & site   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Analyze market conditions & funding opportunities   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| <b>4 Summary of Opportunities: Share Findings</b>   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Meet with Town project team (virtual meeting)   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| <b>PHASE 2: Conceptual Design &amp; Financial Viability</b>   | 10 wks        | 4/22/24 - 7/1/24        |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| <b>1 Initial Conceptual Design &amp; Engage Public</b>  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Identify what housing options w/in existing buildings and/or new construction. Present initial funding options.                               |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Meet with Town project team to review conceptual design report.(virtual meeting)  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Public meeting to share initial findings & elicit feedback. (virtual meeting)   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Online polls and options for additional public feedback.  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| <b>2 Final Conceptual Design</b>  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Identify what housing options w/in existing buildings and/or new construction. Present initial funding options.                               |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Meet with Town project team to review conceptual design report.(virtual meeting)  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| <b>3 Financial Feasibility of Design</b>  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Construction cost estimate for buildings & site   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Proforma  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| <b>4 Final Report</b>   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Meet with Town project team to review conceptual design report.(virtual meeting)  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Compiled Study report with deliverables from each task above + executive summary  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| <b>OVERALL PROPOSED SCHEDULE</b>  | <b>22 wks</b> | <b>1/29/24 - 7/1/24</b> |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |

# PUBLIC MEETING DEBRIEF

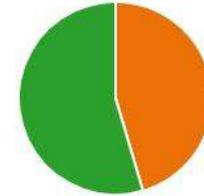
## POLL RESULTS

### QUESTION 1

- » Which of the following populations do you feel the Town should consider the highest priority for housing?
- » **Veterans - 0**
- » **Seniors - 5**
- » **Both Equal - 6**

1. Which of the following populations do you feel the Town should consider the highest priority for housing?

|             |   |
|-------------|---|
| Veterans.   | 0 |
| Seniors.    | 5 |
| Both equal. | 6 |



### SELECTED PUBLIC POLL COMMENTS

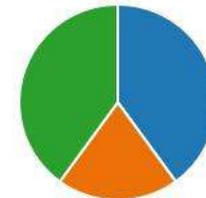
- » Housing for young adults with special needs should be considered by the town.

### QUESTION 2

- » What level of affordable housing should the Town prioritize?
- » **Maximize affordable housing for those most in need. - 2**
- » **Provide affordable housing options for a wide range of income levels. - 1**
- » **Develop affordable housing alongside market rate development. - 2**

1. What level of affordable housing should the Town prioritize?

|                                    |   |
|------------------------------------|---|
| Maximize affordable housing fo...  | 2 |
| Provide affordable housing opti... | 1 |
| Develop affordable housing alo...  | 2 |



### SELECTED PUBLIC POLL COMMENTS

- » No comments.

# PUBLIC MEETING DEBRIEF

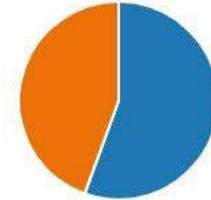
## POLL RESULTS

### QUESTION 3

- » For Veteran & Senior Housing, do you feel there is a necessity for a bus stop closer to the project site?
- » **Yes, add a public bus stop. - 5**
- » **No, current bus access is sufficient. - 4**

1. For Veteran & Senior Housing, do you feel there is a necessity for a bus stop closer to the project site?

- Yes, add a public bus stop. 5
- No, current bus access is sufficient. 4



### SELECTED PUBLIC POLL COMMENTS

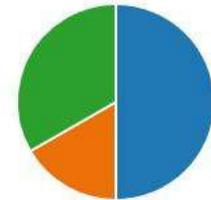
- » No comments.

### QUESTION 4

- » Do you and your family use the play area or sports court behind the two buildings? Would you use it if it were upgraded?
- » **I use it all the time and would continue to use it. - 3**
- » **No, I don't use it but I would consider using it - 1**
- » **No, I don't use it and I likely would not use it. - 2**

1. Do you and your family use the play area or sports court behind the two buildings? Would you use it if it were upgraded?

- I use it all the time and would continue to use it. 3
- No, I don't use it but I would consider using it. 1
- No, I don't use it and I likely would not use it. 2



### SELECTED PUBLIC POLL COMMENTS

- » The Launch program located at the 74 Pond St uses the basketball for their fitness.

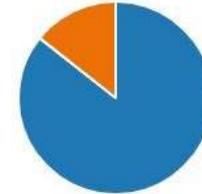
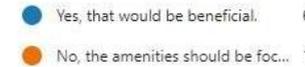
# PUBLIC MEETING DEBRIEF

## POLL RESULTS

### QUESTION 5

- » Would you like to have access to the Veteran/Senior Housing's Public Amenities as a community member? Examples include social service offices, community meeting rooms, and dining areas.
- » **Yes, that would be beneficial. - 6**
- » **No, the amenities should be focused for the residents only. - 1**

1. Would you like to have access to the Veteran/Senior Housing's Public Amenities as a community member? Examples include social service offices, community meeting rooms, and dining areas.



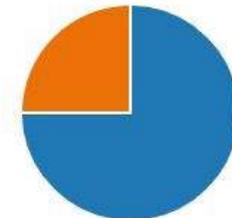
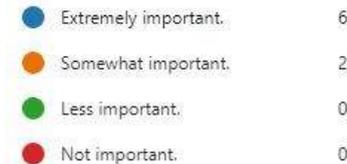
### SELECTED PUBLIC POLL COMMENTS

- » They can be open to the public of the town but the safety of the residents needs to be prioritized.

### QUESTION 6

- » How important is maintaining the original historic appearance of these two buildings?
- » **Extremely important. - 6**
- » **Somewhat important. - 2**
- » **Less important. - 0**
- » **Not important. - 0**

1. How important is maintaining the original historic appearance of these two buildings?



### SELECTED PUBLIC POLL COMMENTS

- » No comments.

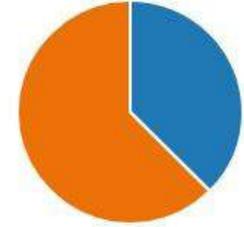
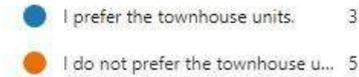
# PUBLIC MEETING DEBRIEF

## POLL RESULTS

### QUESTION 7

- » What is your preference of unit types on the site?
- » **I prefer the townhouse units. - 3**
- » **I do not prefer the townhouse units, keep the units concentrated at the main structure. - 5**

1. What is your preference of unit types on the site?



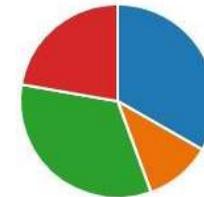
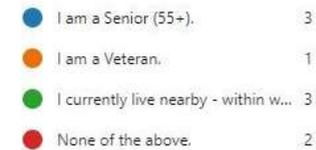
### SELECTED PUBLIC POLL COMMENTS

- » The townhouses might create more traffic at the Fairview Ave.

### QUESTION 8

- » We want to know more about you. Which of these categories do you identify with? Select all that apply.
- » **I am a Senior (55+). - 3**
- » **I am a Veteran. - 1**
- » **I currently live nearby - within walking distance. - 3**
- » **None of the above. - 2**

1. We want to know more about you. Which of these categories do you identify with? Select all that apply.



### SELECTED PUBLIC POLL COMMENTS

- » No relevant comments.

# PUBLIC MEETING DEBRIEF

---

## ADDITIONAL FEEDBACK RECEIVED FROM THE TOWN

- » Written polls?
- » Any other communication that came from meeting?

## SOURCES PROVIDING ADDITIONAL INFORMATION ON SENIOR NEEDS

- » South Shore Elder Services
- » Father Bill & MainSpring
- » Independence Manor
- » Braintree Housing Authority
- » Other suggestions?

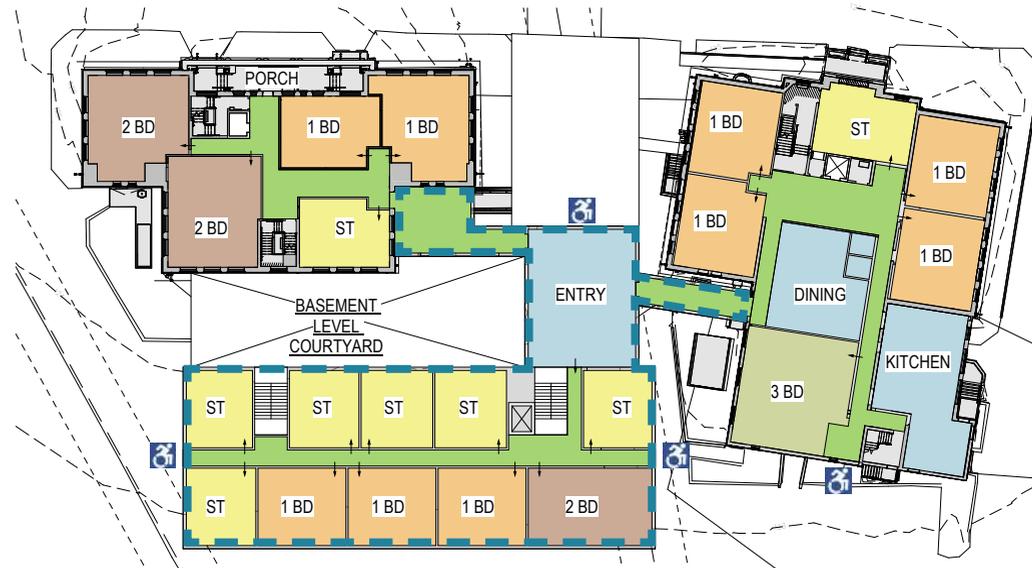




| PARKING COUNT     |     |
|-------------------|-----|
| TOTAL RES. UNITS: | 79  |
| 1.5X SPACES/UNIT  |     |
| REQUIRED SPACES:  | 119 |
| PROPOSED SPACES:  | 92  |



TOWNHOUSE PLAN



FIRST FLOOR PLAN

### COLOR KEY

- ST: 500-550 SF
- 1BD: 650-700 SF
- 2BD: 950-1,000 SF
- 3BD: 1,200-1,250 SF
- TOWNHOUSE: 1,200 SF

- CIRCULATION
- AMENITY
- ADDITION

### GROSS SF

|           |            |
|-----------|------------|
| EXISTING: | 47,407 SF  |
| ADDED:    | 56,506 SF  |
| PROPOSED: | 103,913 SF |

### UNIT COUNT

|                     |           |
|---------------------|-----------|
| STUDIO:             | 34        |
| 1 BEDROOM:          | 26        |
| 2 BEDROOM:          | 9         |
| 3 BEDROOM:          | 1         |
| TOWNHOUSE:          | 9         |
| <b>TOTAL UNITS:</b> | <b>79</b> |



NORTHWEST BIRDSEYE VIEW



POND STREET VIEW



NORTHWEST POND STREET VIEW



TOWNHOUSE ENTRY VIEW



FRONT ENTRY COURTYARD VIEW

# FINAL REPORT - INITIAL COST FEEDBACK

## DRAFT CONSTRUCTION COST ESTIMATE

### RENOVATION OF EXISTING BUILDINGS AND NEW 3-STORY BUILDING

- » 93,000 GSF
- » 70 UNITS
- » \$41,415,000 EST. COST
- » APPROX. \$445/SF
- » APPROX. \$590,000/UNIT

### NEW TOWN HOUSES

- » 10,800 GSF
- » 9 UNITS
- » \$7,175,000 EST. COST
- » APPROX. \$650/SF
- » APPROX. \$780,000/UNIT

### COMBINED

- » 103,800 GSF
- » 79 UNITS
- » \$48,590,000 EST. COST
- » APPROX. \$470/SF
- » APPROX. \$615,000/UNIT

### NOTES:

- » OPEN SHOP LABOR
- » 15% DESIGN & PRICING CONTINGENCY
- » NO HAZARDOUS MATERIALS ABATEMENT (SITE OR BUILDINGS)
- » NO ESCALATION
- » COSTS DO NOT INCLUDE SOFT COSTS, OR LAND PURCHASE

# UPDATE ON FINANCIAL ANALYSIS

## Housing Delivery Methods - HOW AFFORDABLE IS IT?

### » Dedicated Affordable Housing

- Maximize Affordable Housing delivery.
- Higher proportions of restricted units.
- Deeper level of affordability set aside.
- Lower AMI (<80% and <60%).
- Deeply subsidized (ex. LIHTC).
- **Specialized developers.**

### » Mixed Income

- Develop additional Affordable Housing alongside market-rate development.
- Developed under inclusionary zoning measures (ex. Chapter 40B).
- Higher AMI (80%-120%).
- Capital funding sources & operating subsidies support these properties.
- Subsidies may go unused due to administrative & technical burden.
- **Traditional market-rate developers.**

## Development Scenarios - RENTAL OR OWNERSHIP?

### » Rental Models

- Market Rate baseline
- 100% Affordable @ 60% AMI (typical LIHTC)
- 25% Affordable @ 80% AMI (typical 40B)

### » Ownership Models

- Market Rate baseline
- Affordable For Sale Condominium

# UPDATE ON FINANCIAL ANALYSIS

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## MODELLING APPROACH

- » **Model development pro-formas for a variety of housing types** in order to determine where there might be opportunities for the market to recognize value.
- » Look at the **gap between what units cost to build and what units are able to generate** in an implied value based on restricted rent or sales price.
- » Look at the **gap analysis through the lens of capital funding sources** available to developers to close that gap and make the projects feasible.
- » Look at **specific program guidelines and limitations to identify opportunities and obstacles** for funding specific programmatic housing options.

# UPDATE ON FINANCIAL ANALYSIS

## HOUSING FEASIBILITY ANALYSIS: RENTAL MODEL FINDINGS

- » Market Rate Baseline
  - Market rents are a function of: cost to operate, cost to construct, cost of land.
  - A project cost \$575,000/unit to build needs to generate rents \$3,731/month to justify the cost to develop the unit.
  - Rents at an average of \$3,731 /month support themselves but would have to be higher to provide a cross-subsidy to support Affordable Units.
  - A household would need to make \$150,000/year for \$3,731 rents to not cost burden them.
  - **Current market rates w/in Braintree fall short of \$3,731 on average, making market rental developments difficult to pencil in the current market.**

### Market Breakeven Rent

| Development Proforma                  |  | Per Unit  |
|---------------------------------------|--|-----------|
| <b>Cost to Develop</b>                |  |           |
| Land                                  |  | \$40,000  |
| Construction Cost                     |  | \$400,000 |
| Profit and Incentive                  |  | \$135,000 |
| <b>Total Development Cost (Value)</b> |  | \$575,000 |
| Capitalization Rate                   |  | 5.00%     |
| <b>Required NOI to Support Value</b>  |  | \$28,750  |

| Operating Proforma                |       | \$/Unit/Year | \$/Unit/Month  |
|-----------------------------------|-------|--------------|----------------|
| <b>Income</b>                     |       |              |                |
| Rental Income                     |       | \$44,769     | <b>\$3,731</b> |
| Vacancy Allowance                 | 5.00% | (\$2,238)    |                |
| <b>Expenses</b>                   |       |              |                |
| Operating Expenses                | 30%   | (\$13,431)   |                |
| Replacement Reserves              |       | (\$350)      |                |
| <b>Net Operating Income (NOI)</b> |       | \$28,750     |                |

# FINAL REPORT - OVERVIEW

## PROPOSED TABLE OF CONTENTS

### EXECUTIVE SUMMARY & RECOMMENDATIONS

- Study Goals & Process .....2**
  - Introduction*
  - Study Goals*
  - Study Process*
- Housing Background.....4**
  - Demographics & Housing Costs*
  - Senior & Veteran Specific Needs*
  - Feedback from Local Agencies*
  - Housing Development Methods*
- Financial Analysis.....6**
  - Economic Analysis*
  - Modeling Approach*
  - Findings*
- Design Recommendations..... 12**
  - Building & Site Existing Conditions*
  - Programming & Massing*
  - Unit Mix & Amenities*
  - Construction Costs*
  - Financial Conclusions*

### THE STUDY STEP-BY-STEP:

#### I. INFORMATION GATHERING

- 2/2/24 Kick-Off Meeting*
- 2/7/24 Site Assessment*
- Building Scans & Site Survey*
- 3/15/24 Housing Needs Discussion*
- 4/11/24 Review of Assessment*

#### II. CONCEPTUAL PLAN & FINANCIAL VIABILITY

- 5/2/24 Conceptual Design Meeting 1*
- 5/9/24 Public Meeting*
- 6/6/24 Conceptual Design Meeting 2*
- 6/27/24 Review of Final Report*

#### APPENDICES

- Cost Estimate Back-up Information.....A*
- Online Polls & Stakeholder Feedback.....B*
- Financial Analysis - Technical Memo .....C*

# NEXT STEPS

- » **Coordinate Estimate & Proforma**
- » **Final Report**
- » **Meet to review Thursday, June 27th - Rescheduled from June 20th**

| TOWN OF BRAINTREE AFFORDABLE HOUSING STUDY  |               |                         | JAN  |     | FEB  |      |      |     |      | MAR  |      |     |     | APR  |      |      |     |      | MAY  |      |     |      | JUN  |      |  |  |
|---|---------------|-------------------------|------|-----|------|------|------|-----|------|------|------|-----|-----|------|------|------|-----|------|------|------|-----|------|------|------|--|--|
| PROPOSED SCHEDULE   | DURATION      | DATE RANGE              | 1/29 | 2/5 | 2/12 | 2/19 | 2/26 | 3/4 | 3/11 | 3/18 | 3/25 | 4/1 | 4/8 | 4/15 | 4/22 | 4/29 | 5/6 | 5/13 | 5/20 | 5/27 | 6/3 | 6/10 | 6/17 | 6/24 |  |  |
| <b>PHASE 2: Conceptual Design &amp; Financial Viability</b>   | 10 wks        | 4/22/24 - 7/1/24        |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |  |
| <b>1 Initial Conceptual Design &amp; Engage Public</b>  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |  |
| Identify what housing options w/in existing buildings and/or new construction. Present initial funding options. |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |  |
| Meet with Town project team to review conceptual design report.(virtual meeting)                                |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |  |
| Public meeting to share initial findings & elicit feedback. (virtual meeting)                                   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |  |
| Online polls and options for additional public feedback.  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |  |
| <b>2 Final Conceptual Design</b>  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |  |
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| <b>3 Financial Feasibility of Design</b>  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |  |
| Construction cost estimate for buildings & site   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |  |
| Proforma  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |  |
| <b>4 Final Report</b>   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |  |
| Meet with Town project team to review conceptual design report.(virtual meeting)                                |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |  |
| Compiled Study report with deliverables from each task above + executive summary                                |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |  |
| <b>OVERALL PROPOSED SCHEDULE</b>  | <b>22 wks</b> | <b>1/29/24 - 7/1/24</b> |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |  |



74 Pond



90 Pond

## TOWN OF BRAINTREE - AFFORDABLE HOUSING STUDY 74/90 POND STREET

### CONCEPTUAL DESIGN REPORT MEETING

JUNE 27, 2024



# TODAY'S MEETING

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## Agenda

### 1. SCHEDULE

### 2. HOUSING NEEDS FOLLOW UP

- » Hallie Lipa & Donna Shecrallah at South Shore Elder Services
- » Jonathan Lanham at Father Bills
- » Katie Barker at Independence Manor
- » Lauren Murphy at BHA

### 3. EXAMPLE PROJECTS

### 4. PROFORMA REVIEW

### 5. REVIEW DRAFT FINAL REPORT PROGRESS

## Meeting Goals

- » Review Content for Final Report
- » Review Proforma
- » Confirm Deliverable and Review Timeline

# PROJECT SCHEDULE

| TOWN OF BRAINTREE AFFORDABLE HOUSING STUDY  |               |                         | JAN  |     | FEB  |      |      |     | MAR  |      |      |     | APR |      |      |      | MAY |      |      |      | JUN |      |      |      |
|---|---------------|-------------------------|------|-----|------|------|------|-----|------|------|------|-----|-----|------|------|------|-----|------|------|------|-----|------|------|------|
| PROPOSED SCHEDULE   | DURATION      | DATE RANGE              | 1/29 | 2/5 | 2/12 | 2/19 | 2/26 | 3/4 | 3/11 | 3/18 | 3/25 | 4/1 | 4/8 | 4/15 | 4/22 | 4/29 | 5/6 | 5/13 | 5/20 | 5/27 | 6/3 | 6/10 | 6/17 | 6/24 |
| <b>PHASE 1: Information Gathering</b>   | 12 wks        | 1/29/24 - 4/22/24       |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| <b>1 Project Kick-off: Understand Project Goals &amp; Collect Relevant Documents</b>  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Meet with Mayor & Town Staff to understand study goals. (virtual meeting)   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Identify key stakeholders and relevant ongoing Town initiatives. Confirm project schedule and deliverables.                                   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Collect & review existing building, site & regulatory documents   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| <b>2 Assessment: Visit Site &amp; Summarize Conditions</b>  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Meet on site to perform visual exploration of the existing buildings & site. (in-person meeting)  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Assess the findings to identify existing conditions which may impact housing feasibility and construction costs.                              |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| <b>2A Assessment: Create Measured Drawings</b>  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Create measured base drawings for buildings and site.   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| <b>3 Feasibility Analysis: Housing Opportunities &amp; Market Conditions</b>  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Meet with the Town's affordable housing organizations/advocates to collect info on community's housing needs and resources. (virtual meeting) |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Analyze Housing Opportunities for the building & site   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Analyze market conditions & funding opportunities   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| <b>4 Summary of Opportunities: Share Findings</b>   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Meet with Town project team (virtual meeting)   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| <b>PHASE 2: Conceptual Design &amp; Financial Viability</b>   | 10 wks        | 4/22/24 - 7/1/24        |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
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| <b>2 Final Conceptual Design</b>  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Identify what housing options w/in existing buildings and/or new construction. Present initial funding options.                               |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
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| Construction cost estimate for buildings & site   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Proforma  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| <b>4 Final Report</b>   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
| Meet with Town project team to review conceptual design report.(virtual meeting)  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |
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| <b>OVERALL PROPOSED SCHEDULE</b>  | <b>22 wks</b> | <b>1/29/24 - 7/1/24</b> |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |

# HOUSING NEEDS

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## HALLIE LIPA & DONNA SHECRALLAH - SOUTH SHORE ELDER SERVICES

### Current Challenges

- » Lack of availability of affordable housing is one of the biggest challenges. The wait list keeps growing.
- » Wait lists are typically over 1 year long.
- » More people are applying at a younger age due to long wait times.
- » Properties are being sold due to high property value. Seniors who rent are being evicted or the rent is raised too high.
- » Seniors who own housing are stuck because options to downsize are not available, many are living in oversized housing.
- » Shelters are not an option for those on oxygen due to smokers. No options for non-smoking shelters.
- » Seniors want to stay in town where they live: closer to family / spouses, friends, religious organizations, doctors, etc.

### Required Amenities

- » Supportive Housing is needed with on-site staff.
- » Bringing activities to seniors is key since COVID.
- » Senior housing needs to accommodate the needs of folks who wander (dementia).
- » 2 Bedroom Units are useful for those who require live-in caregivers.
- » Scituate Housing Authority - good example of supportive housing facilities - South Shore Elder Services provides case managers and runs activities.

# HOUSING NEEDS

## JONATHAN LANHAM - FATHER BILLS

Elders (60+) served in shelter and serviced in housing over the past 5 years:

|            |              |             |   |
|------------|--------------|-------------|---|
| » FY 2019: | Shelter 293  | Housing 167 |   |
| » FY 2020: | Shelter 290  | Housing 186 |   |
| » FY 2021: | Shelter 178* | Housing 223 | *COVID regulations limited shelter capacity |
| » FY 2022: | Shelter 239* | Housing 277 | *COVID regulations limited shelter capacity |
| » FY 2023: | Shelter 361  | Housing 270 |   |

## KATIE BARKER - INDEPENDENCE MANOR (3 BUILDINGS)

94 Total Units at 41 Independence Ave; Average wait list time: 1.5 years.

- » 24 rented through BHA: 23 one-bedroom units & 1 two-bedroom unit (wait list maintained).
- » 56 one-bedroom units; 14 two-bedroom units.

50 Total Units at 53 Independence Ave; Average wait list time: 1.5 years.

- » 50 one-bedroom units.
- » Subsidy: HUD Project Based Section 8 / 202 - Elderly (62+); rent = 30% of adjusted income.
- » Includes mandatory meal program (1 meal/day) Monday - Friday @ \$175 / mo.
- » Income Guidelines: Max income is 80% AMI.
- » Asset Limit for Admission: below \$100,000 (new requirement per HOTMA guidelines).

Support Services Available:

- » Homemaking
- » Laundry
- » Grocery Shopping
- » Medication Reminders
- » Personal Care Assistance

# HOUSING NEEDS

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- » 16 Total Units at 49 Independence Ave; Average wait list time: 2 years.
  - » 16 one-bedroom units, 3 of which is ADA accessible.
  - » Subsidy: HUD Project Based Section 8 / 202 - Elderly (62+); rent = 30% of adjusted income.
  - » Includes mandatory meal program (1 meal/day) Monday - Friday @ \$175 / mo.
  - » Income Guidelines: Max income is 50% AMI.
  - » Asset Limit for Admission: below \$100,000 (new requirement per HOTMA guidelines).

## LAUREN MURPHY - BHA

- » Current housing through BHA: 162 1 bedroom units for elderly or disabled with an income limit at 80% AMI or less.
- » 17 Congregate housing units - efficiency style with 1/2 bath and shared showers (80% AMI or less).
- » 24 units at Independence Manor - MRVP Project based units for elderly only - Building 41.
- » 60 family units - MRVP project based family units located at Skyline Drive Apartments.
- » 504 Section 8 vouchers - 15,787 on waitlist.
- » 667 housing units, 15,787 people on the waitlist, 304 applicants are local, 367 veterans (17 Local Vets). Estimated wait time for local applicants: 1-3 years.

# SIMILAR DEVELOPMENT PROJECTS

## Oxford Town Residences (senior) - Fairhaven, MA

Adaptive reuse of an existing historic school and new construction serving Fairhaven's Senior population (62+). There are a total of 52 new apartment units, 45 of which are affordably priced and rented to 60% AMI individuals, 11 rented to 30% AMI, and 6 are for homeless individuals. Also available on site are onsite parking, 24-hour emergency maintenance, game room, wellness center, a community room with a kitchen and bathroom tenant storage rooms, upper floor lounge and a central laundry facility. Completed: 2022.



## West Newton Armory - Newton, MA

This project includes an adaptive reuse of the former West Newton Armory Site into 43 developed residential units. Unit distribution will serve majority of households with incomes below 60% AMI and some 30% AMI households. Unit mix includes 15 one-bedroom, 21 two-bedroom, and 7 three-bedroom units. Each unit will be visitable and 5 will be fully accessible. Amenities include preservation and restoration of the historic head house into an office, gallery and community space. Estimated completion: 2026.



## 62 Packard Street - Hudson, MA

Adaptive reuse of the former Hudson Police Station with a focus on neighborhood-scale housing as well as balancing housing and open space. Proposed design includes 40 affordable rental units distributed amongst a majority of households with incomes below 60% AMI and some 30% AMI households. Unit mix includes 13 one-bedroom, 22 two-bedroom and 5 three-bedroom units, with 9 of those units specified as townhouses. Each unit will be visitable and 5 will be fully accessible. Amenities include outdoor gathering spaces, community rooms, tenant storage lockers, and on-site laundry. Estimated completion: October 2024.



# SIMILAR DEVELOPMENT PROJECTS

## Henry T. Wing School Res. (senior) - Sandwich, MA

This project includes the preservation and adaptive reuse of the former Henry T Wing School into 80% affordable senior housing (62+). The project is projected to split into 3 phases, offering a total of 128 affordable housing units. The existing auditorium would be restored and used as a community space, including lounges, a dining area, community kitchen, game rooms, spaces for service agencies, shared laundry facilities, and storage units. Outdoor spaces include trellis bridges, outdoor courtyards and sitting areas.

Estimated completion: July 2025.



## Fulton School Residences (senior) - Weymouth, MA

Adaptive reuse of the former Alice B. Fulton School into 63 affordable housing for the senior community. A priority of the project was the historic renovation of the existing building. Unit mix includes one and two bedroom apartments with fully-equipped kitchen and bathrooms, high thermal window units, and split heating and high efficiency air conditioning systems. Amenities include central laundry system, dedicated storage units, and off-street parking. Construction completed 2011.



## Simpkins School Residences (senior) - Yarmouth, MA

This project includes the adaptive reuse of the historic John Simpkins School into a 65 unit senior housing community. Unit mix includes studio, one-bedroom, and two-bedroom homes and construction focused on providing Energy Star rated units with a restored brick facade. Construction completed 2015.



# FINAL REPORT - INITIAL COST FEEDBACK

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- » \$48,590,000 EST. COST
- » APPROX. \$470/SF
- » APPROX. \$615,000/UNIT

### NOTES:

- » OPEN SHOP LABOR
- » 15% DESIGN & PRICING CONTINGENCY
- » NO HAZARDOUS MATERIALS ABATEMENT (SITE OR BUILDINGS)
- » NO ESCALATION
- » COSTS DO NOT INCLUDE SOFT COSTS, OR LAND PURCHASE

# PROFORMA REVIEW

|   |                     |                             |  |  |  |          |  |
|---|---------------------|-----------------------------|--|--|--|----------|--|
| One Stop2000 Affordable Housing Finance Application [Version 1.21] ©          |                     |                             |  |  |  | Page A-1 |  |
| <h2>Project Summary Information</h2>  |                     |                             |  |  |  |          |  |
| NOTE: Do not fill out this section. It is automatically filled in by program. |                     |                             |  |  |  |          |  |
| Project Name  | 74 & 90 Pond Street |                             |  |  |  |          |  |
| Developer   | N/A                 |                             |  |  |  |          |  |
| Community   | Braintree           |                             |  |  |  |          |  |
| Number of Units   | 70                  |                             |  |  |  |          |  |
| SRO   | 0                   | Low-Income, Rental Assisted |  |  |  | 22       |  |
| 0 bedroom   | 34                  | Low-Income, Below 50%       |  |  |  | 0        |  |
| 1 bedroom   | 26                  | Low-Income, Below 60%       |  |  |  | 48       |  |
| 2 bedrooms  | 9                   | Other Income 100%           |  |  |  | 0        |  |
| 3 bedrooms  | 1                   | Market Rate                 |  |  |  | 0        |  |
| 4 bedrooms  | 0                   |                             |  |  |  |          |  |

# UPDATE ON FINANCIAL ANALYSIS

|                          |                                |                                     |                             |                     |
|--------------------------|--------------------------------|-------------------------------------|-----------------------------|---------------------|
|                          | This is an application for:    | DHCD Tax Credit Allocation .....    | No                          |                     |
|                          |                                | HOME Funding through DHCD .....     | No                          |                     |
|                          |                                | MHFA Official Action Status.....    | No                          |                     |
|                          |                                | MHFA Construction Financing.....    | No                          |                     |
|                          |                                | MHFA Permanent Financing .....      | No                          |                     |
|                          |                                | MHP Fund Financing .....            | No                          |                     |
|                          |                                | MHIC Construction Loan.....         | No                          |                     |
|                          |                                | MHIC Tax Credit Equity .....        | No                          |                     |
|                          |                                | Boston: DND.....                    | No                          |                     |
|                          |                                | Other.....                          | 0                           |                     |
|                          |                                | Other.....                          | N/A                         |                     |
|                          |                                | Other.....                          | N/A                         |                     |
|                          |                                | Financing from Massdevelopment..... | No                          |                     |
| <b>Sources of Funds:</b> |                                | <b>Uses of Funds:</b>               |                             |                     |
|                          | Developer's Equity .....       | \$3,500,000                         | Acquisition .....           | \$100               |
|                          | Tax Credit Equity .....        | \$16,170,000                        | <b>Construction .....</b>   | <b>\$40,965,236</b> |
|                          | Public Equity .....            | \$4,500,000                         | General Development .....   | \$448,421           |
|                          | Subordinate Debt .....         | \$7,016,657                         | Developer Overhead .....    | \$1,500,000         |
|                          | Permanent Debt .....           | \$13,600,000                        | Developer Fee .....         | \$1,500,000         |
|                          | <b>Total All Sources .....</b> | <b>\$44,786,657</b>                 | Capitalized Reserves.....   | \$372,900           |
|                          |                                |                                     | <b>Total All Uses .....</b> | <b>\$44,786,657</b> |
|                          | Uses Exceed Sources by .....   | \$0                                 |                             |                     |

# UPDATE ON FINANCIAL ANALYSIS

| <b>Rent Levels:</b>                      |                    |                        | <i>BR (aver.)</i>                                     | <i>SF (aver.)</i> |
|--|--------------------|------------------------|---|-------------------|
| Low-Income, Rental Assisted .....        | \$2,403            | 0.7                    | 666   |                   |
| Low-Income, Below 50% .....              | N/A                | N/A                    | N/A   |                   |
| Low-Income, Below 60% .....              | \$1,823            | 0.6                    | 641   |                   |
| Other Income 100%.....                   | N/A                | N/A                    | N/A   |                   |
| Market Rate .....                        | N/A                | N/A                    | N/A   |                   |
| <i>Average, All Units .....</i>          | <i>\$2,005</i>     | <i>0.7</i>             | <i>649</i>  |                   |
| <b>Annual Operating Income (year 1):</b> |                    |                        | <b>Annual Operating Expense (year 1):</b>             |                   |
| Gross rental income (residential)        | \$1,684,452        | Management Fee         | \$84,223  |                   |
| Vacancy (resid.) 3.00%                   | \$50,534           | Administrative         | \$132,000   |                   |
| Other Income (net of vacancies)          | \$15,000           | Maintenance            | \$165,000   |                   |
| Subtotal                                 | \$1,648,918        | Res. Service, Security | \$26,500  |                   |
| Operating Subsidies                      | \$0                | Utilities              | \$75,000  |                   |
| Draw on Operating Reserves               | \$0                | Repl. Reserve          | \$21,450  |                   |
| <b>Total Annual Income</b>               | <b>\$1,648,918</b> | Oper. Reserve          | \$0   |                   |
|  |                    | Taxes, Insurance       | \$240,000   |                   |
| <b>Net Operating Income</b>              | <b>\$904,746</b>   | <b>Total</b>           | <b>\$744,173</b>                                      |                   |
| Debt Service                             | \$786,945          |                        |   |                   |
| Debt Service Coverage                    | 1.15               | <b>Total per Unit</b>  | <b>\$10,631</b>                                       |                   |
| 74 & 90 Pond Street                      |                    |                        | Application Date: 06/22/2024 Revised Date: 06/22/2024 |                   |

# UPDATE ON FINANCIAL ANALYSIS

| One Stop2000 Affordable Housing Finance Application [Version 1.21] ©          |       |               |              |  |                    |                      | Page A-2 |
|---|-------|---------------|--------------|--|--------------------|----------------------|----------|
| Rent Profile Analysis   |       |               |              |  |                    |                      |          |
| NOTE: Do not fill out this section. It is automatically filled in by program. |       |               |              |  |                    |                      |          |
|   | Units | Contract Rent | Size of Unit | No. of Bathrooms                               | Gross Rent/Maximum | Rent per square foot |          |
| <b>Low-Income (Rental Assisted):</b>  |       |               |              |  |                    |                      |          |
| SRO   | 0     | N/A           | N/A          | N/A  | N/A                | N/A                  |          |
| 0 bedroom   | 11    | \$2,212       | 525          | 1  | N/A                | \$4.21               |          |
| 1 bedroom   | 7     | \$2,377       | 675          | 1  | N/A                | \$3.52               |          |
| 2 bedrooms  | 3     | \$2,827       | 975          | 1  | N/A                | \$2.90               |          |
| 3 bedrooms  | 1     | \$3,418       | 1,225        | 1.5  | N/A                | \$2.79               |          |
| 4 bedrooms  | 0     | N/A           | N/A          | N/A  | N/A                | N/A                  |          |
| <b>Low-Income (below 50%):</b>  |       |               |              |  |                    |                      |          |
| SRO   | 0     | N/A           | N/A          | N/A  | N/A                | N/A                  |          |
| 0 bedroom   | 0     | N/A           | N/A          | N/A  | N/A                | N/A                  |          |
| 1 bedroom   | 0     | N/A           | N/A          | N/A  | N/A                | N/A                  |          |
| 2 bedrooms  | 0     | N/A           | N/A          | N/A  | N/A                | N/A                  |          |
| 3 bedrooms  | 0     | N/A           | N/A          | N/A  | N/A                | N/A                  |          |
| 4 bedrooms  | 0     | N/A           | N/A          | N/A  | N/A                | N/A                  |          |
| <b>Low-Income (below 60%):</b>  |       |               |              |  |                    |                      |          |
| SRO   | 0     | N/A           | N/A          | N/A  | N/A                | N/A                  |          |
| 0 bedroom   | 23    | \$1,713       | 525          | 1  | N/A                | \$3.26               |          |
| 1 bedroom   | 19    | \$1,836       | 675          | 1  | N/A                | \$2.72               |          |
| 2 bedrooms  | 6     | \$2,203       | 975          | 1  | N/A                | \$2.26               |          |
| 3 bedrooms  | 0     | N/A           | N/A          | N/A  | N/A                | N/A                  |          |
| 4 bedrooms  | 0     | N/A           | N/A          | N/A  | N/A                | N/A                  |          |
| <b>Other Income 100%</b>  |       |               |              |  |                    |                      |          |
|   |       |               |              | Below 100% of the median income for the region |                    |                      |          |
| SRO   | 0     | N/A           | N/A          | N/A  | N/A                | N/A                  |          |
| 0 bedroom   | 0     | N/A           | N/A          | N/A  | N/A                | N/A                  |          |
| 1 bedroom   | 0     | N/A           | N/A          | N/A  | N/A                | N/A                  |          |
| 2 bedrooms  | 0     | N/A           | N/A          | N/A  | N/A                | N/A                  |          |
| 3 bedrooms  | 0     | N/A           | N/A          | N/A  | N/A                | N/A                  |          |
| 4 bedrooms  | 0     | N/A           | N/A          | N/A  | N/A                | N/A                  |          |
| <b>Market Rate (unrestricted occupancy):</b>                                  |       |               |              |  |                    |                      |          |
| SRO   | 0     | N/A           | N/A          | N/A  | N/A                | N/A                  |          |
| 0 bedroom   | 0     | N/A           | N/A          | N/A  | N/A                | N/A                  |          |
| 1 bedroom   | 0     | N/A           | N/A          | N/A  | N/A                | N/A                  |          |
| 2 bedrooms  | 0     | N/A           | N/A          | N/A  | N/A                | N/A                  |          |
| 3 bedrooms  | 0     | N/A           | N/A          | N/A  | N/A                | N/A                  |          |
| 4 bedrooms  | 0     | N/A           | N/A          | N/A  | N/A                | N/A                  |          |

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|---|----------------|------------------------------|----------------|----------------|--------------------------|----------------|
| 21-Year Operating Proforma (Years 1-5)  |                |                              |                |                |                          |                |
| NOTE: Do not fill out this section. It is automatically filled in by program. |                |                              |                |                |                          |                |
|   | Calendar Year: | Year 1<br>2027               | Year 2<br>2028 | Year 3<br>2029 | Year 4<br>2030           | Year 5<br>2031 |
| <b>INCOME:</b>  |                |                              |                |                |                          |                |
| Low-Income, Rental Assisted   |                | \$634,440                    | \$647,129      | \$660,071      | \$673,273                | \$686,738      |
| Low-Income, Below 50%   |                | 0                            | 0              | 0              | 0                        | 0              |
| Low-Income, Below 60%   |                | 1,050,012                    | 1,071,012      | 1,092,432      | 1,114,281                | 1,136,567      |
| Other Income 100%   |                | 0                            | 0              | 0              | 0                        | 0              |
| Other Income:   | 0              | 0                            | 8,141          | 0              | 0                        | 0              |
| Other Income:   | 0              | 0                            | 5              | 0              | 0                        | 0              |
| Other Income:   | 0              | 0                            | 0              | 0              | 0                        | 0              |
| Other Income:   | 0              | 0                            | 0              | 0              | 0                        | 0              |
| <b>Total Gross Income</b>   |                | 1,648,918                    | 1,681,897      | 1,715,535      | 1,749,845                | 1,784,842      |
| Operating Subsidies   |                | 0                            | 0              | 0              | 0                        | 0              |
| Draw on Operating Reserves  |                | 0                            | 0              | 0              | 0                        | 0              |
| <b>Total Effective Income</b>   |                | \$1,648,918                  | \$1,681,897    | \$1,715,535    | \$1,749,845              | \$1,784,842    |
| <b>EXPENSES:</b>  |                |                              |                |                |                          |                |
| Management Fee  |                | 84,223                       | 85,907         | 87,625         | 89,378                   | 91,165         |
| Administrative  |                | 132,000                      | 135,960        | 140,039        | 144,240                  | 148,567        |
| Maintenance   |                | 165,000                      | 169,950        | 175,049        | 180,300                  | 185,709        |
| Resident Services   |                | 25,000                       | 25,750         | 26,523         | 27,318                   | 28,138         |
|   |                |                              | 1,545          |                |                          |                |
|   |                |                              | 1,500          |                |                          |                |
| <b>Total Operating Expenses</b>   |                | \$744,173                    | \$764,831      | \$786,071      | \$807,910                | \$830,365      |
| <b>NET OPERATING INCOME</b>   |                | \$904,746                    | \$917,066      | \$929,464      | \$941,936                | \$954,477      |
| Debt Service  |                | \$786,945                    | \$786,945      | \$786,945      | \$786,945                | \$786,945      |
| Debt Service Coverage   |                | 1.15                         | 1.17           | 1.18           | 1.20                     | 1.21           |
| Project Cash Flow   |                | \$117,801                    | \$130,121      | \$142,519      | \$154,991                | \$167,533      |
| Required Debt Coverage  |                | \$904,987                    | \$904,987      | \$904,987      | \$904,987                | \$904,987      |
| (Gap)/Surplus for Cov.  |                | (\$241)                      | \$12,080       | \$24,477       | \$36,949                 | \$49,491       |
| 74 & 90 Pond Street   |                | Application Date: 06/22/2024 |                |                | Revised Date: 06/22/2024 |                |

# UPDATE ON FINANCIAL ANALYSIS

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## 21-Year Operating Proforma (Years 6-10)

NOTE: Do not fill out this section. It is automatically filled in by program.

| Calendar Year:              | Year 6<br>2032 | Year 7<br>2033 | Year 8<br>2034 | Year 9<br>2035 | Year 10<br>2036 |
|-----------------------------|----------------|----------------|----------------|----------------|-----------------|
| <b>INCOME:</b>              |                |                |                |                |                 |
| Low-Income, Rental Assisted | \$700,473      | \$714,482      | \$728,772      | \$743,348      | \$758,215       |
| Low-Income, Below 50%       | 0              | 0              | 0              | 0              | 0               |
| Low-Income, Below 60%       | 1,159,298      | 1,182,484      | 1,206,134      | 1,230,256      | 1,254,862       |
| Other Income 100%           | 0              | 0              | 0              | 0              | 0               |

|                               |                    |                    |                    |                    |                    |
|-------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Other Income:                 | -                  | 0                  | 0                  | 0                  | 0                  |
| Other Income:                 | -                  | 0                  | 0                  | 0                  | 0                  |
| Other Income:                 | -                  | 0                  | 0                  | 0                  | 0                  |
| Other Income:                 | -                  | 0                  | 0                  | 0                  | 0                  |
| <b>Total Gross Income</b>     | <b>1,820,539</b>   | <b>1,856,950</b>   | <b>1,894,089</b>   | <b>1,931,971</b>   | <b>1,970,610</b>   |
| Operating Subsidies           | 0                  | 0                  | 0                  | 0                  | 0                  |
| Draw on Operating Reserves    | 0                  | 0                  | 0                  | 0                  | 0                  |
| <b>Total Effective Income</b> | <b>\$1,820,539</b> | <b>\$1,856,950</b> | <b>\$1,894,089</b> | <b>\$1,931,971</b> | <b>\$1,970,610</b> |
| <b>EXPENSES:</b>              |                    |                    |                    |                    |                    |
| Management Fee                | 92,989             | 94,848             | 96,745             | 98,680             | 100,654            |
| Administrative                | 153,024            | 157,615            | 162,343            | 167,214            | 172,230            |
| Maintenance                   | 191,280            | 197,019            | 202,929            | 209,017            | 215,288            |
| Resident Services             | 28,982             | 29,851             | 30,747             | 31,669             | 32,619             |

|                                 |                  |                  |                  |                    |                    |
|---------------------------------|------------------|------------------|------------------|--------------------|--------------------|
| Operating Reserves              | 1,791            | 1,791            | 1,791            | 1,791              | 1,791              |
| Real Estate Taxes               | 186,682          | 196,133          | 201,036          | 206,062            | 211,214            |
| Other Taxes                     | 0                | 0                | 0                | 0                  | 0                  |
| Insurance                       | 86,946           | 89,554           | 92,241           | 95,008             | 97,858             |
| MIP                             | 0                | 0                | 0                | 0                  | 0                  |
| Other:                          | 0                | 0                | 0                | 0                  | 0                  |
| <b>Total Operating Expenses</b> | <b>\$853,454</b> | <b>\$877,194</b> | <b>\$901,605</b> | <b>\$926,705</b>   | <b>\$952,514</b>   |
| <b>NET OPERATING INCOME</b>     | <b>\$967,086</b> | <b>\$979,756</b> | <b>\$992,484</b> | <b>\$1,005,266</b> | <b>\$1,018,096</b> |
| Debt Service                    | \$786,945        | \$786,945        | \$786,945        | \$786,945          | \$786,945          |
| <b>Debt Service Coverage</b>    | <b>1.23</b>      | <b>1.25</b>      | <b>1.26</b>      | <b>1.28</b>        | <b>1.29</b>        |
| Project Cash Flow               | \$180,141        | \$192,811        | \$205,540        | \$218,321          | \$231,152          |
| Required Debt Coverage          | \$904,987        | \$904,987        | \$904,987        | \$904,987          | \$904,987          |
| (Gap)/Surplus for Cov.          | \$62,099         | \$74,769         | \$87,498         | \$100,280          | \$113,110          |

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## 21-Year Operating Proforma (Years 11-15)

NOTE: Do not fill out this section. It is automatically filled in by program.

| Calendar Year:              | Year 11<br>2037 | Year 12<br>2038 | Year 13<br>2039 | Year 14<br>2040 | Year 15<br>2041 |
|-----------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| <b>INCOME:</b>              |                 |                 |                 |                 |                 |
| Low-Income, Rental Assisted | \$773,379       | \$788,846       | \$804,623       | \$820,716       | \$837,130       |
| Low-Income, Below 50%       | 0               | 0               | 0               | 0               | 0               |
| Low-Income, Below 60%       | 1,279,959       | 1,305,558       | 1,331,669       | 1,358,302       | 1,385,469       |
| Other Income 100%           | 0               | 0               | 0               | 0               | 0               |

|                               |                    |                    |                    |                    |                    |
|-------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Other Income:                 | 0                  | 0                  | 0                  | 0                  | 0                  |
| Other Income:                 | 0                  | 0                  | 0                  | 0                  | 0                  |
| Other Income:                 | 0                  | 0                  | 0                  | 0                  | 0                  |
| Other Income:                 | 0                  | 0                  | 0                  | 0                  | 0                  |
| <b>Total Gross Income</b>     | <b>2,010,022</b>   | <b>2,050,223</b>   | <b>2,091,227</b>   | <b>2,133,052</b>   | <b>2,175,713</b>   |
| Operating Subsidies           | 0                  | 0                  | 0                  | 0                  | 0                  |
| Draw on Operating Reserves    | 0                  | 0                  | 0                  | 0                  | 0                  |
| <b>Total Effective Income</b> | <b>\$2,010,022</b> | <b>\$2,050,223</b> | <b>\$2,091,227</b> | <b>\$2,133,052</b> | <b>\$2,175,713</b> |
| <b>EXPENSES:</b>              |                    |                    |                    |                    |                    |
| Management Fee                | 102,667            | 104,720            | 106,815            | 108,951            | 111,130            |
| Administrative                | 177,397            | 182,719            | 188,200            | 193,846            | 199,662            |
| Maintenance                   | 221,746            | 228,399            | 235,251            | 242,308            | 249,577            |
| Resident Services             | 33,598             | 34,606             | 35,644             | 36,713             | 37,815             |

|                                 |                    |                    |                    |                    |                    |
|---------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Operating Reserves              | 2,076              | 2,076              | 2,076              | 2,076              | 2,076              |
| Real Estate Taxes               | 211,214            | 221,907            | 227,454            | 233,141            | 238,974            |
| Other Taxes                     | 0                  | 0                  | 0                  | 0                  | 0                  |
| Insurance                       | 100,794            | 103,818            | 106,932            | 110,140            | 113,444            |
| MIP                             | 0                  | 0                  | 0                  | 0                  | 0                  |
| Other:                          | 0                  | 0                  | 0                  | 0                  | 0                  |
| <b>Total Operating Expenses</b> | <b>\$979,052</b>   | <b>\$1,006,341</b> | <b>\$1,034,402</b> | <b>\$1,063,256</b> | <b>\$1,092,927</b> |
| <b>NET OPERATING INCOME</b>     | <b>\$1,030,970</b> | <b>\$1,043,882</b> | <b>\$1,056,826</b> | <b>\$1,069,796</b> | <b>\$1,082,786</b> |
| Debt Service                    | \$786,945          | \$786,945          | \$786,945          | \$786,945          | \$786,945          |
| <b>Debt Service Coverage</b>    | <b>1.31</b>        | <b>1.33</b>        | <b>1.34</b>        | <b>1.36</b>        | <b>1.38</b>        |
| Project Cash Flow               | \$244,025          | \$256,937          | \$269,881          | \$282,851          | \$295,841          |
| Required Debt Coverage          | \$904,987          | \$904,987          | \$904,987          | \$904,987          | \$904,987          |
| (Gap)/Surplus for Cov.          | \$125,984          | \$138,895          | \$151,839          | \$164,809          | \$177,799          |

# UPDATE ON FINANCIAL ANALYSIS

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|---|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|----------|
| 21-Year Operating Proforma (Years 16-21)                                      |                    |                    |                    |                    |                    |                    |          |
| NOTE: Do not fill out this section. It is automatically filled in by program. |                    |                    |                    |                    |                    |                    |          |
| Calendar Year:  | Year 16<br>2042    | Year 17<br>2043    | Year 18<br>2044    | Year 19<br>2045    | Year 20<br>2046    | Year 21<br>2047    |          |
| <b>INCOME:</b>  |                    |                    |                    |                    |                    |                    |          |
| Low-Income, Rent. Astd.   | \$853,873          | \$870,950          | \$888,369          | \$906,137          | \$924,259          | \$942,744          |          |
| Low-Income, Below 50%   | 0                  | 0                  | 0                  | 0                  | 0                  | 0                  |          |
| Low-Income, Below 60%   | 1,413,178          | 1,441,441          | 1,470,270          | 1,499,676          | 1,529,669          | 1,560,263          |          |
| Other Income 100%   | 0                  | 0                  | 0                  | 0                  | 0                  | 0                  |          |
| Other   | 0                  | 0                  | 0                  | 0                  | 0                  | 0                  |          |
| Other   | 0                  | 0                  | 0                  | 0                  | 0                  | 0                  |          |
| Other   | 0                  | 0                  | 0                  | 0                  | 0                  | 0                  |          |
| Other   | 0                  | 0                  | 0                  | 0                  | 0                  | 0                  |          |
| <b>Total Gross Income</b>   | <b>2,219,227</b>   | <b>2,263,612</b>   | <b>2,308,884</b>   | <b>2,355,062</b>   | <b>2,402,163</b>   | <b>2,450,206</b>   |          |
| Operating Subsidies   | 0                  | 0                  | 0                  | 0                  | 0                  | 0                  |          |
| Draw on Operating Res.  | 0                  | 0                  | 0                  | 0                  | 0                  | 0                  |          |
| <b>Total Effective Income</b>   | <b>\$2,219,227</b> | <b>\$2,263,612</b> | <b>\$2,308,884</b> | <b>\$2,355,062</b> | <b>\$2,402,163</b> | <b>\$2,450,206</b> |          |
| <b>EXPENSES:</b>  |                    |                    |                    |                    |                    |                    |          |
| Management Fee  | 113,353            | 115,620            | 117,932            | 120,291            | 122,696            | 125,150            |          |
| Administrative  | 205,652            | 211,821            | 218,176            | 224,721            | 231,463            | 238,407            |          |
| Maintenance   | 257,065            | 264,777            | 272,720            | 280,901            | 289,328            | 298,008            |          |
| Resident Services   | 38,949             | 40,118             | 41,321             | 42,561             | 43,838             | 45,153             |          |
| Other   | 0                  | 0                  | 0                  | 0                  | 0                  | 0                  |          |
| Other   | 0                  | 0                  | 0                  | 0                  | 0                  | 0                  |          |
| Other   | 0                  | 0                  | 0                  | 0                  | 0                  | 0                  |          |
| Other   | 0                  | 0                  | 0                  | 0                  | 0                  | 0                  |          |
| <b>Total Operating Expenses</b>   | <b>\$1,123,438</b> | <b>\$1,154,812</b> | <b>\$1,187,076</b> | <b>\$1,220,254</b> | <b>\$1,254,372</b> | <b>\$1,289,457</b> |          |
| <b>NET OPER. INC.</b>   | <b>\$1,095,789</b> | <b>\$1,108,799</b> | <b>\$1,121,808</b> | <b>\$1,134,808</b> | <b>\$1,147,791</b> | <b>\$1,160,749</b> |          |
| Debt Service  | \$786,945          | \$786,945          | \$786,945          | \$786,945          | \$786,945          | \$786,945          |          |
| Debt Service Coverage   | 1.39               | 1.41               | 1.43               | 1.44               | 1.46               | 1.48               |          |
| Project Cash Flow   | \$308,845          | \$321,854          | \$334,863          | \$347,863          | \$360,846          | \$373,804          |          |
| Required Debt Coverage  | \$904,987          | \$904,987          | \$904,987          | \$904,987          | \$904,987          | \$904,987          |          |
| (Gap)/Surplus for Cov.  | \$190,803          | \$203,813          | \$216,821          | \$229,821          | \$242,805          | \$255,763          |          |

| One Stop2000 Affordable Housing Finance Application [Version 1.21] ©          |                      |                         |                          |                     |                         | Page A-7 |
|---|----------------------|-------------------------|--------------------------|---------------------|-------------------------|----------|
| Operating Expense Analysis  |                      |                         |                          |                     |                         |          |
| NOTE: Do not fill out this section. It is automatically filled in by program. |                      |                         |                          |                     |                         |          |
|   | Residential<br>Total | Residential<br>Per Unit | Residential<br>Per S. F. | Commercial<br>Total | Commercial<br>Per S. F. |          |
| Management Fee  | \$84,223             | \$1,203.18              | \$0.90                   | \$0                 | N/A                     |          |
| Payroll, Administrative   | \$132,000            | \$1,885.71              | \$1.42                   | \$0                 | N/A                     |          |
| Payroll Taxes & Benefits, Admin.  | \$0                  | \$0.00                  | \$0.00                   | \$0                 | N/A                     |          |
| Other:  | \$0                  | \$0.00                  | \$0.00                   | \$0                 | N/A                     |          |
| Other:  | \$0                  | \$0.00                  | \$0.00                   | \$0                 | N/A                     |          |
| <b>Subtotal: Administrative</b>   | <b>\$132,000</b>     | <b>\$1,885.71</b>       | <b>\$1.42</b>            | <b>\$0</b>          | <b>N/A</b>              |          |
| Payroll, Maintenance  | \$165,000            | \$2,357.14              | \$1.77                   | \$0                 | N/A                     |          |
| Payroll Taxes & Benefits, Admin.  | \$0                  | \$0.00                  | \$0.00                   | \$0                 | N/A                     |          |
| Janitorial Materials  | \$0                  | \$0.00                  | \$0.00                   | \$0                 | N/A                     |          |
| Landscaping   | \$0                  | \$0.00                  | \$0.00                   | \$0                 | N/A                     |          |
| Other:  | \$0                  | \$0.00                  | \$0.00                   | \$0                 | N/A                     |          |
| Other:  | \$0                  | \$0.00                  | \$0.00                   | \$0                 | N/A                     |          |
| <b>Subtotal: Maintenance</b>  | <b>\$165,000</b>     | <b>\$2,357.14</b>       | <b>\$1.77</b>            | <b>\$0</b>          | <b>N/A</b>              |          |
| Resident Services   | \$25,000             | \$357.14                | \$0.27                   | \$0                 | N/A                     |          |
| Security  | \$1,500              | \$21.43                 | \$0.02                   | \$0                 | N/A                     |          |
| Electricity   | \$50,000             | \$714.29                | \$0.54                   | \$0                 | N/A                     |          |
| Natural Gas   | \$0                  | \$0.00                  | \$0.00                   | \$0                 | N/A                     |          |
| Oil   | \$0                  | \$0.00                  | \$0.00                   | \$0                 | N/A                     |          |
| Water & Sewer   | \$25,000             | \$357.14                | \$0.27                   | \$0                 | N/A                     |          |
| <b>Subtotal: Utilities</b>  | <b>\$75,000</b>      | <b>\$1,071.43</b>       | <b>\$0.81</b>            | <b>\$0</b>          | <b>N/A</b>              |          |
| Replacement Reserve   | \$21,450             | \$306.43                | \$0.23                   | \$0                 | N/A                     |          |
| Operating Reserve   | \$0                  | \$0.00                  | \$0.00                   | \$0                 | N/A                     |          |
| Real Estate Taxes   | \$165,000            | \$2,357.14              | \$1.77                   | \$0                 | N/A                     |          |
| Other Taxes   | \$0                  | \$0.00                  | \$0.00                   | \$0                 | N/A                     |          |
| Insurance   | \$75,000             | \$1,071.43              | \$0.81                   | \$0                 | N/A                     |          |
| MIP   | \$0                  | \$0.00                  | \$0.00                   | \$0                 | N/A                     |          |
| Other:  | \$0                  | \$0.00                  | \$0.00                   | \$0                 | N/A                     |          |
| <b>Subtotal:Taxes, Insurance</b>  | <b>\$240,000</b>     | <b>\$3,428.57</b>       | <b>\$2.58</b>            | <b>\$0</b>          | <b>N/A</b>              |          |
| <b>TOTAL EXPENSES</b>   | <b>\$744,173</b>     | <b>\$10,631.04</b>      | <b>\$7.99</b>            | <b>\$0</b>          | <b>N/A</b>              |          |

# UPDATE ON FINANCIAL ANALYSIS

| One Stop2000 Affordable Housing Finance Application [Version 1.21] ©  |                  |                      | Page A-8                |                          |                     |                         |
|---|------------------|----------------------|-------------------------|--------------------------|---------------------|-------------------------|
| Development Cost Analysis   |                  |                      |                         |                          |                     |                         |
| NOTE: Do not fill out this section. It is automatically filled in by program.   |                  |                      |                         |                          |                     |                         |
|   |                  | Residential<br>Total | Residential<br>Per Unit | Residential<br>Per S. F. | Commercial<br>Total | Commercial<br>Per S. F. |
| Acquisition: Land   |                  | \$100                | \$1                     | \$0.00                   | \$0                 | N/A                     |
| Acquisition: Building   |                  | \$0                  | \$0                     | \$0.00                   | \$0                 | N/A                     |
| <b>Acquisition Subtotal</b>   |                  | \$100                | \$1                     | \$0.00                   | \$0                 | N/A                     |
| Direct Construction Budget  |                  | \$36,454,315         | \$520,776               | \$391.51                 | \$0                 | N/A                     |
| Construction Contingency  |                  | \$4,510,921          | \$64,442                | \$48.45                  | \$0                 | N/A                     |
| <b>Subtotal: Construction</b>   |                  | \$40,965,236         | \$585,218               | \$439.95                 | \$0                 | N/A                     |
| <b>General Development Costs:</b>   |                  |                      |                         |                          |                     |                         |
| Architecture & Engineering  |                  | \$0                  | \$0                     | \$0.00                   | \$0                 | N/A                     |
| Survey and Permits  |                  | \$0                  | \$0                     | \$0.00                   | \$0                 | N/A                     |
| Clerk of the Works  |                  | \$0                  | \$0                     | \$0.00                   | \$0                 | N/A                     |
| Fees to:  | Application Fees | \$0                  | \$0                     | \$0.00                   | \$0                 | N/A                     |
| Fees to:  | LIHTC            | \$0                  | \$0                     | \$0.00                   | \$0                 | N/A                     |
| MIP   |                  | \$0                  | \$0                     | \$0.00                   | \$0                 | N/A                     |
| Credit Enhancement Fees   |                  | \$0                  | \$0                     | \$0.00                   | \$0                 | N/A                     |
| Letter of Credit Fees   |                  | \$0                  | \$0                     | \$0.00                   | \$0                 | N/A                     |
| Other Financing Fees  |                  | \$0                  | \$0                     | \$0.00                   | \$0                 | N/A                     |
| Development Consultant  |                  | \$0                  | \$0                     | \$0.00                   | \$0                 | N/A                     |
| Other:  |                  | \$448,421            | \$6,406                 | \$4.82                   | \$0                 | N/A                     |
| Other:  |                  | \$0                  | \$0                     | \$0.00                   | \$0                 | N/A                     |
| Soft Cost Contingency   |                  | \$0                  | \$0                     | \$0.00                   | \$0                 | N/A                     |
| <b>Subtotal: Gen. Dev.</b>  |                  | \$448,421            | \$6,406                 | \$4.82                   | \$0                 | N/A                     |
| <b>Subtotal: Acquis., Const.,<br/>and Gen. Dev.</b>   |                  | \$41,413,757         | \$591,625               | \$444.77                 | \$0                 | N/A                     |
| Capitalized Reserves  |                  | \$372,900            | \$5,327                 | \$4.00                   | \$0                 | N/A                     |
| Developer Overhead  |                  | \$1,500,000          | \$21,429                | \$16.11                  | \$0                 | N/A                     |
| Developer Fee   |                  | \$1,500,000          | \$21,429                | \$16.11                  | \$0                 | N/A                     |
| <b>Total Development Cost</b>   |                  | \$44,786,657         | \$639,809               | \$480.99                 | \$0                 | N/A                     |
| <b>Total Net* Development Cost</b>  |                  | \$42,913,757         | \$613,054               | \$460.88                 | \$0                 | N/A                     |
| (*Does not include any capitalized reserves nor any developer's fees or overhead which are contributed or loaned to the project.) |                  |                      |                         |                          |                     |                         |

# FINAL REPORT - OVERVIEW

## PROPOSED TABLE OF CONTENTS

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  - Townhouses*
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*Conceptual Renderings*  
*Construction Cost Estimates*  
*Financial Feasible Development*  
*Financial Analysis*

### THE STUDY STEP-BY-STEP:

#### I. PHASE 1: INFORMATION GATHERING

- 2/02/24 Project Kick Off Meeting with TOB**
- 3/15/24 Housing Needs Discussion with TOB & Stakeholders**
- 4/11/24 Existing Conditions Findings Meeting with TOB**

#### II. PHASE 2: CONCEPTUAL DESIGN

- 5/02/24 Initial Conceptual Design Meeting with TOB**
- 5/09/24 Public Meeting to Share Findings and Gain Feedback**
- 6/06/24 Final Conceptual Design Meeting with TOB**
- 6/27/24 Meeting to Review Final Report with TOB**

#### APPENDICES

- Existing Conditions Drawings**.....A
- Existing Conditions Reports** ..... B
- Cost Estimate Back-up Information** .....C
- Online Polls & Stakeholder Feedback** ..... D
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# NEXT STEPS

- » Final Estimate & Proforma
- » Final Report
- » Confirm Deliverables and Review Timeline

| TOWN OF BRAINTREE AFFORDABLE HOUSING STUDY  |               |                         | JAN  |     | FEB  |      |      |     |      | MAR  |      |     |     | APR  |      |      |     |      | MAY  |      |     |      | JUN  |      |  |  |
|---|---------------|-------------------------|------|-----|------|------|------|-----|------|------|------|-----|-----|------|------|------|-----|------|------|------|-----|------|------|------|--|--|
| PROPOSED SCHEDULE   | DURATION      | DATE RANGE              | 1/29 | 2/5 | 2/12 | 2/19 | 2/26 | 3/4 | 3/11 | 3/18 | 3/25 | 4/1 | 4/8 | 4/15 | 4/22 | 4/29 | 5/6 | 5/13 | 5/20 | 5/27 | 6/3 | 6/10 | 6/17 | 6/24 |  |  |
| <b>PHASE 2: Conceptual Design &amp; Financial Viability</b>   | 10 wks        | 4/22/24 - 7/1/24        |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |  |
| <b>1 Initial Conceptual Design &amp; Engage Public</b>  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |  |
| Identify what housing options w/in existing buildings and/or new construction. Present initial funding options. |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |  |
| Meet with Town project team to review conceptual design report.(virtual meeting)                                |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |  |
| Public meeting to share initial findings & elicit feedback. (virtual meeting)                                   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |  |
| Online polls and options for additional public feedback.  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |  |
| <b>2 Final Conceptual Design</b>  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |  |
| Identify what housing options w/in existing buildings and/or new construction. Present initial funding options. |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |  |
| Meet with Town project team to review conceptual design report.(virtual meeting)                                |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |  |
| <b>3 Financial Feasibility of Design</b>  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |  |
| Construction cost estimate for buildings & site   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |  |
| Proforma  |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |  |
| <b>4 Final Report</b>   |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |  |
| Meet with Town project team to review conceptual design report.(virtual meeting)                                |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |  |
| Compiled Study report with deliverables from each task above + executive summary                                |               |                         |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |  |
| <b>OVERALL PROPOSED SCHEDULE</b>  | <b>22 wks</b> | <b>1/29/24 - 7/1/24</b> |      |     |      |      |      |     |      |      |      |     |     |      |      |      |     |      |      |      |     |      |      |      |  |  |



**APPENDIX A:  
EXISTING CONDITIONS DRAWINGS**

# Affordable Housing Study - 74 Pond St

**74 Pond St,  
Braintree, MA**



**EXISTING CONDITIONS**

**03/01/2024**

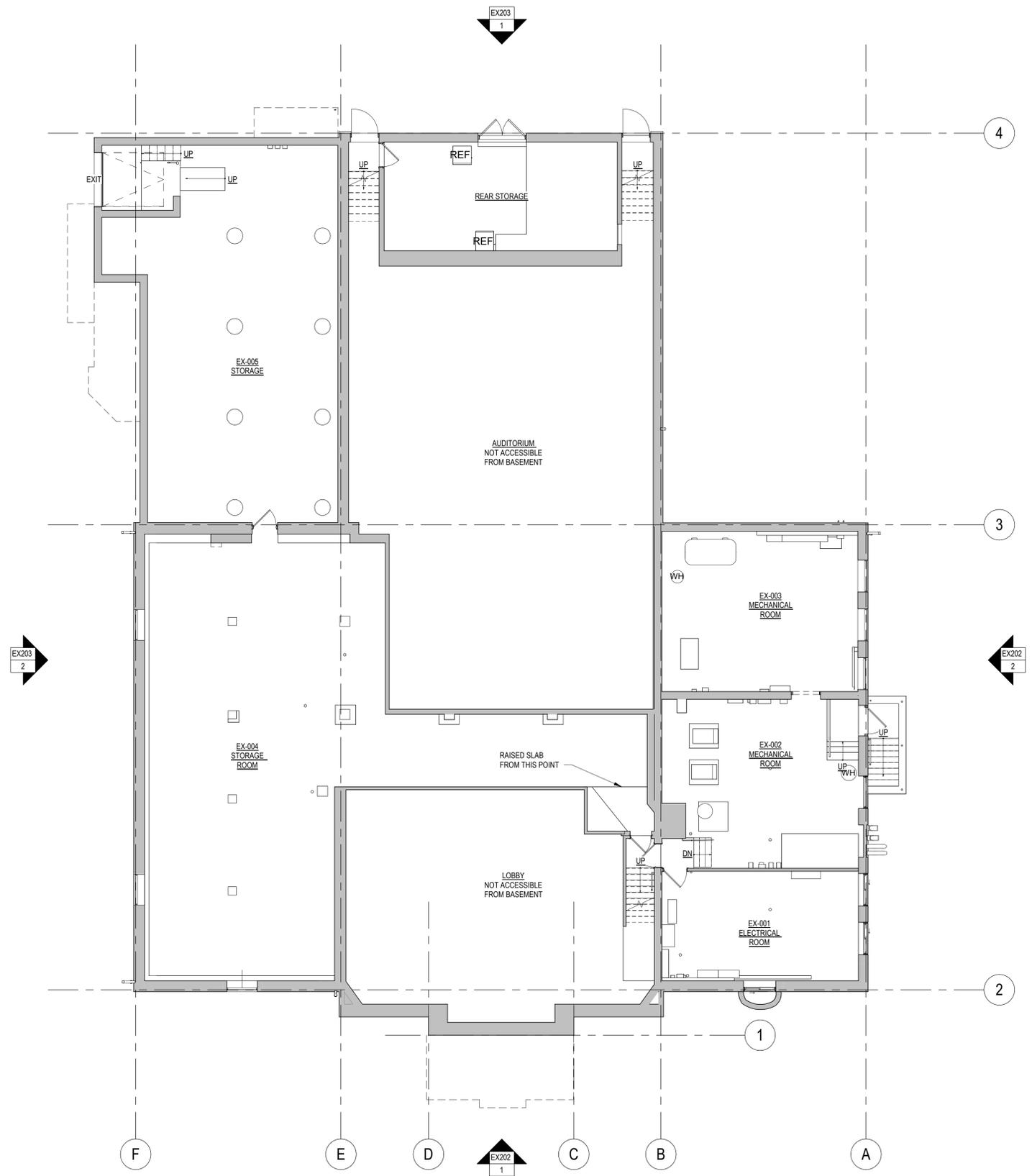
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500 Harrison Avenue, Suite 3F  
Boston, MA 02118

tel: 617 621-1455  
fax 617 621-1477

[www.LDa-Architects.com](http://www.LDa-Architects.com)

**EXISTING WALL KEY**  
 ——— EXISTING WALL ASSEMBLY



**1 EXISTING BASEMENT PLAN**  
 SCALE: 1/8" = 1'-0"

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Construction Consultants

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 74 Pond St,  
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DATE: 03/01/2024  
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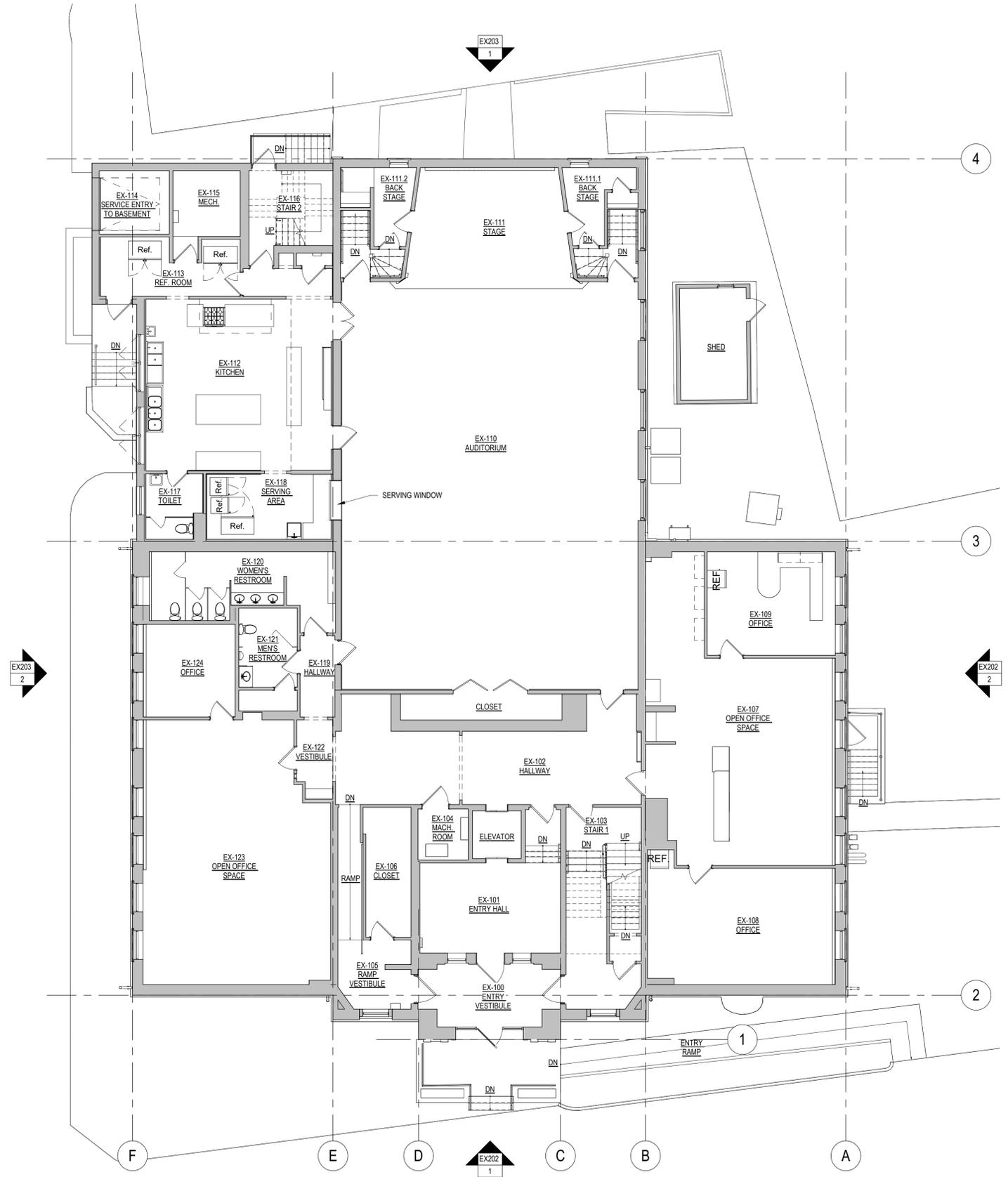
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**EX100**

**EXISTING WALL KEY**

— EXISTING WALL ASSEMBLY



**1 EXISTING FIRST FLOOR PLAN**  
SCALE: 1/8" = 1'-0"

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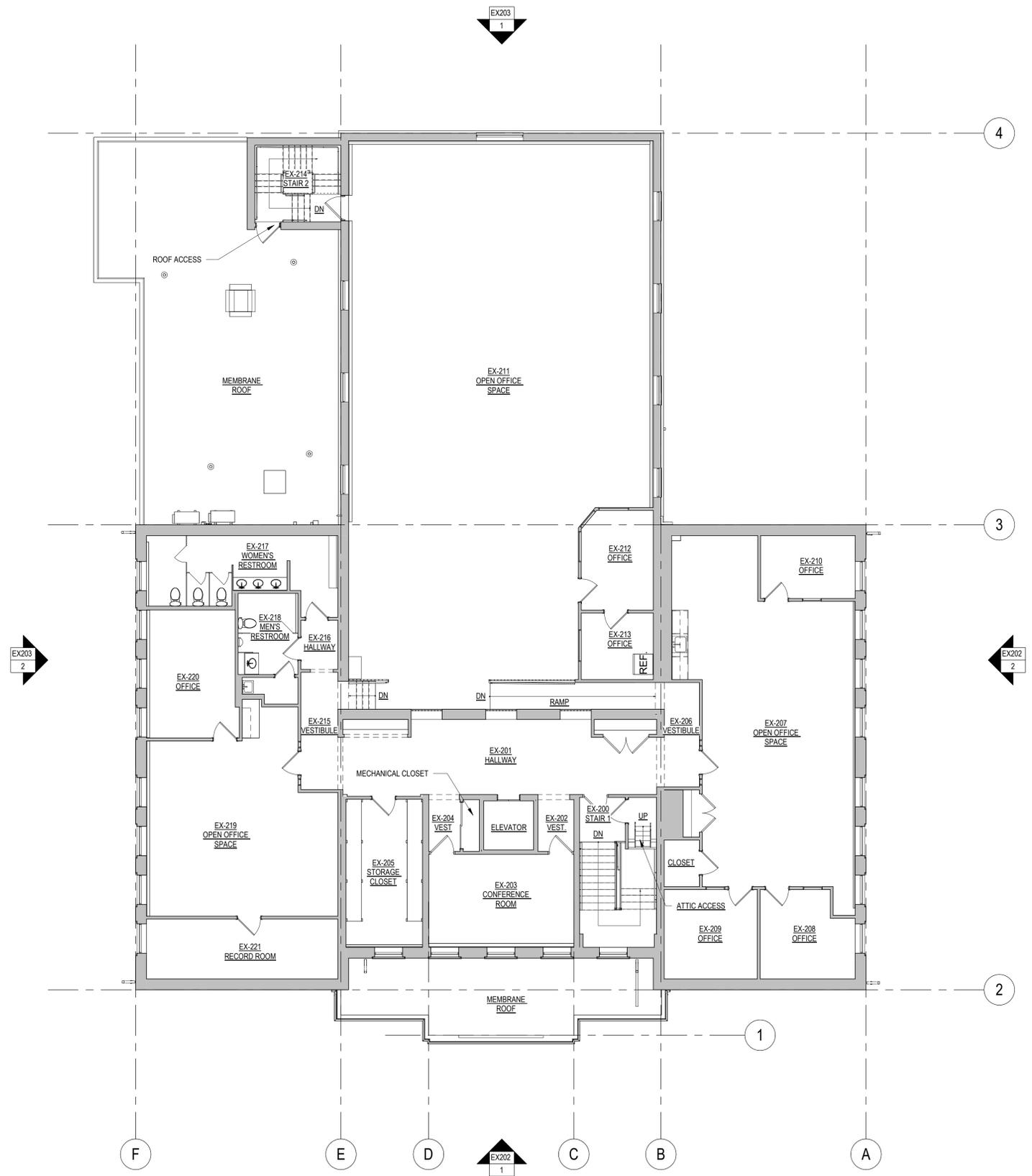
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EXISTING FIRST FLOOR PLAN



**EX101**

**EXISTING WALL KEY**  
 ——— EXISTING WALL ASSEMBLY



**1 EXISTING SECOND FLOOR PLAN**  
 SCALE: 1/8" = 1'-0"

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ISSUANCE:  
 EXISTING CONDITIONS

REVISION:

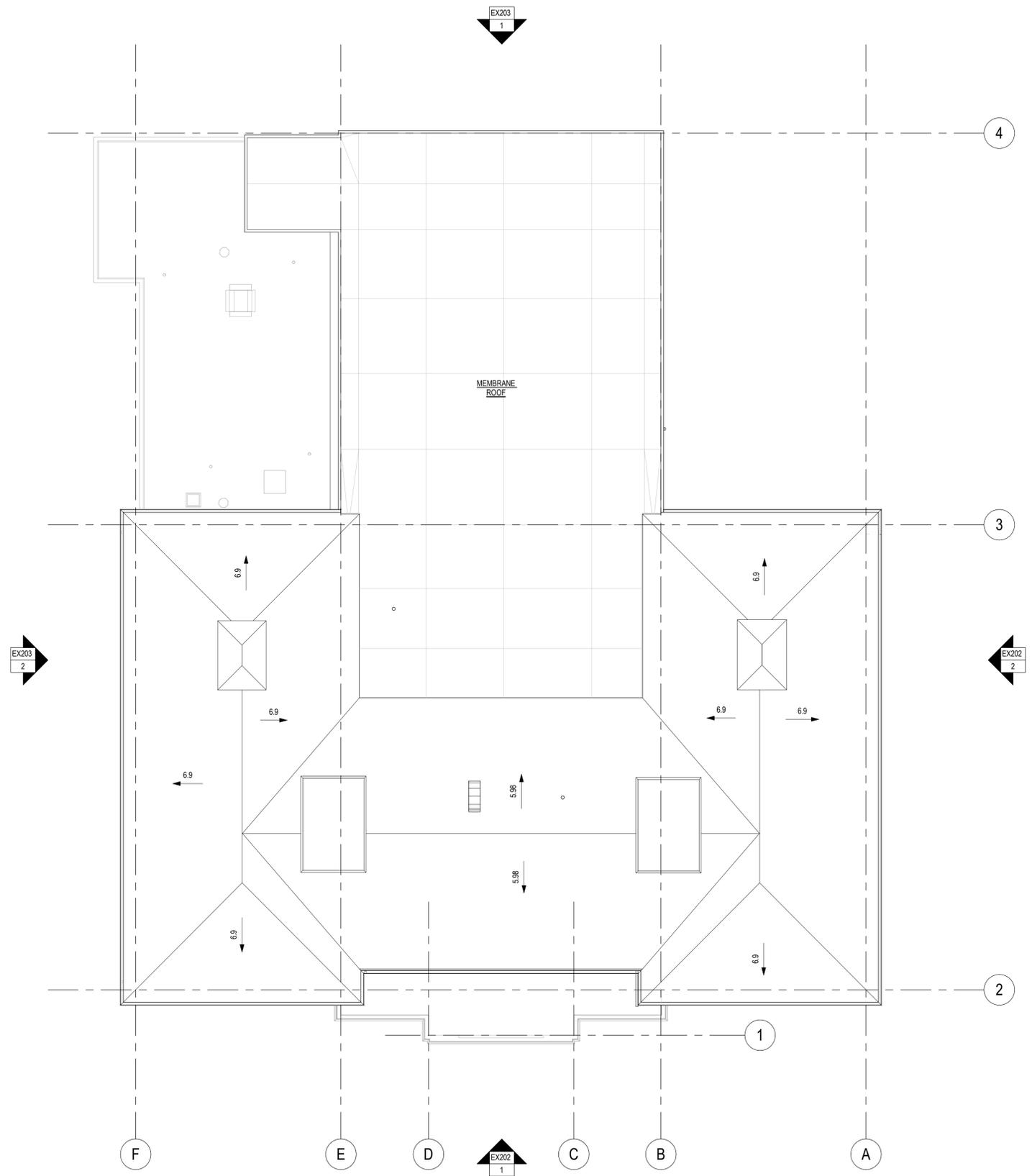
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SHEET INFO:  
 EXISTING SECOND FLOOR PLAN



**EX102**

**EXISTING WALL KEY**  
 ——— EXISTING WALL ASSEMBLY



**1** EXISTING ROOF PLAN  
 SCALE: 1/8" = 1'-0"

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ISSUANCE:  
 EXISTING CONDITIONS

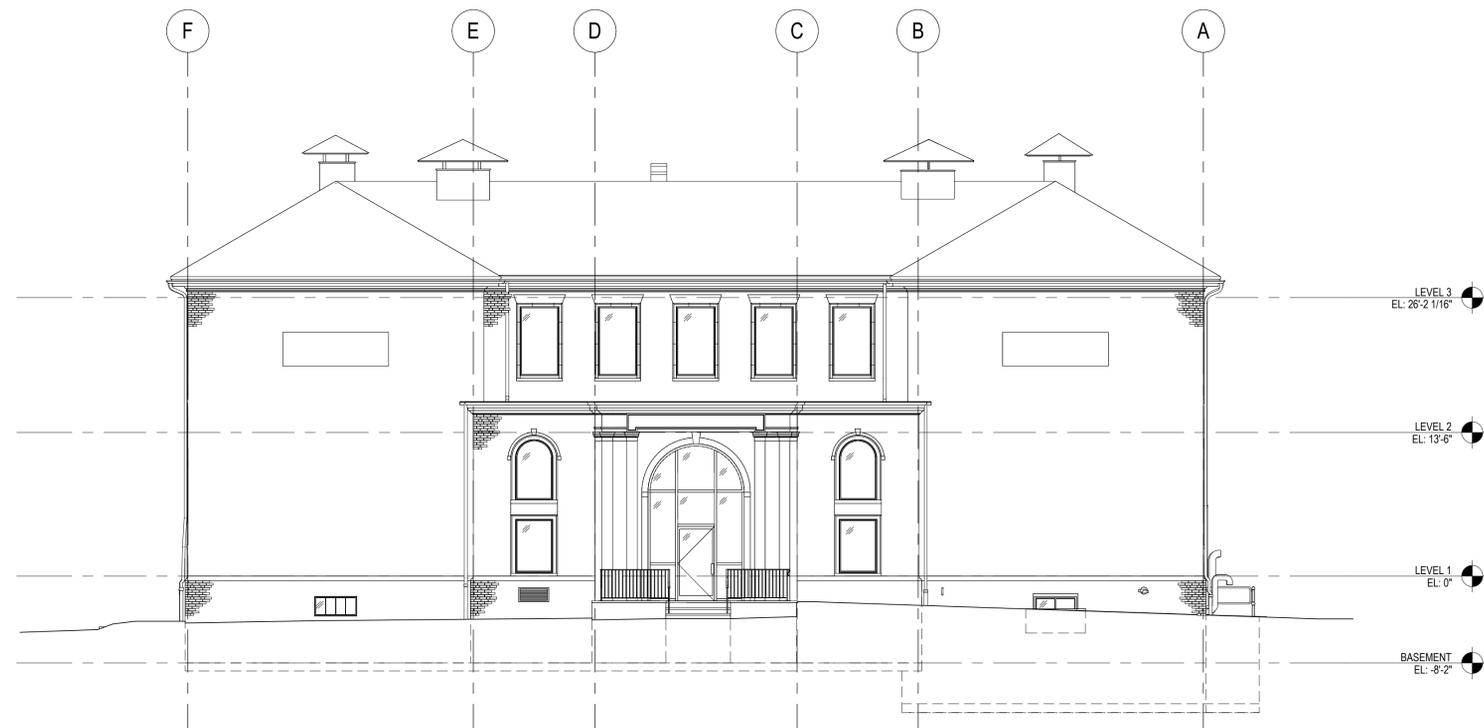
REVISION:

DATE: 03/01/2024  
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SHEET INFO:  
 EXISTING ROOF PLAN



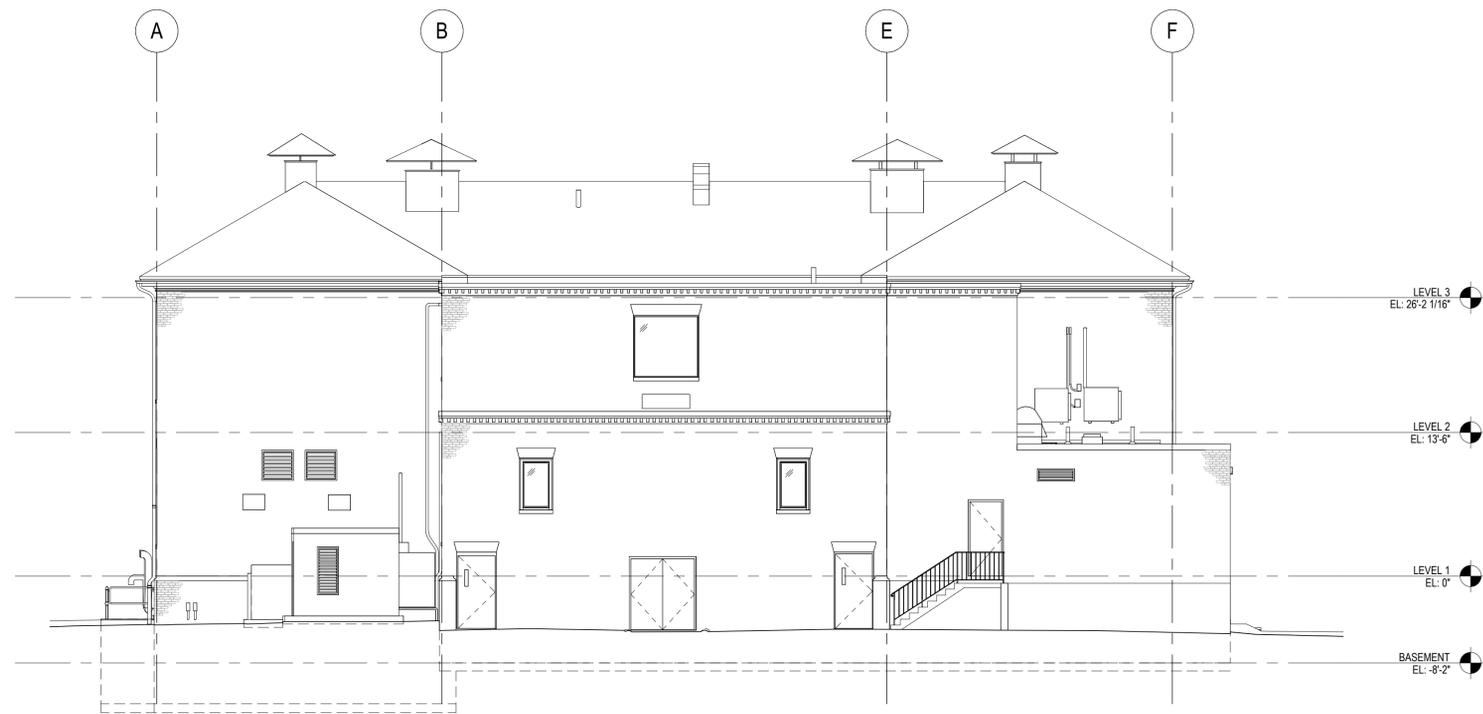
**EX103**



1 EXISTING NORTH ELEVATION  
SCALE: 1/8" = 1'-0"



2 EXISTING WEST ELEVATION  
SCALE: 1/8" = 1'-0"



1 EXISTING SOUTH ELEVATION  
SCALE: 1/8" = 1'-0"



2 EXISTING EAST ELEVATION  
SCALE: 1/8" = 1'-0"

# Affordable Housing Study - 90 Pond St

**90 Pond St.  
Braintree, MA**



**EXISTING CONDITIONS**

**03-01-2024**

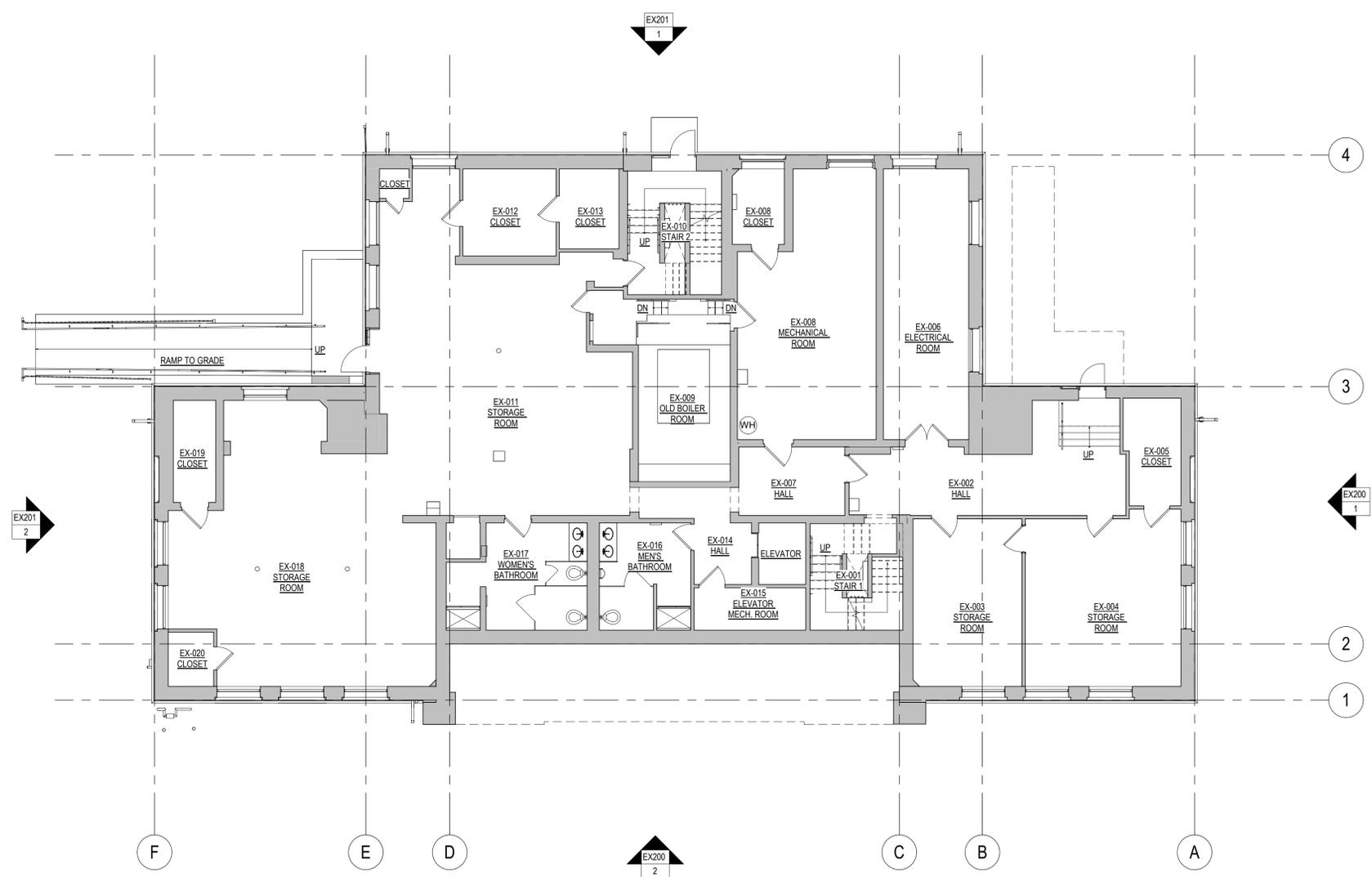
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**EXISTING WALL KEY**  
 ——— EXISTING WALL ASSEMBLY



**1 EXISTING BASEMENT PLAN**  
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ISSUANCE:  
 EXISTING CONDITIONS

REVISION:

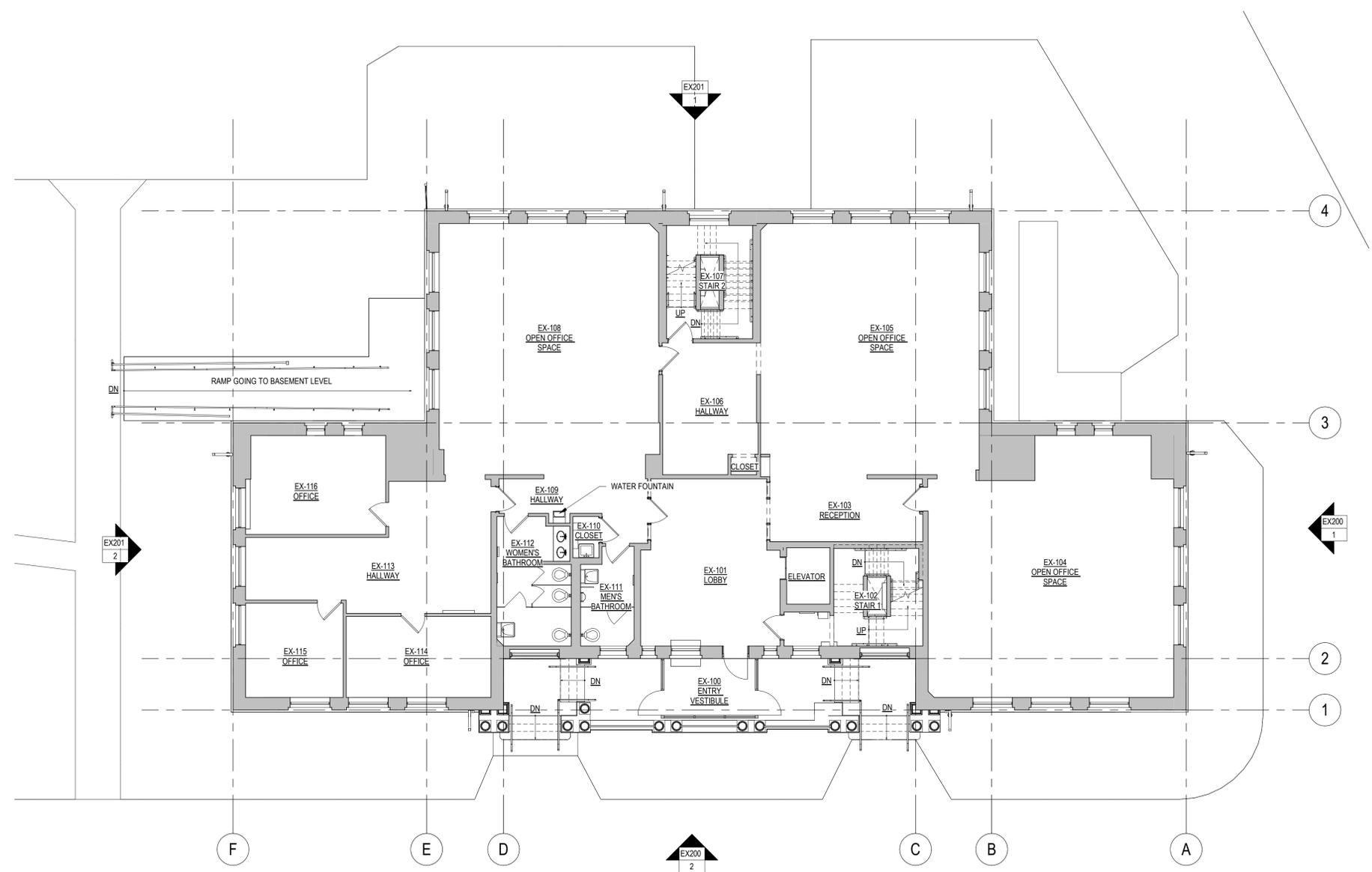
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 SCALE: As indicated  
 DRAWN: SA  
 CHECKED: GRB/KB

SHEET INFO:  
 EXISTING BASEMENT PLAN



**EX100**

**EXISTING WALL KEY**  
 ——— EXISTING WALL ASSEMBLY



**1** EXISTING FIRST FLOOR PLAN  
 SCALE: 1/8" = 1'-0"

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**CLS**  
 Nitsch Engineering

**ELLANA inc.**  
 Construction Consultants

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 Braintree, MA

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ISSUANCE:  
 EXISTING CONDITIONS

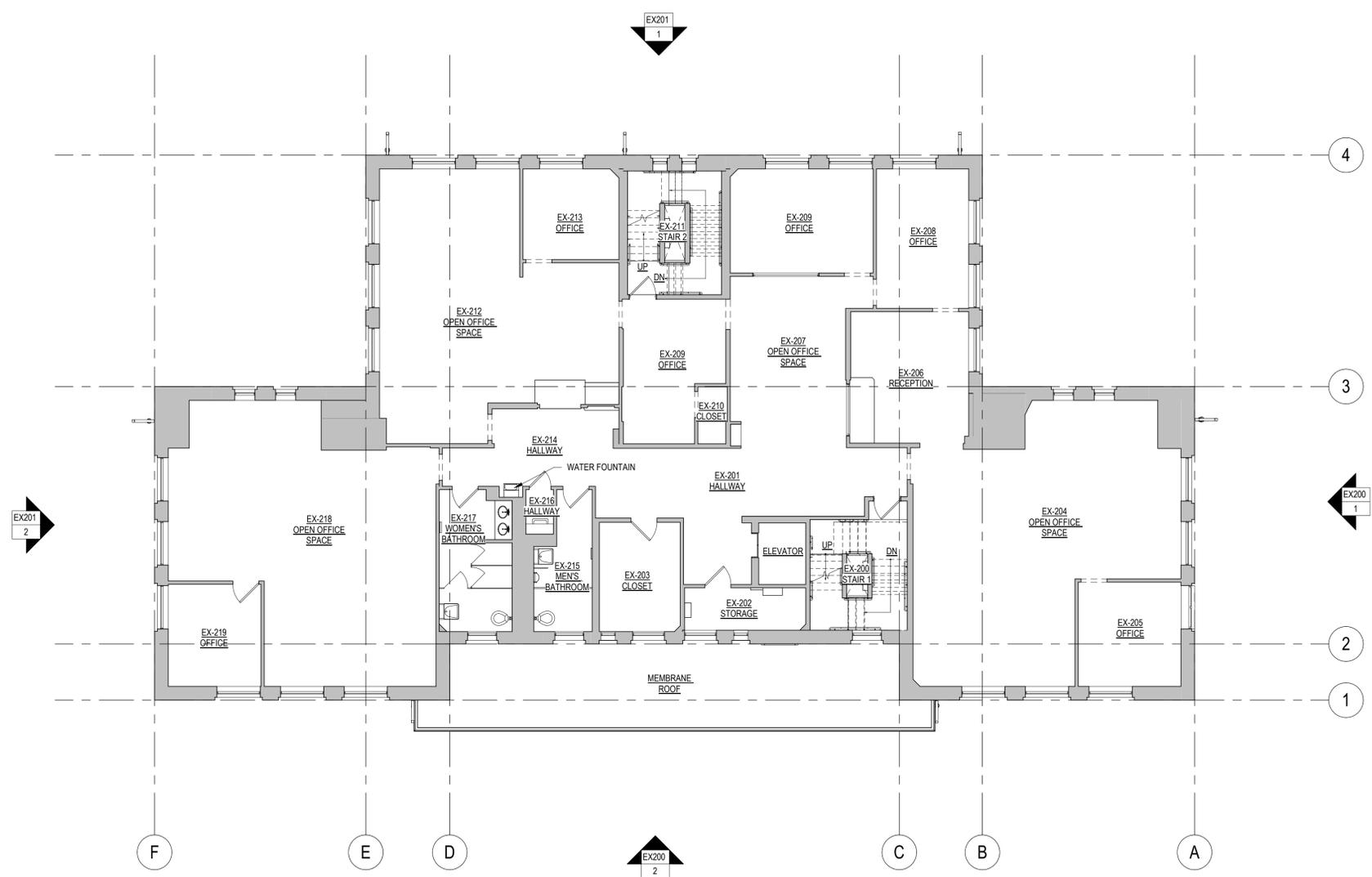
REVISION:

DATE: 03-01-2024  
 SCALE: As indicated  
 DRAWN: SA  
 CHECKED: GRB/KB  
 SHEET INFO:  
 EXISTING FIRST FLOOR PLAN



**EX101**

**EXISTING WALL KEY**  
 ——— EXISTING WALL ASSEMBLY



**1 EXISTING SECOND FLOOR PLAN**  
 SCALE: 1/8" = 1'-0"

**LDa** ARCHITECTURE & INTERIORS

**RSE**

**CLS**  
 Nitsch Engineering

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 EXISTING CONDITIONS

REVISION:

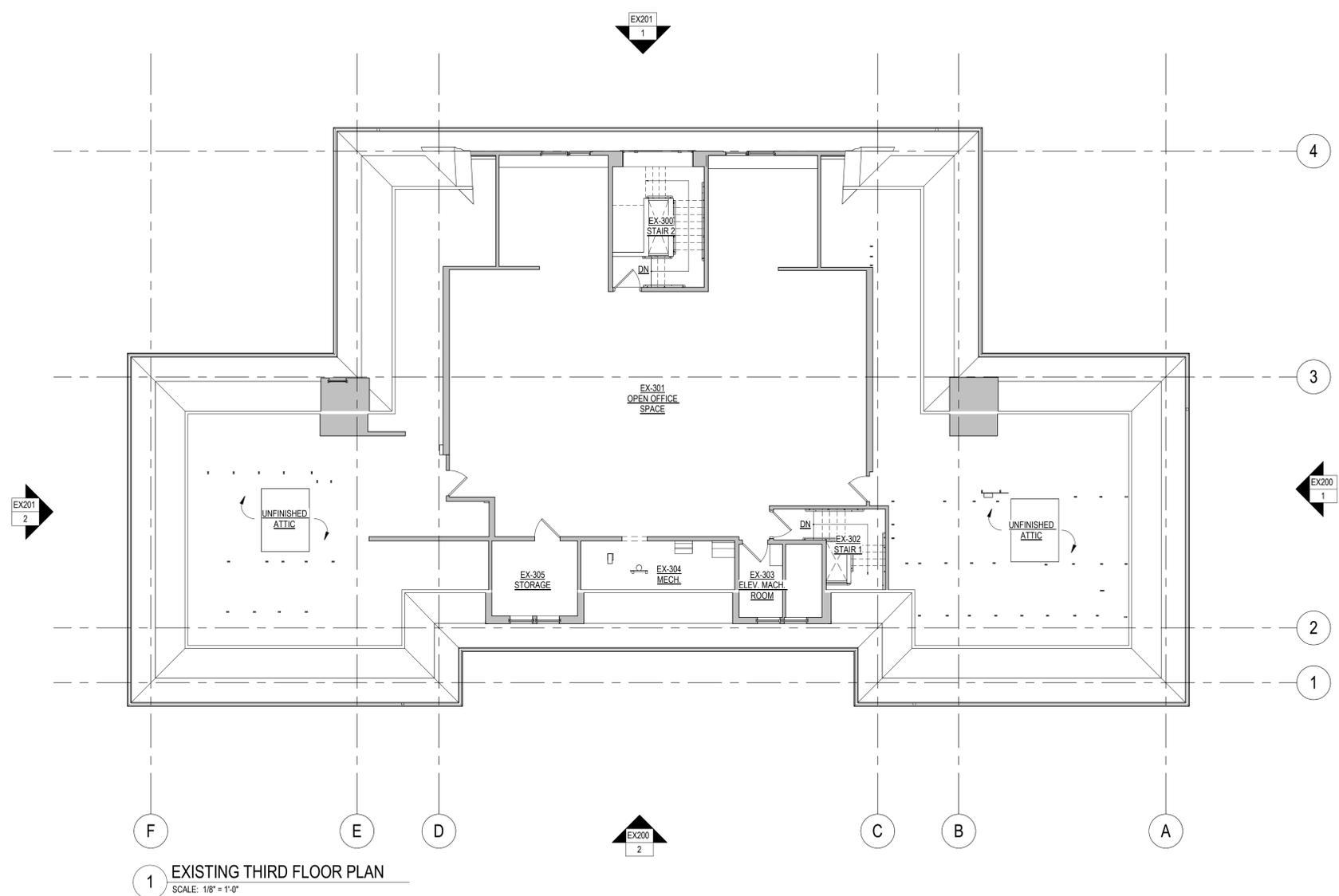
DATE: 03-01-2024  
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 DRAWN: SA  
 CHECKED: GRB/KB

SHEET INFO:  
 EXISTING SECOND FLOOR PLAN



**EX102**

**EXISTING WALL KEY**  
 ——— EXISTING WALL ASSEMBLY



**1** EXISTING THIRD FLOOR PLAN  
 SCALE: 1/8" = 1'-0"

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ISSUANCE:  
 EXISTING CONDITIONS

REVISION:

DATE: 03-01-2024  
 SCALE: As indicated  
 DRAWN: SA  
 CHECKED: GRB/KB

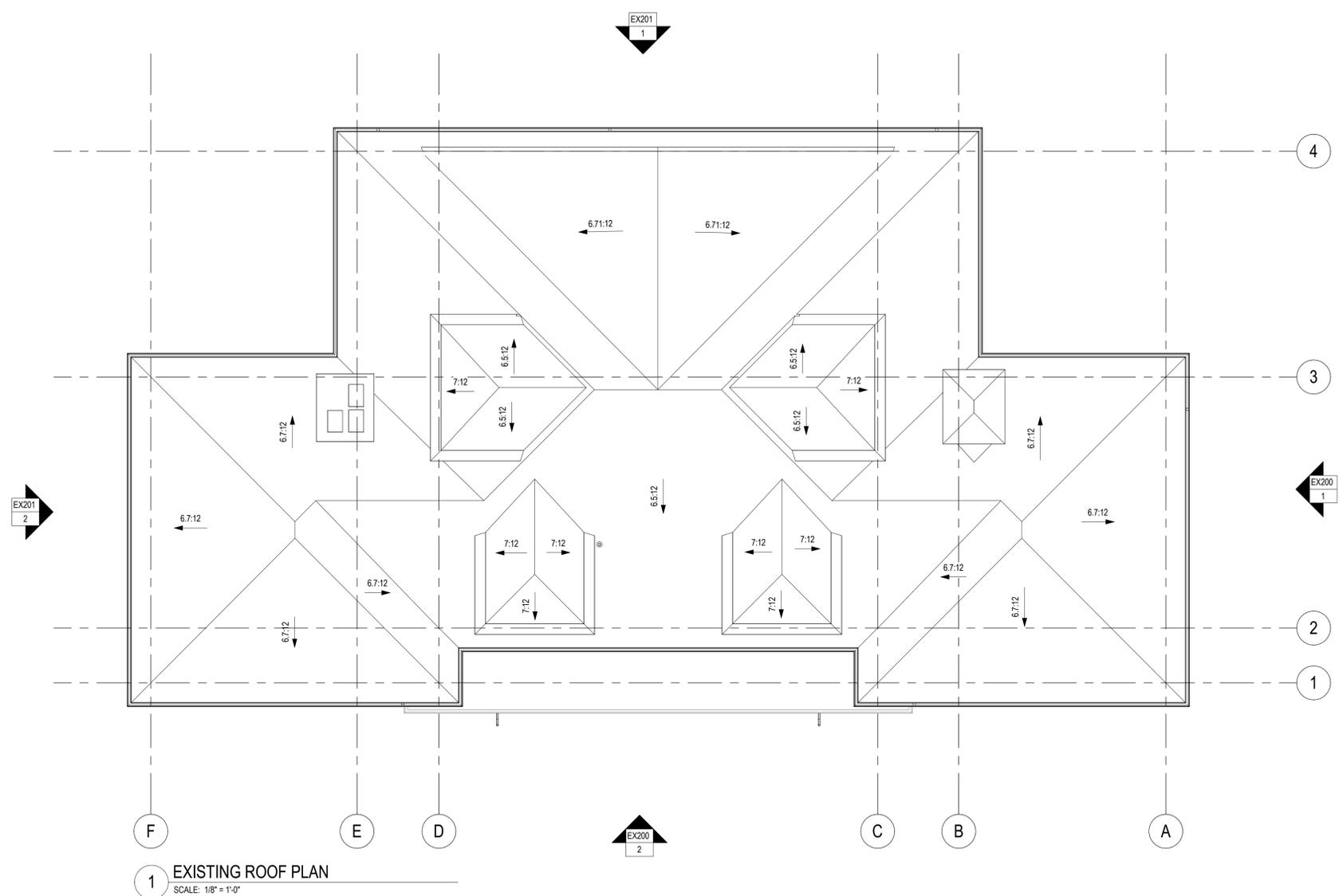
SHEET INFO:  
 EXISTING THIRD FLOOR PLAN



**EX103**

**EXISTING WALL KEY**

— EXISTING WALL ASSEMBLY



**1 EXISTING ROOF PLAN**  
SCALE: 1/8" = 1'-0"

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REVISION:

DATE: 03-01-2024  
SCALE: As indicated  
DRAWN: SA  
CHECKED: GRB/KB

SHEET INFO:  
EXISTING ROOF PLAN



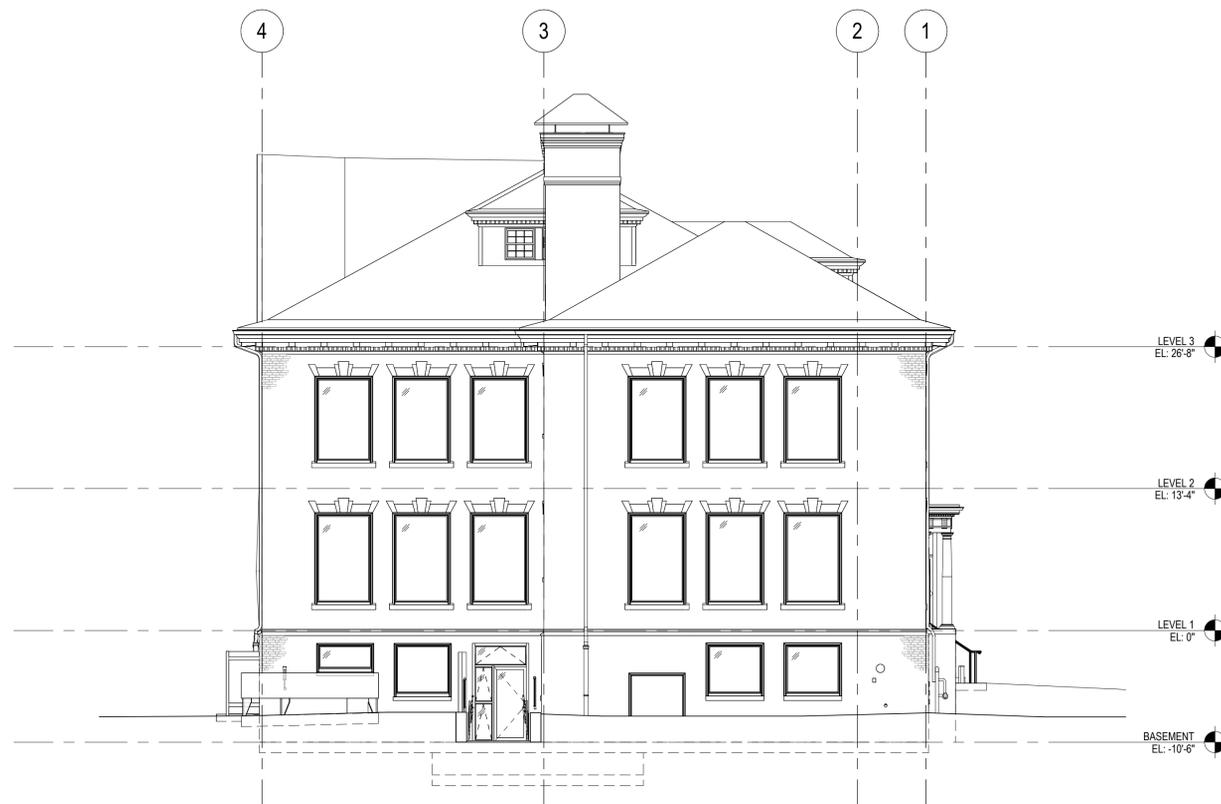
**EX104**



1 EXISTING WEST ELEVATION  
SCALE: 1/8" = 1'-0"



2 EXISTING NORTH ELEVATION  
SCALE: 1/8" = 1'-0"



2 EXISTING EAST ELEVATION  
SCALE: 1/8" = 1'-0"

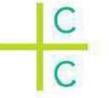
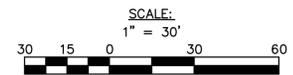


1 EXISTING SOUTH ELEVATION  
SCALE: 1/8" = 1'-0"



**LEGEND**

- DRAIN - - - - -
- SEWER - - - - -
- ELECTRIC/TELECOM - - - - -
- WATER - - - - -
- GAS - - - - -



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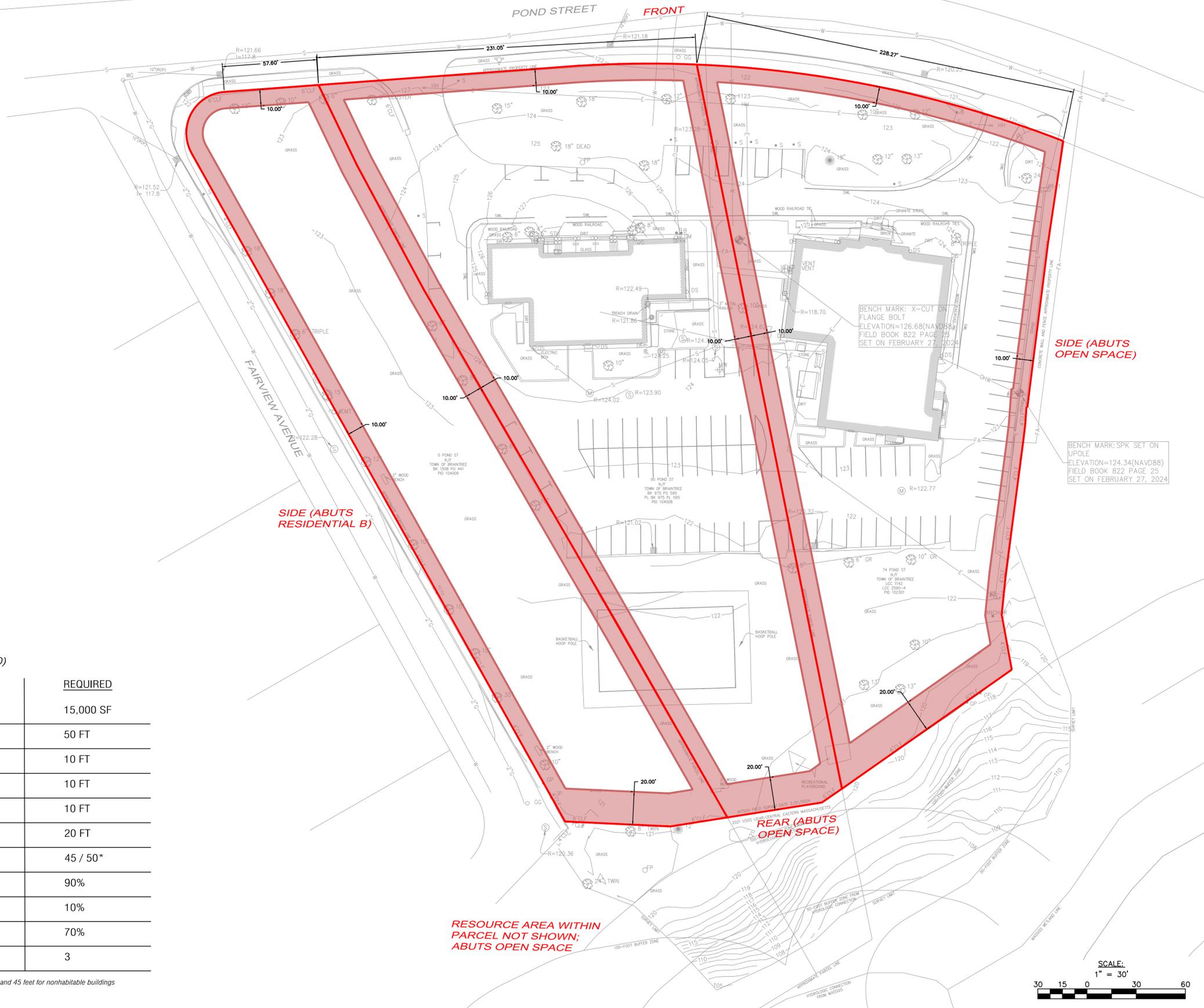
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ISSUANCE:  
EXISTING CONDITIONS

REVISION:

DATE: 04-10-2024  
SCALE:  
DRAWN: CGC/SGR  
CHECKED: SV  
SHEET INFO: EXISTING UTILITIES

**UTILITIES**

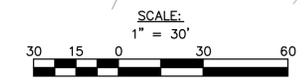


**SCHEDULE OF DIMENSIONAL CONTROLS**

ZONING DISTRICT: GENERAL BUSINESS DISTRICT (GBD)

| REQUIREMENT                   | REQUIRED  |
|-------------------------------|-----------|
| LOT AREA:                     | 15,000 SF |
| MIN. LOT FRONTAGE:            | 50 FT     |
| FRONT YARD:                   | 10 FT     |
| SIDE YARD:                    | 10 FT     |
| MIN. SIDE YARD ABUTTING RES.: | 10 FT     |
| REAR YARD:                    | 20 FT     |
| MAX. BUILDING HEIGHT:         | 45 / 50*  |
| MAX. LOT COVERAGE:            | 90%       |
| MIN. OPEN SPACE               | 10%       |
| MAX. BUILDING LOT COVERAGE:   | 70%       |
| MAX. STORIES:                 | 3         |

\*In business and commercial districts the height limitation is 50 feet for habitable and 45 feet for nonhabitable buildings



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ISSUANCE:  
EXISTING CONDITIONS

REVISION:

DATE: 04-10-2024  
SCALE:  
DRAWN: CGC/SGR  
CHECKED: SV  
SHEET INFO:  
ZONING SETBACKS

- KEY**
-  PROPERTY LINE
  -  ASPHALT
  -  CONCRETE
  -  GRAVEL
  -  GRASS
  -  WOODED
  -  PLANTING BED
  -  WETLAND
  -  DECIDUOUS TREE
  -  EVERGREEN TREE
  -  SHRUB
  -  CHAIN LINK FENCE



**Affordable Housing Study**  
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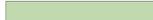
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ISSUANCE:  
EXISTING CONDITIONS

REVISION:

DATE: 03-01-2024  
SCALE: 1" = 40'-0"  
DRAWN: CV  
CHECKED: NC

SHEET INFO:  
Existing Conditions  
Site Plan

- KEY**
-  PROPERTY LINE
  -  GRASS
  -  WOODED
  -  PLANTING BED
  -  WETLAND
  -  DECIDUOUS TREE
  -  EVERGREEN TREE
  -  SHRUB
  -  CHAIN LINK FENCE



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EXISTING CONDITIONS

REVISION:

DATE: 03-01-2024  
SCALE: 1" = 40'-0"  
DRAWN: CV  
CHECKED: NC

SHEET INFO: Vegetation  
Diagram

- KEY**
- — — — — PROPERTY LINE
  - - - - - PEDESTRIAN CIRCULATION
  - - - - - INFORMAL CIRCULATION
  - - - - - WOODED CIRCULATION



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 EXISTING CONDITIONS

REVISION:

DATE: 03-01-2024  
 SCALE: 1" = 40'-0"  
 DRAWN: CV  
 CHECKED: NC  
 SHEET INFO: Pedestrian  
 Circulation Diagram

**KEY**

- — — — — PROPERTY LINE
- — — — — TWO WAY VEHICULAR CIRCULATION
- - - - - ONE WAY VEHICULAR CIRCULATION



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REVISION:

DATE: 03-01-2024  
 SCALE: 1" = 40'-0"  
 DRAWN: CV  
 CHECKED: NC  
 SHEET INFO: Vehicular Circulation Diagram

- KEY**
- — — — — PROPERTY LINE
  - - - - - MINOR CONTOUR
  - - - - - MAJOR CONTOUR
  - XX% → SLOPE



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REVISION:

DATE: 03-01-2024  
 SCALE: 1" = 40'-0"  
 DRAWN: CV  
 CHECKED: NC  
 SHEET INFO: Elevation and Slope Diagram

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ISSUANCE:  
EXISTING CONDITIONS

REVISION:

DATE: 03-01-2024  
SCALE: 1" = 40'-0"  
DRAWN: CV  
CHECKED: NC  
SHEET INFO: Views From Site  
Diagram





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**- 74 & 90 Pond St**

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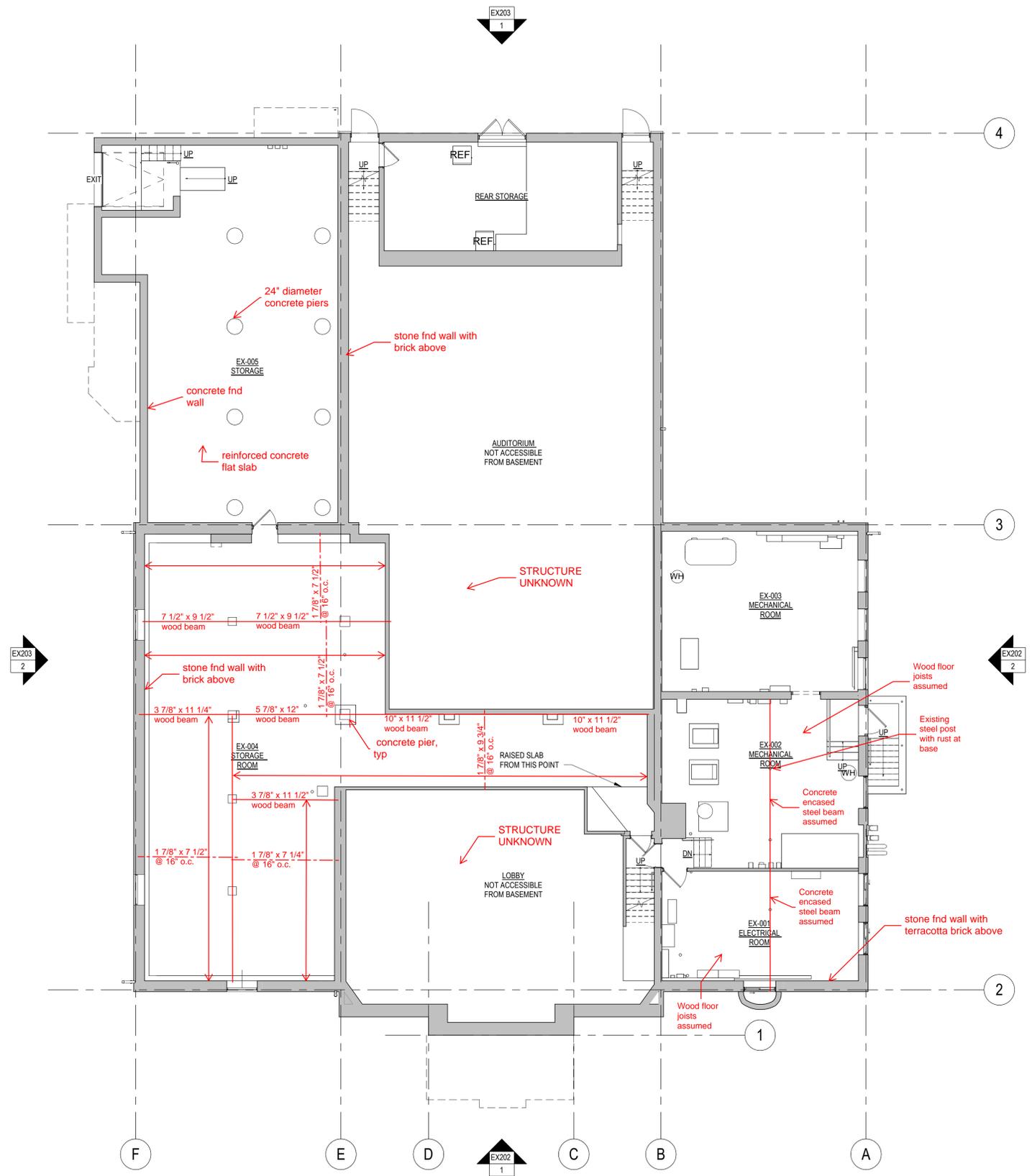
ISSUANCE:  
EXISTING CONDITIONS

REVISION:

DATE: 03-01-2024  
SCALE: 1" = 40'-0"  
DRAWN: CV  
CHECKED: NC

SHEET INFO: Views Into Site  
Diagram

**EXISTING WALL KEY**  
 ——— EXISTING WALL ASSEMBLY



**1 EXISTING FIRST FLOOR FRAMING**

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 EXISTING CONDITIONS

REVISION:

DATE: 03/01/2024  
 SCALE: As indicated  
 DRAWN: SA  
 CHECKED: GRB/KB  
 SHEET INFO:  
 EXISTING BASEMENT PLAN



**EX100**

**EXISTING WALL KEY**  
 ——— EXISTING WALL ASSEMBLY



**Affordable Housing Study**  
 - 90 Pond St  
 P31727.00  
 90 Pond St.  
 Braintree, MA

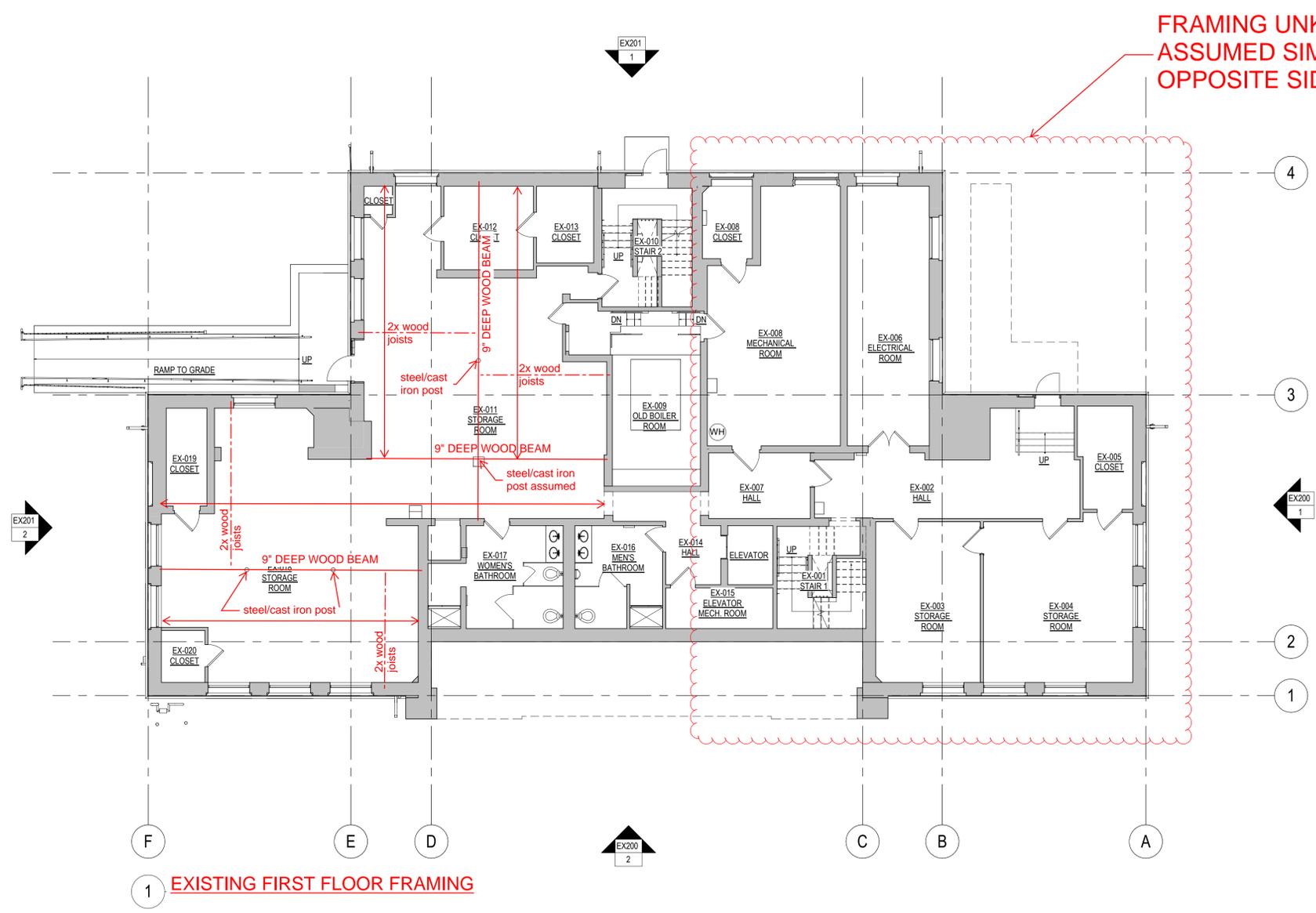
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 DRAWN: SA  
 CHECKED: GRB/KB

SHEET INFO:  
 EXISTING BASEMENT PLAN



**1 EXISTING FIRST FLOOR FRAMING**



**EX100**



**NOTES**

1. THIS DOCUMENT IS AN INSTRUMENT OF SERVICE OF NITSCHE ENGINEERING. IT IS ISSUED TO LDA ARCHITECTURE & INTERIORS, LLP FOR PURPOSES RELATED DIRECTLY AND SOLELY TO NITSCHE ENGINEERING'S SCOPE OF SERVICES UNDER CONTRACT WITH LDA ARCHITECTURE & INTERIORS, LLP FOR 74 POND STREET PROJECT. ANY USE OR REUSE OF THIS DOCUMENT FOR ANY REASON BY ANY PARTY FOR PURPOSES UNRELATED DIRECTLY AND SOLELY TO SAID CONTRACT AND PROJECT SHALL BE AT THE USER'S SOLE AND EXCLUSIVE RISK AND LIABILITY, INCLUDING LIABILITY FOR VIOLATION OF COPYRIGHT LAWS, UNLESS WRITTEN AUTHORIZATION IS GIVEN THEREOF BY NITSCHE ENGINEERING.
2. THE PURPOSE OF THIS PLAN IS TO SHOW THE EXISTING CONDITION AS THE RESULT OF AN ON-THE-GROUND INSTRUMENT SURVEY WHICH OCCURRED FEBRUARY 2024.
3. HORIZONTAL COORDINATES REFER TO MASSACHUSETTS STATE PLANE (NAD83) BASED ON RTK GPS OBSERVATIONS.
4. ELEVATION REFERS TO NAVD83 BENCHMARK BASED ON RTK GPS OBSERVATIONS.
5. THE INFORMATION CONTAINED ON THE DISK OR ELECTRONIC DRAWING FILE ACCOMPANYING THIS PLAN MUST BE COMPARED TO THE SEALED AND SIGNED HARD COPY OF THE PLAN TO ENSURE THE ACCURACY OF ALL INFORMATION AND TO ENSURE NO CHANGES, ALTERATIONS, OR MODIFICATIONS HAVE BEEN MADE. RELIANCE SHALL NOT BE MADE ON A DOCUMENT TRANSMITTED BY COMPUTER OR OTHER ELECTRONIC MEANS UNLESS FIRST COMPARED TO THE ORIGINAL SEALED DOCUMENT ISSUED AT THE TIME OF THE SURVEY. DUE TO THE CRITICAL NATURE OF SURVEYING, DATA ACQUISITION, AND AUTOCAD PLAN DEVELOPMENT, IF CRITICAL DIMENSIONAL INFORMATION IS NEEDED AND IS NOT SPECIFICALLY SHOWN ON THE ELECTRONIC DRAWING FILE, PLEASE CONTACT NITSCHE ENGINEERING.

**UTILITY INFORMATION STATEMENT**

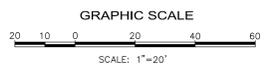
1. THE SUB-SURFACE UTILITY INFORMATION SHOWN HEREON IS COMPILED BASED ON FIELD SURVEY INFORMATION, RECORD INFORMATION AS SUPPLIED BY THE APPROPRIATE UTILITY COMPANIES, AND PLAN INFORMATION SUPPLIED BY THE CLIENT. IF ANY, THEREFORE WE CANNOT GUARANTEE THE ACCURACY OF SAID COMPILED SUB-SURFACE INFORMATION TO ANY CERTAIN DEGREE OF STATED TOLERANCE. ONLY PHYSICALLY LOCATED SUB-SURFACE UTILITY FEATURES FALL WITHIN NORMAL STANDARD OF CARE ACCURACIES.
2. THE LOCATIONS OF UNDERGROUND PIPES, CONDUITS, AND STRUCTURES HAVE BEEN DETERMINED FROM SAID INFORMATION, AND ARE APPROXIMATE ONLY. COMPILED LOCATIONS OF ANY UNDERGROUND STRUCTURES, NOT VISIBLY OBSERVED AND LOCATED, CAN VARY FROM THEIR ACTUAL LOCATIONS.
3. ADDITIONAL BURIED UTILITIES/STRUCTURES MAY BE ENCOUNTERED.
4. THE STATUS OF UTILITIES, WHETHER ACTIVE, ABANDONED, OR REMOVED, IS AN UNKNOWN CONDITION AS FAR AS OUR COMPILED INFORMATION.
5. IT IS INCUMBENT UPON INDIVIDUALS USING THIS INFORMATION TO UNDERSTAND THAT COMPILED UTILITY INFORMATION IS NOT EXACT, AND IS SUBJECT TO CHANGE BASED UPON VARYING PLAN INFORMATION RECEIVED AND ACTUAL LOCATIONS.
6. THE ACCURACY OF MEASURED UTILITY INVERTS AND PIPE SIZES IS SUBJECT TO FIELD CONDITIONS. THE ABILITY TO MAKE VISUAL OBSERVATIONS, DIRECT ACCESS TO THE VARIOUS ELEMENTS AND OTHER MATTERS.
7. THE PROPER UTILITY ENGINEERING/COMPANY SHOULD BE CONSULTED AND THE ACTUAL LOCATIONS OF SUBSURFACE STRUCTURES SHOULD BE VERIFIED IN THE FIELD (V.I.F.) BEFORE PLANNING FUTURE CONNECTIONS. CONTACT THE DIG SAFE CALL CENTER AT 1-888-344-7233, SEVENTY-TWO HOURS PRIOR TO EXCAVATION, BLASTING, GRADING, AND/OR PAVING.
8. AS OF THE DATE OF THIS PLAN RECORD INFORMATION HAS NOT BEEN RECEIVED BY NITSCHE ENGINEERING FOR THE FOLLOWING UTILITIES:

**LEGEND**

- CATCH BASIN
- CABLE TELEVISION MANHOLE
- DRAIN MANHOLE
- ELECTRIC MANHOLE
- MISCELLANEOUS MANHOLE
- SENEER MANHOLE
- TELEPHONE MANHOLE
- WATER MANHOLE
- GAS SHUT-OFF
- WATER SHUT-OFF
- GAS GATE
- WATER GATE
- IRRIGATION CONTROL VALVE
- CLEANOUT
- BOSTON WATER WORKS
- FIRE HYDRANT
- DOWN SPOUT
- UTILITY POLE
- UTILITY POLE WITH CONDUIT LINE TO GROUND
- LIGHT POLE
- LIGHT BOLLARD
- LANDSCAPE LIGHT
- HAND HOLE
- TRASH CAN
- FIRE ALARM CALL BOX
- METAL POST
- CONCRETE POST
- PARKING METER
- SIGN POST
- TRAFFIC MAST ARM
- TRAFFIC SIGNAL
- PEDESTRIAN SIGNAL
- DECIDUOUS TREE WITH TRUNK DIAMETER
- CONIFEROUS TREE WITH TRUNK DIAMETER
- HANDICAP PARKING
- SPOT ELEVATION
- CHAIN LINK FENCE
- BITUMINOUS CONCRETE BERM
- SLOPED GRANITE CURB
- VERTICAL GRANITE CURB
- VERTICAL CONCRETE CURB
- WHEELCHAIR RAMP
- LANDSCAPE TIMBER
- RIM ELEVATION EQUALS
- INVERT ELEVATION EQUALS
- TOP OF HOOD ELEVATION EQUALS
- NO PIPES VISIBLE
- TOP OF WATER
- TRAFFIC CONTROL BOX
- UNDERGROUND CABLE TELEVISION LINE
- UNDERGROUND CABLE LINE
- UNDERGROUND ELECTRIC LINE
- UNDERGROUND GAS LINE
- UNDERGROUND SENEER LINE
- UNDERGROUND TELEPHONE LINE
- UNDERGROUND WATER LINE
- OVERHEAD WIRES
- MONITORING WELL
- BENCH MARK



DENIS R. SEQUIN, PLS DATE  
 MASSACHUSETTS REG. NO. 37058  
 REGISTERED PROFESSIONAL LAND SURVEYOR





**APPENDIX B:  
EXISTING CONDITIONS REPORTS**

# **Braintree Affordable Housing**

**Braintree, Massachusetts**

**Nitsch Project #15743**

## **Existing Conditions Assessment**

**74 & 90 Pond Street, Braintree, MA**

**Nitsch Engineering**

February 22, 2024

The Town of Braintree is conducting a feasibility and initial design study for affordable and market rate housing at 74 and 90 Pond Street in Braintree, Massachusetts. This report is summarizing the existing conditions of the site based on historical data, Town of Braintree resources, and a site visit conducted by Nitsch Engineering on February 6, 2024.

### **OBSERVATIONS FROM SITE WALK:**

The project site being studied is comprised of two (2) parcels, 74 and 90 Pond Street, (see Appendix A, Figure 1 and Figure 2). The ‘0’ lot parcel may be part of the project site, as it may impact drainage or utility work. It was observed that the fence line at the edge of the grass separates the developed area and non-developed wetland that is all included in the property boundary of 74 and 90 Pond Street. The non-developed area is at a lower elevation than the developed area.



L: Fence line from “developed” side



R: Fence line from “non-developed” side

### **SOIL SURVEY:**

Based on the Natural Resources Conservation Service (NRCS) Web Soil Survey, most of the site is classified as Urban Land and hydrologic soil group A. The southern area, mostly composed of the wetland, is classified as silt loams and hydrologic soil groups B/D. See attached NRCS Soil Resource Report and GIS Figure 1 in Appendix B.

## **UTILITY INFRASTRUCTURE:**

### **Storm Drain**

It was observed that the existing storm drain system consists mainly of sheet flow to the wetland located on the southern area of the site. There is a low point at the east corner of the open field at the 74 Pond Street property line south of the building where runoff is likely directed prior to entering the wetland below.

There are at least three (3) catch basins on site. Two (2) are located on the site's southern edge of pavement where the parking lot meets the pervious area. The areas surrounding both catch basins are degraded and experiencing erosion, overgrowth, and broken pavement. It is possible that the catch basins are leaching basins, more information is needed from the survey and discussions with Town of Braintree to understand where these catch basins outlet.



Low point at eastern edge of 74 Pond Street property line



Catch basin at site southeastern pavement border



Catch basin at site southwestern pavement border

One (1) catch basin is located on site north where the accessible parking meets the pervious area. The area surrounding the catch basin is degraded and experiencing erosion, overgrowth, and broken pavement. More information is needed via survey and discussion with the Town of Braintree to understand where this catch basin outlets.



Catch basin at site north pavement border

It was observed that runoff from the northern portion of the site sheet flows to existing storm drainage infrastructure on Pond Street. See Appendix A, Figure 3 for conceptual, preliminary drainage areas based on observations of the site. Three (3) drainage points may be analyzed as part of this study:

- DP-1: Pond Street
- DP-2: Low Point on East Property Line of 74 Pond St. Lot
- DP-3: Wetland

## Sanitary Sewer

There is an existing 8" Vitrified Clay (V.C.) sewer line that enters the site from the north from an existing 8" V.C. sewer main that runs in Pond Street. The sewer line continues to the west through two manholes and then connects into 90 Pond Street at the south face of the building (back of building). There are at least two (2) sewer manholes, based on observation and a survey from the Town of Braintree DPW Engineering Division dated 07/26/2019, See Appendix A, Figure 4. The sewer manhole covers were observed as corroded.



One of the existing sewer manholes on site

There is an existing sewer easement that travels across the site approximately where the fence separates the developed portion of the site from the lower-grade wetland area. More information on the owner, location, and infrastructure of the easement should be reviewed and discussed with the Town of Braintree.

## Water

There is an existing 2" Cast Iron (C.I.) Water line that enters the site from Pond Street and connects to the building in the 74 Pond Street parcel. There is at least one (1) fire hydrant on the site between the two buildings. It is not clear how this hydrant is fed. Water service and hydrant connections should be reviewed and discussed with the Town of Braintree.



Observed fire hydrant on site

The project team should discuss with the town if there are hydrant flow test data to review or if a hydrant flow test should be conducted by the project team.

### **Gas**

No visible gas utilities were observed during the site visit. Record information should be requested by the client from the Town of Braintree or the appropriate utility provider.

### **Electric/Telecom**

It was observed that there are utility poles on the east property line of the 74 Pond Street lot and that there may be an underground electrical connection to either or both buildings. However, record information should be requested from the Town of Braintree or an appropriate utility provider to understand how the electrical/telecom connections are made to each building.



Observed utility poles on eastern edge of 74 Pond Street property line

## **PERMITTING**

### **Wetlands**

Based on GIS record information, it appears there is an existing wetland resource area on the southern portion of the site, See Appendix A, Figure 5. It appears that the wetland may be more than 10+ feet lower than the northern parking lot area spanning both lots. A portion of the Monatiquot River travels through the southern border of the site. Adjacent to the river are areas of marsh and wooded marsh. Approximate buffer zones using GIS may be indicated on future concept drawings. However, any wetland delineation and associated buffer zones must be determined by a wetland scientist in the field and provided on a stamped survey plan.

It does not appear that the project site is within **Areas of Critical Environmental Concern (ACEC)**, dated April 2009, (Appendix A, Figure 6), **Natural Heritage Priority Habitat or Endangered Species Areas**, dated August 1, 2021 (see Appendix A, Figure 7), or **Wellhead Protection Areas** (see Appendix A, Figure 8).

### **FEMA FLOOD PLAIN**

Based on the FEMA Flood Hazard GIS data, the southern wetland area of the site contains a regulatory floodway and is within an AE: 1% Annual Chance of Flooding with Base Flood Elevation (BFE) of approximately 104 feet (see Appendix A, Figure 9 and Figure 10).

**PAVEMENT**

The two buildings on site are surrounded by pavement roadways that consist of an entrance and exit to the site, and a parking lot. There are two entrance/exit driveways to Pond Street that are in poor condition and appear eroded. The connection between the site and Pond Street consists of cracks, broken pavement, and potholes. The rest of the driveway through the site was similarly observed as eroded and contains visible cracks and broken pavement.



Site northeast entrance/exit



Site northwest entrance/exit



Front driveway



In front of 74 Pond St.



Back parking lot edge of pavement



Typ. parking spot in lot, cracked pavement visible

## APPENDIX A

### Geographic Information Systems (GIS) Figures

Figure 1: Aerial Locus Map

Figure 2: USGS Map

Figure 3: Conceptual Existing Drainage Areas

Figure 4: Town of Braintree DPW Site Plan Review

Figure 5: MassDEP Wetlands Map

Figure 6: Areas of Critical Environmental Concern Map

Figure 7: Natural Heritage Endangered Species Program Map

Figure 8: Wellhead Protection Areas Map

Figure 9: Federal Emergency Management Agency (FEMA) National Flood Hazard Layer Firmette

Figure 10: FEMA Flood Hazard Map

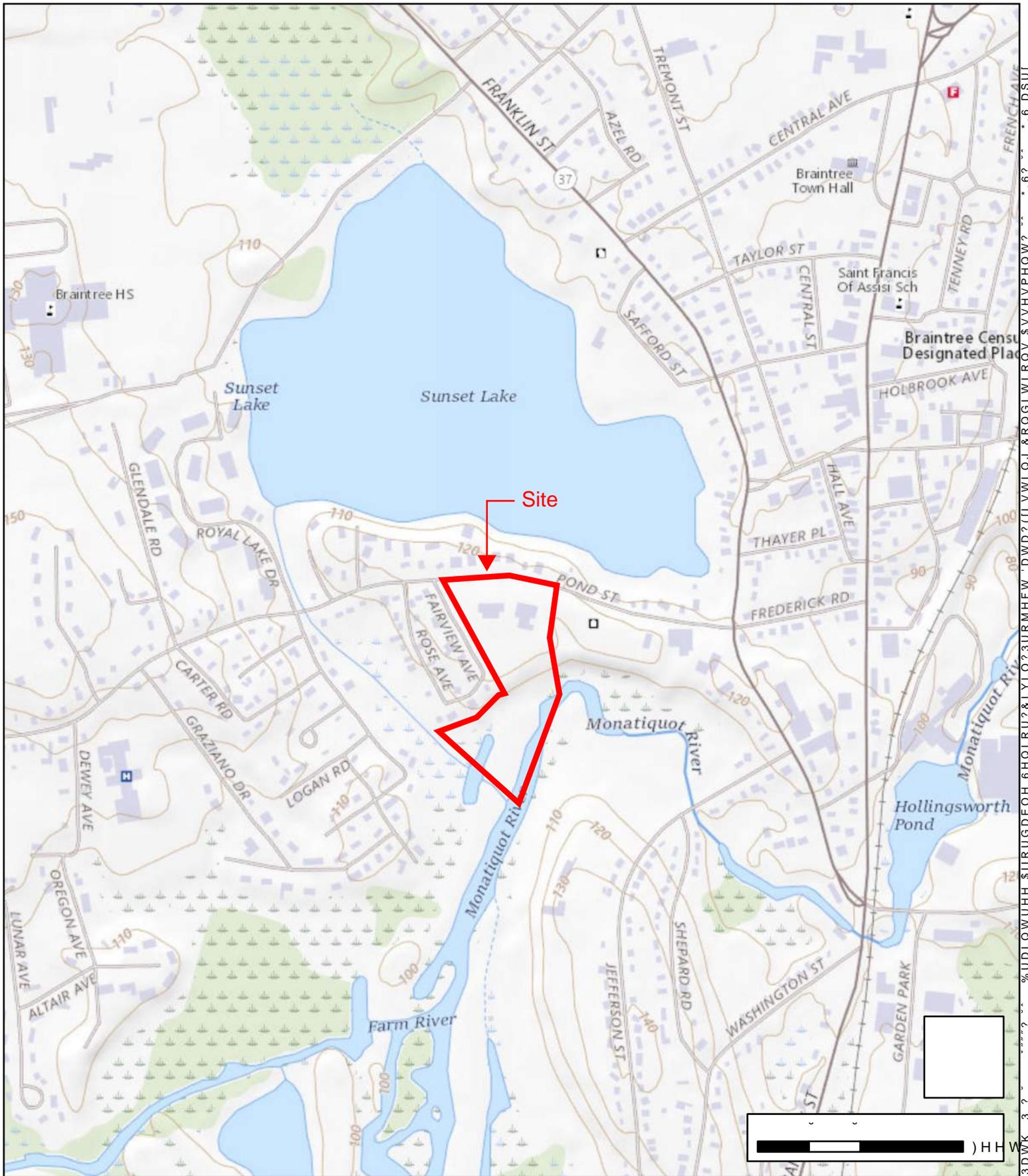


**Figure 1: Aerial Locus** ) / R F X V

Braintree Affordable Housing  
74 & 90 Pond Street, Braintree, MA

Data Source: MassGIS  
Nitsch Project #15743

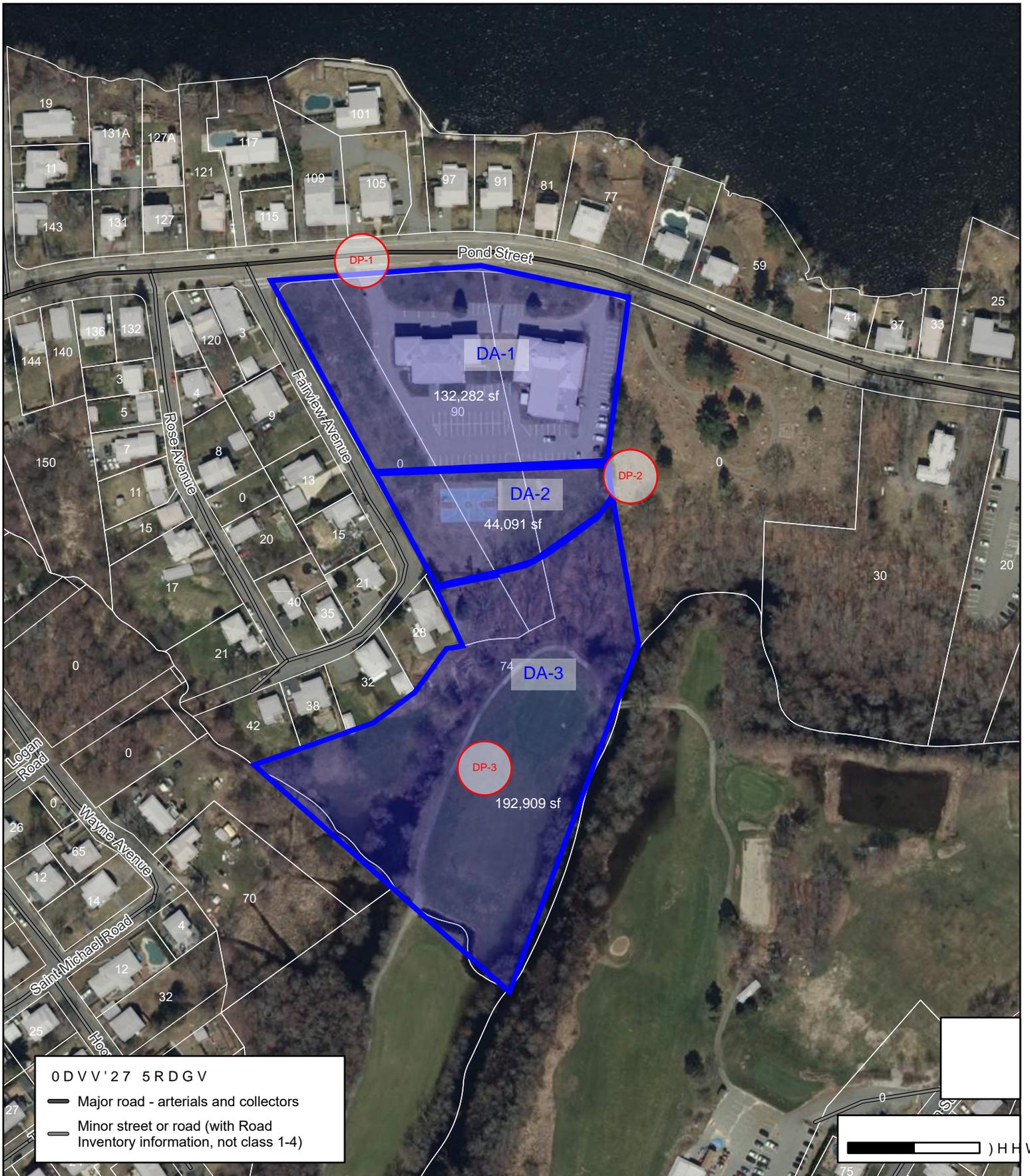




**Figure 2: USGS Locus**      F X V

%UDLQWUHH \$IIRUGDEOH +RXVLQJ  
 ^ " 3RQG 6WUHHW %UDLQWUHH 0\$

'DWD 6RXUFH, 0DVV\*.6 86\*6  
 1LWVFK 3URMHFW



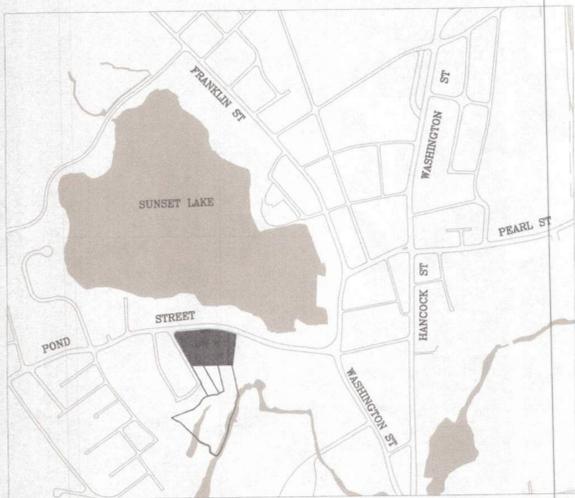
**Figure 3: Conceptual Existing Drainage Areas**

Braintree Affordable Housing  
74 & 90 Pond Street, Braintree, MA

Figure 4: Town of Braintree DPW Site Plan Review

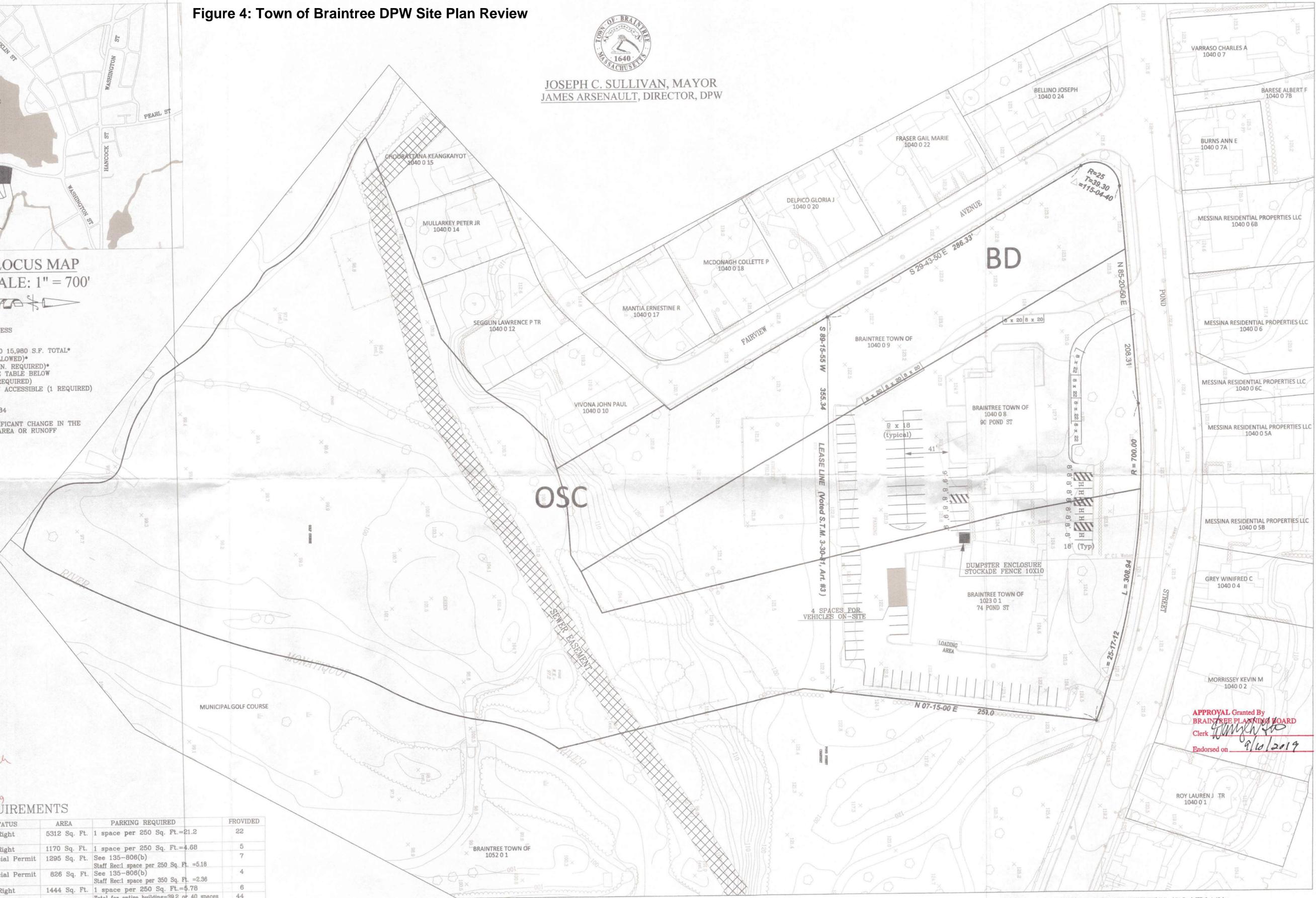


JOSEPH C. SULLIVAN, MAYOR  
JAMES ARSENAULT, DIRECTOR, DPW



LOCUS MAP  
SCALE: 1" = 700'

NOTES:  
ZONING: "LEASE AREA" BUSINESS  
REMAINDER OSC  
LOT AREA: 132,858± S.F.\*  
BUILDING AREA: 6960 + 9620 15,980 S.F. TOTAL\*  
BUILDING AREA: 12% (70% ALLOWED)\*  
OPEN SPACE %: 56% (10% MIN. REQUIRED)\*  
PARKING REQUIREMENTS: SEE TABLE BELOW  
ACCESSIBLE PARKING: 4 (2 REQUIRED)  
2 VAN ACCESSIBLE (1 REQUIRED)  
OWNER: TOWN OF BRAintree  
1 JFK MEMORIAL DR.  
BRAintree, MA 02184  
TOPOGRAPHY & DRAINAGE:  
THERE WILL BE NO SIGNIFICANT CHANGE IN THE  
CONTOURS, IMPERVIOUS AREA OR RUNOFF  
CHARACTERISTICS.



Robert P. Campbell  
Town Engineer

PARKING REQUIREMENTS

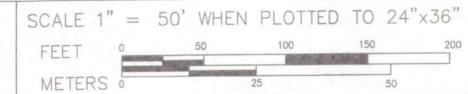
| USE                    | STATUS         | AREA         | PARKING REQUIRED  | PROVIDED |
|------------------------|----------------|--------------|---|----------|
| Community Center       | By Right       | 5312 Sq. Ft. | 1 space per 250 Sq. Ft.=21.2  | 22       |
| Office (Devana)        | By Right       | 1170 Sq. Ft. | 1 space per 250 Sq. Ft.=4.68  | 5        |
| Municipal Use          | Special Permit | 1295 Sq. Ft. | See 135-806(b)<br>Staff Recl. space per 250 Sq. Ft. =5.18                   | 7        |
| Catering               | Special Permit | 826 Sq. Ft.  | See 135-806(b)<br>Staff Recl. space per 350 Sq. Ft. =2.36                   | 4        |
| Office (Retirement BD) | By Right       | 1444 Sq. Ft. | 1 space per 250 Sq. Ft.=5.78<br>Total for entire building=39.2 or 40 spaces | 6<br>44  |

APPROVAL Granted By  
BRAintree PLANNING BOARD  
Clerk: [Signature]  
Endorsed on 9/10/2019

\*INFORMATION TRANSCRIBED FROM "#90 POND STREET" SPECIAL PERMIT PLAN OF MAY 18, 1981 and REVISED OCTOBER 10, 2004

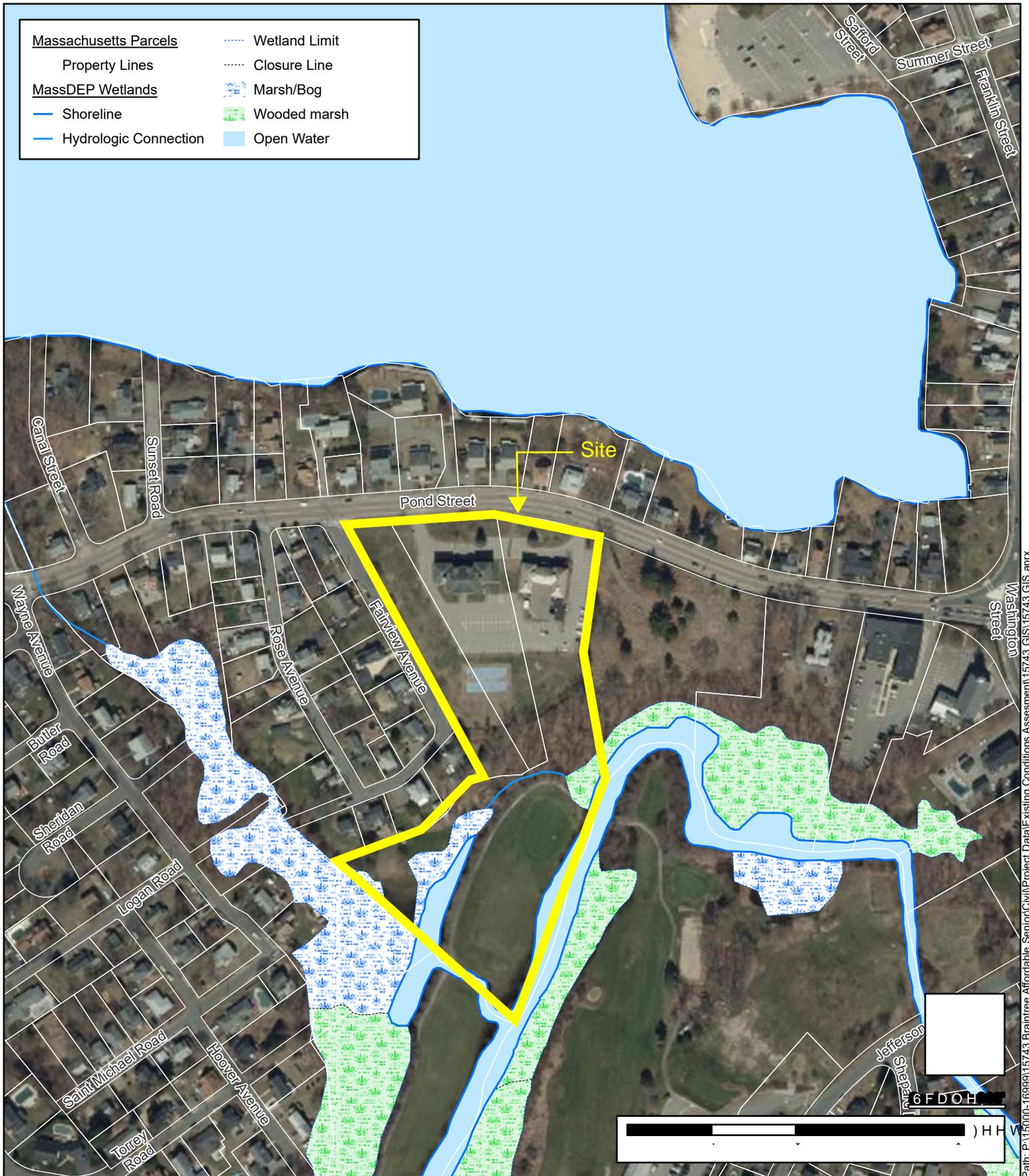
TOWN OF BRAintree DPW  
ENGINEERING DIVISION

SPECIAL PERMIT/ SITE PLAN REVIEW FOR 74 POND STREET  
BRAintree, MASSACHUSETTS



|                 |                   |                |                 |              |
|-----------------|-------------------|----------------|-----------------|--------------|
| DATE: 7/26/2019 | DESIGNED BY: RPC  | DRAWN BY: RMH  | CHECKED BY: RPC | SHEET 1 OF 1 |
| REV: 9/04/2019  | CONTRACT NO. 00-0 | RECORD PLAN(S) |                 |              |

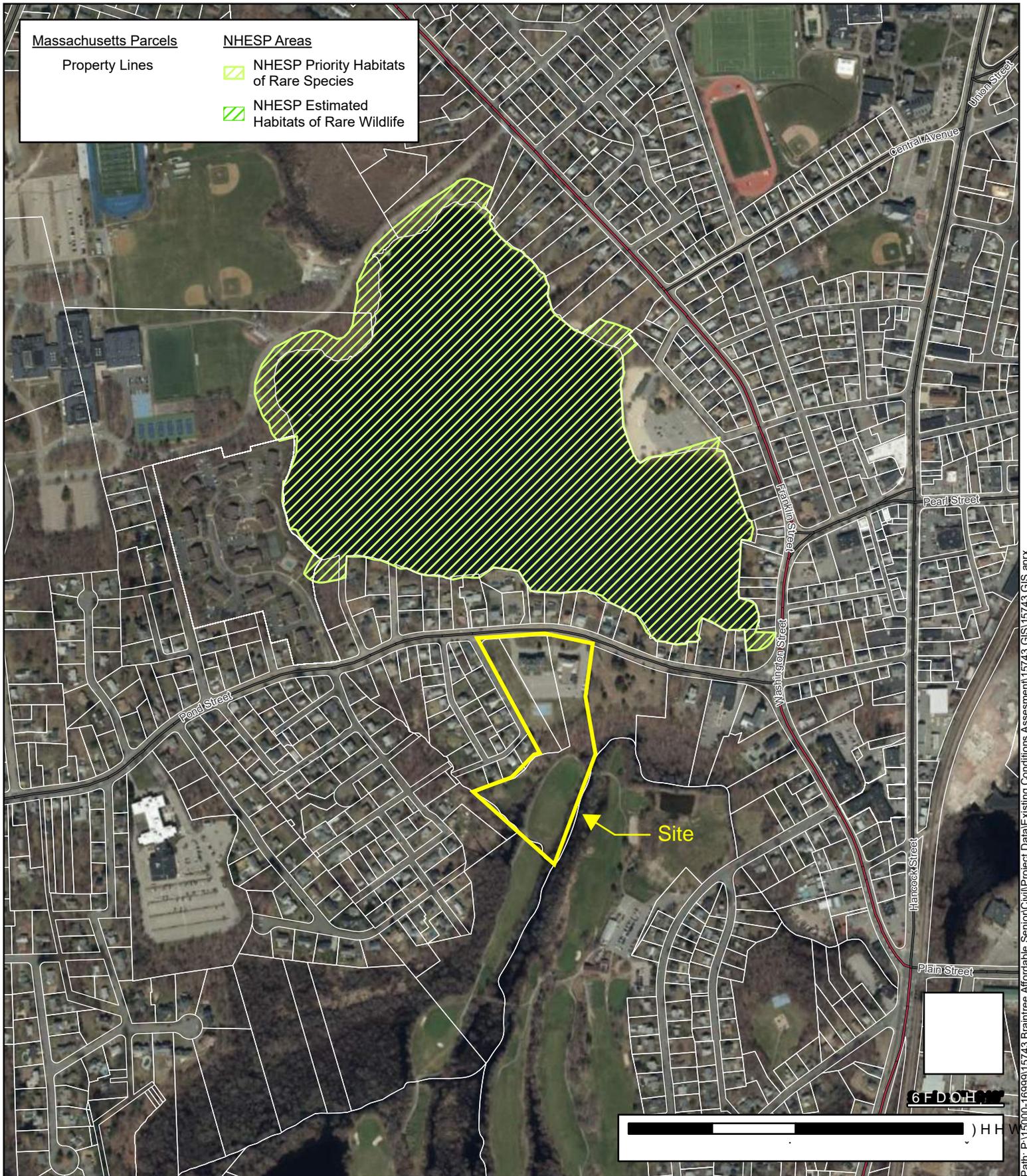
File 19-11



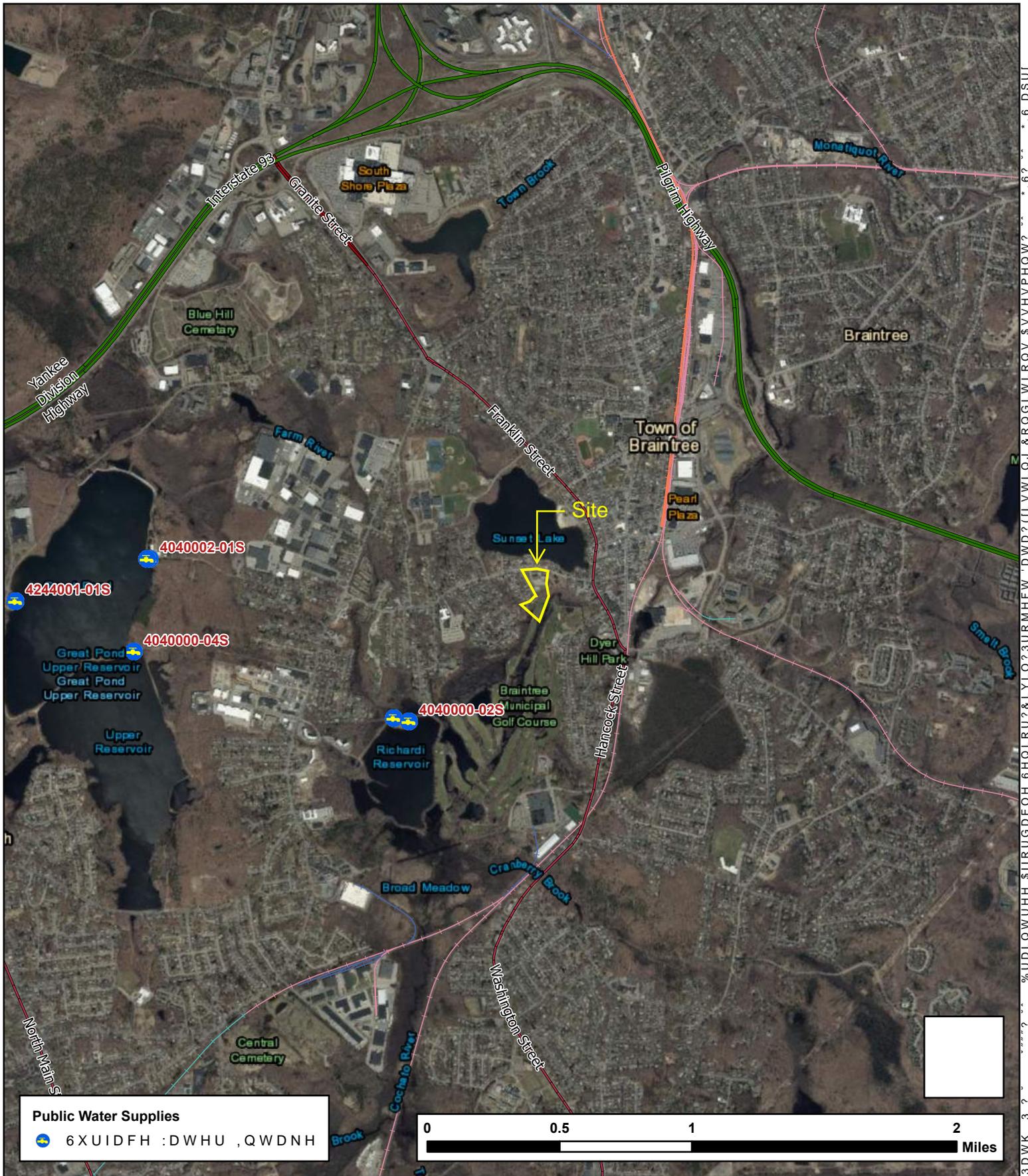
**Figure 5: MassDEP Wetlands**  
 Braintree Affordable Housing  
 74 & 90 Pond Street, Braintree, MA



**Figure 6: Areas of Critical Environmental Concern QYLURQPHQWDO & RQFHUQ**



**Figure 7: Natural Heritage and Endangered Species Program** 3 D Q J H U H G  
 Braintree Affordable Housing  
 74 & 90 Pond Street, Braintree, MA



**Figure 8: Wellhead Protection Areas**

2/20/2024

%UDLQWUHH \$IIRUGDEOH +RXVLQJ  
 ^ " 3RQG 6WUHHW %UDLQWUHH 0\$

'DWD 6RXUFH, 0DVV\*.6  
 1LWVFK 3URMHFW

Figure 9: National Flood Hazard Layer FIRMette



**FHOG**

Legend for flood hazard symbols and colors:

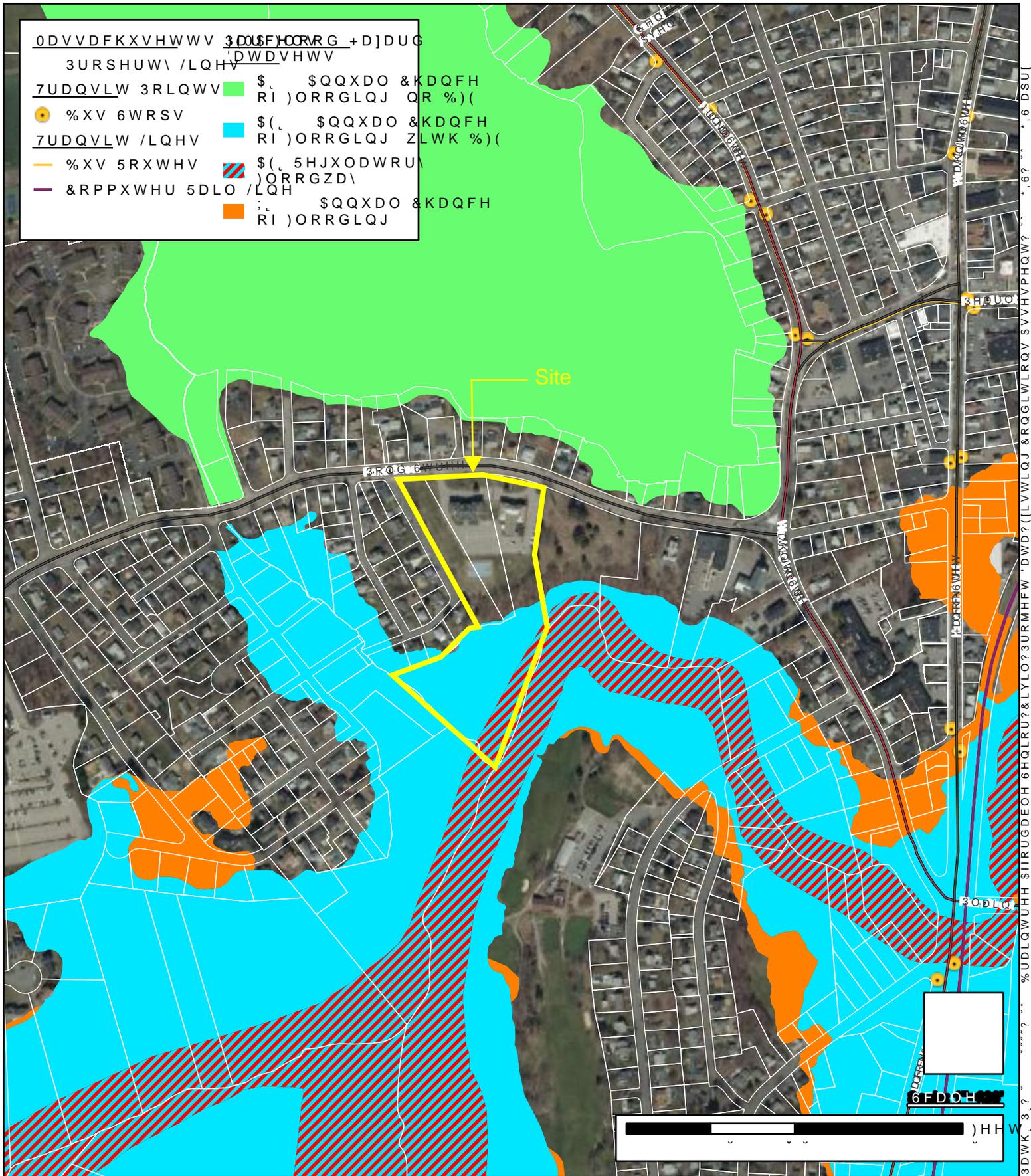
- Light Blue: L W H R W % D H J P R R G O H D M L R Q % - F Q H \$ 9 \$
- Light Blue with Diagonal Hatching: L W K % R U F B W K - F Q H \$ 9 \$ 9 \$
- Red with Diagonal Hatching: \$ H O D M R U A J P R R G D
- Orange: \$ O O O D & O O H J O R R G E P U G \$ U H D / R D O O O D F R O O F H I O R R G Z W K D M U D H G B W K O H W W K O Q R Q H I R R W R U Z W K G U L O O D J U H D / R O H W W K O Q R Q H V D U E O H F Q H ;
- Grey with Diagonal Hatching: X W X U H & R Q L W L R Q / \$ O O O D & O O H J O R R G E P U G - F Q H ;
- Orange with Diagonal Hatching: \$ U D Z W K \$ G H G J P R R G \$ L N G H W R A H H G H R M V H - F Q H ;
- Yellow with Diagonal Hatching: \$ U D Z W K J O R R G \$ L N G H W R A H H - F Q H ;
- Blue outline: \$ U H R Q L E O J P R R G E P U G - F Q H ; ( I H F W L Y H U V
- Light Blue with Diagonal Hatching: \$ U H R Q L W H U E Q G J P R R G E P U G - F Q H ;
- Black dashed line: & O O O O & O Y H U W R U & V R U R E Z U
- Black dotted line: A H H L N H R U J P R R G O O
- Black line with circle: \$ U R W & F W L R Q / Z W K \$ O O O D & O O H J
- Black line with square: D A V H U & U I P H O H D M L R Q
- Black dashed line: & F D W D D J U D Q A F W
- Black wavy line: % D H J P R R G O H D M L R Q L Q H %
- Red line: L E W R & V X G
- Yellow line: X U L V L F W L R Q % R Q O E U A
- Black dashed line: & F D W D D J U D Q A F W % D H O L Q H
- Blue dashed line: \$ U R L O H % D H O L Q H
- Blue solid line: \$ U R U D S K L F J D M X U H
- Green with cross-hatch: L L W O D D W D \$ O L O E O H
- Green with diagonal hatching: R L L W O D D W D \$ O L O E O H
- Green with cross-hatch: X C E S S G
- Red circle: 7 K H S L Q G L V S O D H G R Q W K H B S L V D Q D S S U R L B W H S R L Q V V O H F W H G E W K H X H U D O G G R H V Q R W U H U H D O O D W W K U L W D W L Y H S U R S U W O R F D W L R Q

7 K L V B S F F B O L H V Z W K J V W D O O E U G / I R U W K H X H R G L J W O I O R R G B S / L I L W L V Q R W Y R L G D V G H F U L B G B O R Z 7 K H E D M B S V K R Q F F B O L H V Z W K J V E D M B S D F F U D R W D O O E U G /

7 K H I O R R G K Q U G L Q R U B M L R Q L V G U L Y H G L U H F W O I U R P W K D A W K U L W D M L Y H J Z E V H U L F H V S U R L G G E J 7 K L V B S Z V H S R U W H G R Q D V 3

U H O H F W F R O Q H V R U D P Q R Q W V X B H I X Q V W R W K L V G D M H D O G W L R 7 K H J D O G H I F W L Y H L Q R U B M L R Q B F R O Q H R U E F F R V S H U V H G G E Q Z O D V D R F H U W L R

7 K L V B S L B H L Y R L G L I W K H R Q R U R U H R W K H I R O O R Z O J B S H O H R Q W G R Q R W D S S D U E D M B S L B H U I O R R G J R O H D E H O V O H F Q G V R O D H E D U B S F U H D M L R Q G D M H F F Q L W L G Q M L L H U V ) S S O O H Q E H U D O G ) S H I F W L Y H G D M H D S L B H V I R U X C E S S G D O G X C R G U Q J H G D U H D F O O Q R W B H X V G I R U U H K O D M R U A S U S R V H



**Figure 10: FEMA Flood Hazard** DUG  
 %UDLQWUHH \$IIRUGDEOH +RXVLQJ  
 ^ " 3RQG 6WUHHW %UDLQWUHH 0\$

'DWD 6RXUFH, 0DVV\*,6  
 1LWVFK 3URMHFW

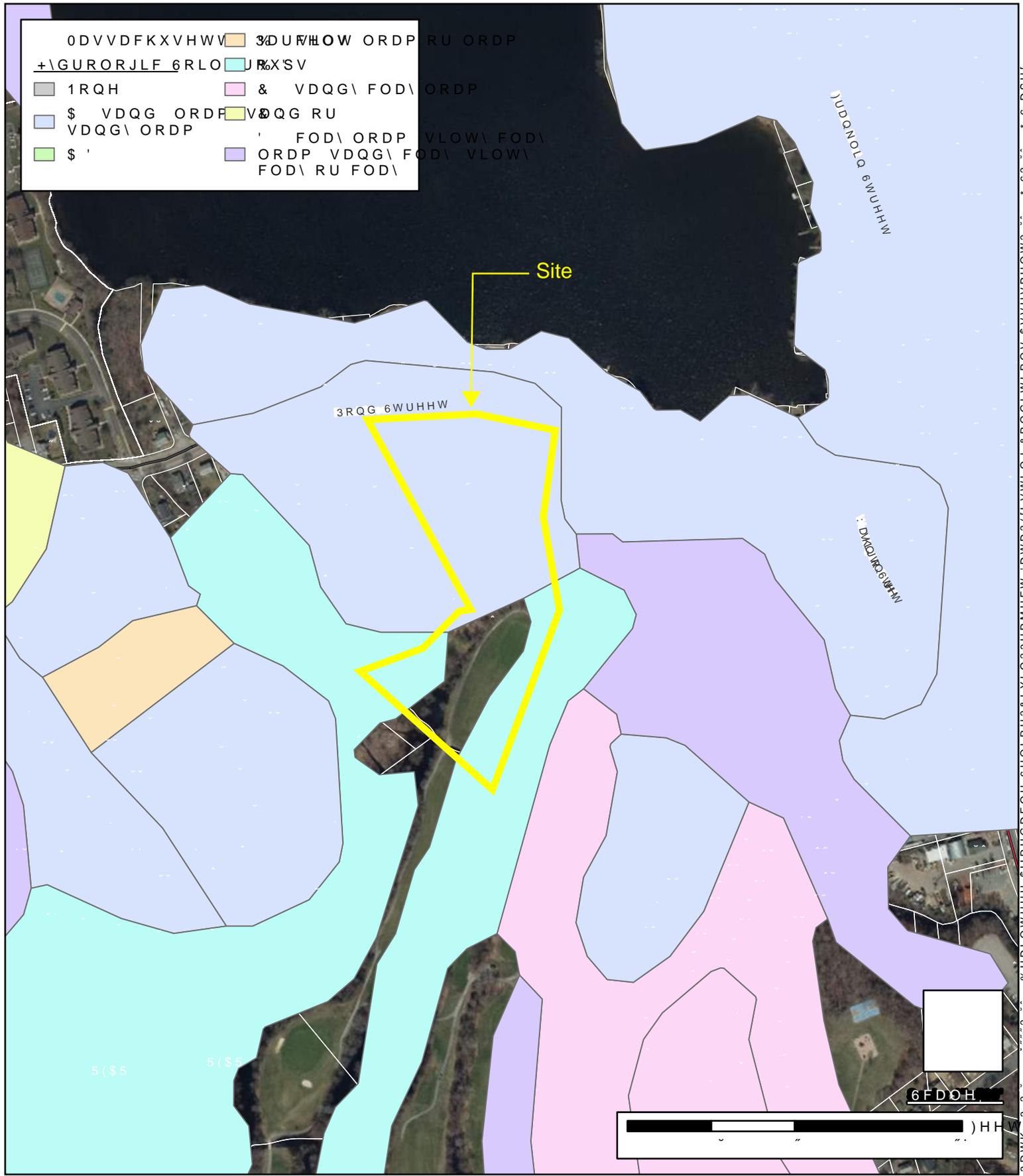
APPENDIX B

Soil Information

Figure 1: Hydrologic Soil Groups GIS Map

National Resource Conservation Service (NRCS) Web Soil Survey Report

|                  |                       |              |
|------------------|-----------------------|--------------|
| 0DVVDFKXVHVW     | 3DUFW#OW ORDP         | RU ORDP      |
| + \GURORJLF 6RLO | JR%XS V               |              |
| 1RQH             | & VDQG\ FOD\ ORDP     |              |
| \$ VDQG ORDF     | V0QG RU               |              |
| VDQG\ ORDP       | ' FOD\ ORDP           | VLOW\ FOD\   |
| \$ '             | ORDP VDQG\ FOD\ VLOW\ | FOD\ RU FOD\ |



)LJXUH + \GURORJLF 6RLO \*URXS V  
 %UDLQWUHH \$IIRUGDEOH +RXVLQJ  
 ^ " 3RQG 6WUHHW %UDLQWUHH 0\$



United States  
Department of  
Agriculture

**NRCS**

Natural  
Resources  
Conservation  
Service

A product of the National  
Cooperative Soil Survey,  
a joint effort of the United  
States Department of  
Agriculture and other  
Federal agencies, State  
agencies including the  
Agricultural Experiment  
Stations, and local  
participants

# Custom Soil Resource Report for Norfolk and Suffolk Counties, Massachusetts



# Preface

---

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist ([http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2\\_053951](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951)).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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# How Soil Surveys Are Made

---

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

## Custom Soil Resource Report

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

## Custom Soil Resource Report

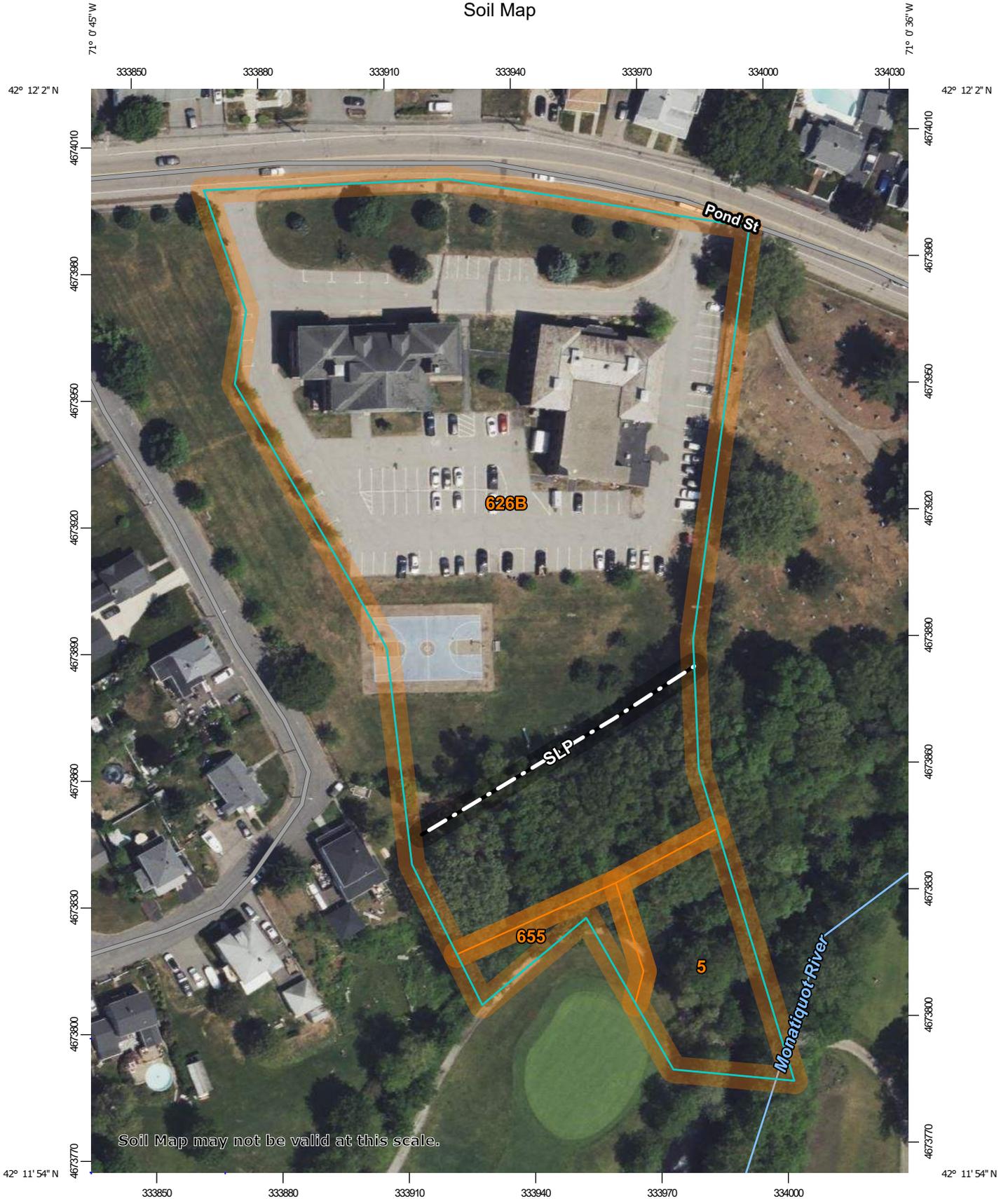
identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

# Soil Map

---

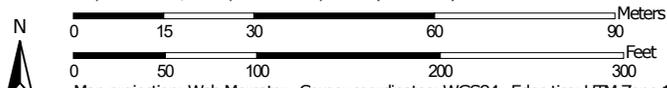
The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

# Custom Soil Resource Report Soil Map



Soil Map may not be valid at this scale.

Map Scale: 1:1,250 if printed on A portrait (8.5" x 11") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

### MAP LEGEND

|   |                        |   |                       |
|---|------------------------|---|-----------------------|
| <b>Area of Interest (AOI)</b>   |                        |  | Spoil Area            |
|   | Area of Interest (AOI) |  | Stony Spot            |
| <b>Soils</b>  |                        |  | Very Stony Spot       |
|    | Soil Map Unit Polygons |  | Wet Spot              |
|    | Soil Map Unit Lines    |  | Other                 |
|    | Soil Map Unit Points   |  | Special Line Features |
| <b>Special Point Features</b>   |                        | <b>Water Features</b>   |                       |
|    | Blowout                |  | Streams and Canals    |
|    | Borrow Pit             | <b>Transportation</b>   |                       |
|    | Clay Spot              |  | Rails                 |
|    | Closed Depression      |  | Interstate Highways   |
|    | Gravel Pit             |  | US Routes             |
|    | Gravelly Spot          |  | Major Roads           |
|    | Landfill               |  | Local Roads           |
|    | Lava Flow              | <b>Background</b>   |                       |
|    | Marsh or swamp         |  | Aerial Photography    |
|    | Mine or Quarry         |   |                       |
|   | Miscellaneous Water    |   |                       |
|  | Perennial Water        |   |                       |
|  | Rock Outcrop           |   |                       |
|  | Saline Spot            |   |                       |
|  | Sandy Spot             |   |                       |
|  | Severely Eroded Spot   |   |                       |
|  | Sinkhole               |   |                       |
|  | Slide or Slip          |   |                       |
|  | Sodic Spot             |   |                       |

### MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:25,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
 Web Soil Survey URL:  
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Norfolk and Suffolk Counties, Massachusetts  
 Survey Area Data: Version 19, Sep 10, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 22, 2022—Jun 5, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Map Unit Legend

| Map Unit Symbol                    | Map Unit Name  | Acres in AOI | Percent of AOI |
|------------------------------------|--|--------------|----------------|
| 5                                  | Saco silt loam, frequently ponded, 0 to 1 percent slopes, frequently flooded | 0.4          | 8.5%           |
| 626B                               | Merrimac-Urban land complex, 0 to 8 percent slopes                           | 3.9          | 88.8%          |
| 655                                | Udorthents, wet substratum   | 0.1          | 2.7%           |
| <b>Totals for Area of Interest</b> |  | <b>4.4</b>   | <b>100.0%</b>  |

## Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or

## Custom Soil Resource Report

landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

## Norfolk and Suffolk Counties, Massachusetts

### 5—Saco silt loam, frequently ponded, 0 to 1 percent slopes, frequently flooded

#### Map Unit Setting

*National map unit symbol:* 2zvfh  
*Elevation:* 20 to 260 feet  
*Mean annual precipitation:* 45 to 54 inches  
*Mean annual air temperature:* 43 to 54 degrees F  
*Frost-free period:* 145 to 240 days  
*Farmland classification:* Not prime farmland

#### Map Unit Composition

*Saco and similar soils:* 85 percent  
*Minor components:* 15 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Saco

##### Setting

*Landform:* Alluvial flats  
*Landform position (two-dimensional):* Toeslope  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Concave  
*Across-slope shape:* Concave  
*Parent material:* Soft coarse-silty alluvium

##### Typical profile

*H1 - 0 to 26 inches:* silt loam  
*H2 - 26 to 58 inches:* silt loam  
*H3 - 58 to 60 inches:* stratified coarse sand to loamy fine sand

##### Properties and qualities

*Slope:* 0 to 1 percent  
*Depth to restrictive feature:* 40 to 80 inches to strongly contrasting textural stratification  
*Drainage class:* Very poorly drained  
*Runoff class:* Very high  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.60 to 2.00 in/hr)  
*Depth to water table:* About 0 to 2 inches  
*Frequency of flooding:* Frequent  
*Frequency of ponding:* Frequent  
*Available water supply, 0 to 60 inches:* Very high (about 13.2 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 6w  
*Hydrologic Soil Group:* B/D  
*Ecological site:* F144AY016MA - Very Wet Low Floodplain  
*Hydric soil rating:* Yes

**Minor Components**

**Freetown**

*Percent of map unit: 5 percent*  
*Landform: Bogs*  
*Hydric soil rating: Yes*

**Swansea**

*Percent of map unit: 4 percent*  
*Landform: Bogs*  
*Hydric soil rating: Yes*

**Rippowam**

*Percent of map unit: 4 percent*  
*Landform: Alluvial flats*  
*Hydric soil rating: Yes*

**Scarboro**

*Percent of map unit: 2 percent*  
*Landform: Terraces*  
*Hydric soil rating: Yes*

**626B—Merrimac-Urban land complex, 0 to 8 percent slopes**

**Map Unit Setting**

*National map unit symbol: 2tyr9*  
*Elevation: 0 to 820 feet*  
*Mean annual precipitation: 36 to 71 inches*  
*Mean annual air temperature: 39 to 55 degrees F*  
*Frost-free period: 140 to 250 days*  
*Farmland classification: Not prime farmland*

**Map Unit Composition**

*Merrimac and similar soils: 45 percent*  
*Urban land: 40 percent*  
*Minor components: 15 percent*  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Merrimac**

**Setting**

*Landform: Outwash plains, outwash terraces, moraines, eskers, kames*  
*Landform position (two-dimensional): Summit, shoulder, backslope, footslope*  
*Landform position (three-dimensional): Crest, side slope, riser, tread*  
*Down-slope shape: Convex*  
*Across-slope shape: Convex*  
*Parent material: Loamy glaciofluvial deposits derived from granite, schist, and gneiss over sandy and gravelly glaciofluvial deposits derived from granite, schist, and gneiss*

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### Typical profile

*Ap - 0 to 10 inches:* fine sandy loam  
*Bw1 - 10 to 22 inches:* fine sandy loam  
*Bw2 - 22 to 26 inches:* stratified gravel to gravelly loamy sand  
*2C - 26 to 65 inches:* stratified gravel to very gravelly sand

### Properties and qualities

*Slope:* 0 to 8 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Somewhat excessively drained  
*Runoff class:* Very low  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to very high (1.42 to 99.90 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum content:* 2 percent  
*Maximum salinity:* Nonsaline (0.0 to 1.4 mmhos/cm)  
*Sodium adsorption ratio, maximum:* 1.0  
*Available water supply, 0 to 60 inches:* Low (about 4.6 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 2e  
*Hydrologic Soil Group:* A  
*Ecological site:* F144AY022MA - Dry Outwash  
*Hydric soil rating:* No

## Description of Urban Land

### Typical profile

*M - 0 to 10 inches:* cemented material

### Properties and qualities

*Slope:* 0 to 8 percent  
*Depth to restrictive feature:* 0 inches to manufactured layer  
*Runoff class:* Very high  
*Capacity of the most limiting layer to transmit water (Ksat):* Very low (0.00 to 0.00 in/hr)  
*Available water supply, 0 to 60 inches:* Very low (about 0.0 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 8  
*Hydrologic Soil Group:* D  
*Hydric soil rating:* Unranked

## Minor Components

### Sudbury

*Percent of map unit:* 5 percent  
*Landform:* Deltas, terraces, outwash plains  
*Landform position (two-dimensional):* Footslope  
*Landform position (three-dimensional):* Tread, dip  
*Down-slope shape:* Concave  
*Across-slope shape:* Linear  
*Hydric soil rating:* No

**Hinckley**

*Percent of map unit:* 5 percent

*Landform:* Deltas, kames, eskers, outwash plains

*Landform position (two-dimensional):* Summit, shoulder, backslope

*Landform position (three-dimensional):* Crest, side slope, head slope, nose slope, rise

*Down-slope shape:* Convex

*Across-slope shape:* Convex, linear

*Hydric soil rating:* No

**Windsor**

*Percent of map unit:* 5 percent

*Landform:* Outwash terraces, dunes, outwash plains, deltas

*Landform position (three-dimensional):* Tread, riser

*Down-slope shape:* Linear, convex

*Across-slope shape:* Linear, convex

*Hydric soil rating:* No

**655—Udorthents, wet substratum**

**Map Unit Setting**

*National map unit symbol:* vkyd

*Elevation:* -30 to 310 feet

*Mean annual precipitation:* 45 to 54 inches

*Mean annual air temperature:* 43 to 54 degrees F

*Frost-free period:* 145 to 240 days

*Farmland classification:* Not prime farmland

**Map Unit Composition**

*Udorthents and similar soils:* 95 percent

*Minor components:* 5 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Udorthents**

**Setting**

*Landform position (two-dimensional):* Shoulder, footslope

*Landform position (three-dimensional):* Riser, tread

*Down-slope shape:* Convex, linear

*Across-slope shape:* Convex, linear

*Parent material:* Excavated and filled sandy and gravelly human transported material over highly-decomposed herbaceous organic material

**Properties and qualities**

*Slope:* 0 to 3 percent

*Depth to restrictive feature:* More than 80 inches

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

**Minor Components**

**Urban land**

*Percent of map unit: 3 percent*

*Hydric soil rating: Unranked*

**Ipswich**

*Percent of map unit: 2 percent*

*Landform: Marshes*

*Hydric soil rating: Yes*

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**Braintree Affordable Housing  
74 Pond Street & 90 Pond Street  
Braintree, MA 02184**

## **Existing Building Code Investigation & Evaluation Report Chapter 34**

**March 21, 2024**

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**CODE CONSULTING - FIRE PROTECTION ENGINEERING  
CONSTRUCTION ADMINISTRATION - PERFORMANCE-BASED DESIGN**

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## 1. Introduction & Project Description

LDA Architecture & Interiors has retained Code Red Consultants to provide fire protection and life safety code consulting services for feasibility study for 74 & 90 Pond Street in Braintree, MA. The intent of this report is to document the existing conditions of the buildings and outline the major code considerations for the study.

The existing building at 74 Pond Street was originally constructed in 1926 with an addition to the building built in 1964. Programmatic spaces within the building currently include offices and a youth center, as well as service/support spaces in the basement. The building is two-stories above grade with a basement and approximately 19,600 square feet.

The existing building at 90 Pond Street was originally constructed in 1905. The building is currently vacant, but previously included office program throughout the building and service/support spaces in the basement. The building is four-stories above grade with a basement and approximately 17,900 gross square feet.

The study includes evaluating the feasibility of converting the two existing buildings from office space to residential apartments for senior housing. The study will also consider constructing a connection between the two buildings and constructing a third building on the site.

## 2. Applicable Codes

The current codes adopted in the Commonwealth of Massachusetts are identified below. Codes of record generally vest with the date of building permit application for a project, with the exception of the Electrical Code, Plumbing Code, and Elevator Code which vest with their respective installation permit applications.

|                      |   |
|----------------------|---|
| <b>Building</b>      | 780 CMR – Massachusetts State Building Code 10 <sup>th</sup> Edition, which is an amended version of the 2021 International Building Code (IBC).<br><br><i>Massachusetts Amendments to the 2021 IBC: During their October 11, 2022, meeting, the Board of Building Regulations and Standards (BBRS) approved the DRAFT 10<sup>th</sup> Edition 780 CMR amendments which have been used in this analysis; however, they are still subject to change based on the public comment and final approval process.</i><br><br>780 CMR 34.00, which is an amended version of the 2015 International Existing Building Code (IEBC), herein referred to as the MEBC. |
| <b>Fire</b>          | 527 CMR 1.00 - Massachusetts Comprehensive Fire Safety Code, which is an amended version of the 2021 Edition of NFPA 1, Uniform Fire Code   |
| <b>Accessibility</b> | 521 CMR – Massachusetts Architectural Access Board (MAAB) Rules and Regulations<br><br>2010 ADA Standards for Accessible Design<br><br>Fair Housing Act <sup>1</sup>  |
| <b>Electrical</b>    | 527 CMR 12.00 - Massachusetts Electrical Code, which is an amended version of the 2023 Edition of NFPA 70, National Electrical Code   |
| <b>Mechanical</b>    | 2015 International Mechanical Code (IMC) as amended by 780 CMR 28.00.   |
| <b>Plumbing</b>      | 248 CMR 10.00 – Uniform State Plumbing Code ( <b>updated 12/8/2023</b> )  |
| <b>Energy</b>        | 225 CMR 22.00 – Massachusetts Residential Energy Code, which is an amended version of the 2021 International Building Code  |
| <b>Elevator</b>      | 524 CMR – Massachusetts Board of Elevator Regulations, which is an amended version of the 2013 ANSI A17.1, Safety Code for Elevators and Escalators   |
| <b>Other</b>         | Various other National Fire Protection Association (NFPA) Standards, as referenced by the above codes.  |

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<sup>1</sup> The Fair Housing Act is not applicable to buildings where first occupancy occurred before March 13, 1991. The two existing buildings on the site are therefore not required to comply with the Fair Housing Act. If a new building is added to the site, it would be required to comply with the Fair Housing Act.

### 3. Existing Building Code Scoping Requirements

#### 3.1 General Requirements

Portions of an existing building undergoing repair, alteration, addition, or a change of occupancy are subject to the requirements of the MEBC. In general, existing materials and conditions can remain provided they were installed in accordance with the code at the time of original installation and are not deemed a hazardous condition by an authority having jurisdiction (AHJ). Work to existing buildings is required to be performed in accordance with 780 CMR for new construction unless otherwise specified by the MEBC. Alterations to existing buildings are not permitted to reduce the level of safety currently provided within the building unless the portion altered complies with the requirements of 780 CMR for new construction.

Where compliance with the requirements of the code for new construction is impractical due to construction difficulties or regulatory conflicts, compliance alternatives may be approved by the building official. Any compliance alternatives being sought are required to be identified on the submittal documents (MEBC 104.11).

#### 3.2 Compliance Method & Classification of Work

The MEBC has 2 different compliance methods that can be used to evaluate a renovation project:

- Prescriptive Compliance Method (MEBC Chapter 5)
- Work Area Method (MEBC Chapters 6-12)

Based on the proposed scope of work, the **Work Area Compliance Method** has been selected to evaluate this project in accordance with MEBC Section 301.1.2. The proposed work is classified as a **Level 3 Alteration** and a **Change of Occupancy** (Group B to Group R-2) as defined below. The project could include an **Addition**, so the definition is provided below.

**Level 3 Alterations:** Renovations where the work area exceeds 50% of the aggregate building area. Level 3 Alteration projects are required to comply with MEBC Chapter 7 through 9 (MEBC 604).

**Change of Occupancy:** A change in the use of the building or a portion of the building, including a change of occupancy classification, any change from one group to another within an occupancy classification, or any change in use within a group for a specific occupancy classification. Change of Occupancy projects are required to comply with MEBC Chapter 10 (MEBC 605) and where the change of occupancy includes a special use, the requirements of 780 CMR Chapter 4 also apply (MEBC 1002.1).

**Addition:** An extension or increase in floor area, number of stories, or height of a building or structure. Additions are required to comply with MEBC Chapter 11 (MEBC 606).

Additionally, the buildings are listed by the Massachusetts Historical Commission (MHC) on the state register of historic places (MACRIS Inventory No. BRA.232 & BRA.233). If the buildings are eligible to be listed as historic, they are considered a historic building per the MEBC definition. For the purposes of this report, it is assumed that the buildings are eligible to be listed as historic. Historic buildings are required to comply with applicable provisions in the MEBC for the work being performed, except as specifically permitted by MEBC Chapter 12.

## 4. MEBC Analysis

The following analysis has been prepared to illustrate compliance with the requirements of the MEBC and 780 CMR based on the compliance method and classification of work identified above. In general, new work is required to comply with the new construction requirements of 780 CMR unless otherwise stated herein (MEBC 801.4).

### 4.1 Historical Building Analysis

Specific provisions are in place for buildings deemed historical by the town, state, or country. Therefore, MEBC Chapter 12 provides provisions which allow for the renovation of historical buildings to not comply with all new construction codes. Note that the building official is entitled to require a technical report prepared by a registered design professional that documents each required safety feature that is in compliance with the provisions for historic buildings and where compliance with other sections would be damaging to the contributing historic features of the building (MEBC 1201.2).

### 4.2 Use and Occupancy Classification

#### 4.2.1 Primary Occupancy Groups

The existing buildings contain the following primary occupancies.

| 74 Pond Street - Occupancy Groups (780 CMR 302) |                                       |
|---|---------------------------------------|
| Occupancy                                       | Use                                   |
| Group A-3                                       | Community Center Gym, Recreation Area |
| Group B   | Offices                               |

TABLE 1: 74 POND STREET - PRIMARY OCCUPANCY CLASSIFICATION

| 90 Pond Street - Occupancy Groups (780 CMR 302) |         |
|---|---------|
| Occupancy                                       | Use     |
| Group B   | Offices |

TABLE 2: 90 POND STREET - PRIMARY OCCUPANCY CLASSIFICATION

Following the renovation, the buildings will contain the occupancies as listed below.

| Occupancy Groups (780 CMR 302) |            |
|--------------------------------|------------|
| Occupancy                      | Use        |
| Group R-2                      | Apartments |

TABLE 3: PRIMARY OCCUPANCY CLASSIFICATION

A room or space used for assembly purposes with an occupant load of less than 50 persons or less than 750 square feet and accessory to another occupancy shall be classified as part of that occupancy (780 CMR 303.1.2). It is not anticipated that the buildings will contain Assembly Occupancies.

#### 4.2.1 Accessory Occupancies

Table 4 indicates accessory occupancies that are ancillary to the primary occupancies within the buildings. Accessory occupancies do not occupy more than 10 percent of the building area of the story in which they are located, evaluated collectively across all accessory occupancies on the floor (780 CMR 508.2.1).

| Accessory Occupancy Groups (780 CMR 302) |         |
|--|---------|
| Occupancy                                | Use     |
| Group S-2, Low-Hazard Storage            | Storage |

TABLE 4: ACCESSORY OCCUPANCY GROUPS

#### 4.3 Special Use and Occupancy

##### 4.3.1 Residential (Apartments)

Both buildings will be converted to apartments, which are classified as Group R-2, Residential occupancies. Such occupancies are required to comply with 780 CMR Section 420. The major fire protection and life safety code implications associated with residential uses are incorporated throughout this report.

#### 4.4 Construction Classification

##### 4.4.1 Construction Type

The buildings are constructed with masonry exterior walls and interior wood framing that is most consistent with Type IIIB construction. Within 90 Pond Street, it was observed that

the floor/ceiling assembly contained one layer of gypsum with wood, the floor assembly does not carry a 1-hour fire resistance rating per 780 CMR Section 722.6.



FIGURE 1: 74 POND STREET BUILDING CONSTRUCTION



FIGURE 2: 90 POND STREET BUILDING CONSTRUCTION



FIGURE 3: 74 POND STREET BUILDING CONSTRUCTION



FIGURE 4: 90 POND STREET BUILDING CONSTRUCTION

The fire-resistance ratings of any new or altered structure are required to be maintained as part of the project (MEBC 701.2).

| Building Element                         | Fire-Resistance Rating <sup>2</sup>      |
|--|--|
| Primary structural frame                 | 0  |
| Exterior bearing walls                   | 2  |
| Interior bearing walls                   | 0  |
| Nonbearing exterior walls                | See Exterior Wall Section of this report |
| Nonbearing Interior walls                | 0  |
| Floor construction and secondary members | 0  |
| Roof construction and secondary members  | 0  |

TABLE 5: FIRE-RESISTANCE RATINGS – TYPE IIIB CONSTRUCTION

#### 4.4.2 Height and Area

74 Pond Street is 2 stories in height with a basement. The footprint area is approximately 6,560 sf, the total aggregate area is approximately 19,600 sf, and the height above grade is approximately 40 feet. It should be noted that at the time of this report, elevations for the building have not been provided.

90 Pond Street is 4 stories in height with a basement. The footprint area is approximately 5,950 sf, the total aggregate area is approximately 17,900 sf, and the height above grade is approximately 50 feet. It should be noted that at the time of this report, elevations for the building have not been provided.

The buildings are subject to compliance with new construction height and area limitations as the renovation includes a change of occupancy to a higher hazard in Table 1011.6 (MEBC 1011.6). As shown in the tables below, the buildings comply with these limitations. The floorplate area is limited to 48,000 sf and the aggregate area of the building is 144,000 sf based on a single occupancy, fully sprinklered Type IIIB building (780 CMR 506.2.1).

| 74 Pond Street    |                         |        |                                   |                     |                                   |                     |            |
|-------------------|-------------------------|--------|-----------------------------------|---------------------|-----------------------------------|---------------------|------------|
| Construction Type | Height (stories)/(feet) |        | Footprint Area (ft <sup>2</sup> ) |                     | Aggregate Area (ft <sup>2</sup> ) |                     | Compliance |
|                   | Allowable               | Actual | Allowable                         | Actual <sup>3</sup> | Allowable                         | Actual <sup>4</sup> |            |
| IIIB              | 4 / 75                  | 2 / 40 | 48,000                            | 6,560               | 144,000                           | 19,600              | Compliant  |

TABLE 6: BUILDING HEIGHT AND AREA

<sup>2</sup> The fire-resistance ratings shall be not less than the ratings required for the fire-resistance-rated assemblies supported by the structural members (780 CMR 704.1).

<sup>3</sup> The allowable floor area for historic buildings undergoing a change of occupancy shall be permitted to exceed the allowable areas specified in Chapter 5 of 780 CMR by 20 percent.

| 90 Pond Street    |                         |        |                                   |                     |                                   |                     |            |
|-------------------|-------------------------|--------|-----------------------------------|---------------------|-----------------------------------|---------------------|------------|
| Construction Type | Height (stories)/(feet) |        | Footprint Area (ft <sup>2</sup> ) |                     | Aggregate Area (ft <sup>2</sup> ) |                     | Compliance |
|                   | Allowable               | Actual | Allowable                         | Actual <sup>5</sup> | Allowable                         | Actual <sup>6</sup> |            |
| IIIB              | 4/ 75                   | 4 / 50 | 48,000                            | 5,950               | 144,000                           | 17,900              | Compliant  |

TABLE 7: BUILDING HEIGHT AND AREA

It should be noted that if a connection between 74 and 90 Pond Street is desired, the buildings could be classified as one structure with a maximum footprint of 12,510 sf and aggregate area of 37,500 sf before additional square footage. Additionally, a third structure could be constructed as its own structure or all three could be considered one Type IIIB structure if the maximum footprint is less than 48,000 sf and the maximum aggregate footprint is less than 144,000 sf.

Building connections will require either an easement to build over the lot lines of the different parcels or the lots could be combined by the City. If a third building is added to the single building on the same lot, it will be considered an addition to the building.

If the parcels are combined into one lot and the structures are not attached, the buildings would be considered portions of the same building if the building height, number of stories of each building, and the aggregate building areas of the buildings are within the limitations specified in 780 CMR 504 and 506 (780 CMR 503.1.2).

#### 4.4.3 Exterior Walls

The fire resistance ratings and opening percentages of the existing exterior walls are not required to comply with the code for new construction since the change of occupancy is to an equal hazard (MEBC 1012.6).

Alterations to the building are required to maintain the requirements of a Type IIIB building. New openings in the exterior wall and new exterior walls are required to comply with the new provisions of the code. This includes energy compliance and allowable opening percentages based on the lot lines and imaginary lot lines associated with the project.

<sup>5</sup> The allowable floor area for historic buildings undergoing a change of occupancy shall be permitted to exceed by 20 percent the allowable areas specified in Chapter 5 of 780 CMR.

<sup>6</sup> The allowable floor area for historic buildings undergoing a change of occupancy shall be permitted to exceed by 20 percent the allowable areas specified in Chapter 5 of 780 CMR.

The required fire-resistance ratings and allowable opening percentages for all new and altered exterior walls are required to comply with the following based on building being fully sprinkler protected with unprotected openings (780 CMR 705.5 & 705.8):

| Exterior Wall Ratings and Openings Based on Fire Separation Distance |                        |                |
|--|------------------------|----------------|
| Fire Separation Distance   | Fire-Resistance Rating | Allowable area |
| $0 \leq X < 3$   | 1 Hour                 | Not Permitted  |
| $3 \leq X < 5$   | 1 Hour                 | 15%            |
| $5 \leq X < 10$  | 1 Hour                 | 25%            |
| $10 \leq X < 15$   | 1 Hour                 | 45%            |
| $15 \leq X < 20$   | 1 Hour                 | 75%            |
| $X \geq 20$  | 0 Hour                 | No Limit       |

TABLE 8: FIRE RESISTANCE RATING FOR EXTERIOR WALLS

For the purposes of applying the above table, fire separation distance is measured to one of the following: (1) closest interior lot line, (2) centerline of a street, alley, or public way, or (3) an imaginary line between two buildings on the property.

The project may consider the construction of a third building, on its own parcel, adjacent to the existing 74 and 90 Pond Street lots. The three building locations would need to be studied as they will be required to comply with 780 CMR for new construction regarding exterior walls and allowable opening limitations.

74 Pond and 90 Pond currently are each more than 20 feet from their parcel lines.

## 4.5 Interior Walls and Partitions

### 4.5.1 Fire/Smoke Resistive Assemblies

If constructed new, or if existing areas are altered, the following spaces are required to be constructed of fire resistance rated construction. The following are some of the typical rooms found in this type of building:

| Type of Assembly  | Construction   | Code Reference           |
|---|--|--------------------------|
| Corridor Rating   |  |                          |
| Serving Group R Occupancies                                 | ½-hour fire partition  | 780 CMR 1020.1           |
| Serving other Occupancies                                   | No rating required   | 780 CMR 1020.1           |
| Special Rooms/Incidental Uses                               |  |                          |
| Non-sprinklered Electrical Room                             | 2-hour fire barrier and horizontal assembly                  | NFPA 13, 8.15.10.3       |
| Vertical and Horizontal Dwelling Unit Separations           | ½-hour fire partition  | 780 CMR 420.2 & 708.3(2) |
| Laundry room > 100 sf                                       | Wall capable of resisting the passage of smoke <sup>7</sup>  | 780 CMR 509              |
| Elevator Lobbies (see Elevator Section)                     | Wall capable of resisting the passage of smoke <sup>2</sup>  | 780 CMR 3006.3(2)        |
| Shafts connecting up to 3 stories                           | 1-hour fire barrier  | 780 CMR 713.4            |
| Connecting 4 or more stories                                | 2-hour fire barrier  | 780 CMR 713.4            |
| Enclosed Usable Spaces under enclosed and unenclosed stairs | 1-hour fire barrier or rating of shaft, whichever is greater | 780 CMR 1011.7.3         |

TABLE 9: FIRE/SMOKE RESISTIVE ASSEMBLIES

Fire rated shafts, fire barriers, and horizontal assemblies are required to be supported by structure affording the required fire-resistance rating of the supported element (780 CMR 707.5.1 & 713.2). Note that the supporting construction of the rated corridor walls, dwelling unit demising walls, and dwelling unit floors do not need to be supported by rated construction in Type IIIB buildings (780 CMR 708.4, 711.2.3(2)).

Where 1-hour fire-resistance-rated construction is required, it is not necessary to provide it if the existing wall and ceiling finish is wood or metal lath and plaster (MEBC 1203.7 & 1205.10).

Corridors do not appear to be consistently rated, with select doors containing fire protection ratings. Intermittently in 74 Pond Street, some corridor doors had labels, some were painted, and the vast majority were unlabeled. It is understood as part of this project that the existing corridors will likely be removed and replaced with compliant, rated corridors.

<sup>7</sup> Wall is required to extend from the top of the foundation or floor assembly below to the underside of a fire-resistance rated floor/roof assembly or to the underside of the floor or roof sheathing, deck, or slab above.

## 4.5.2 Fire Doors

New fire doors, and their corresponding components are required to have fire-resistance ratings and meet the required testing standards as specified in Table 10. All new fire doors required to be fire-resistance-rated must be designed, installed, and labeled in accordance with NFPA 80 and tested in accordance with UL1784 (780 CMR 716.5; 716.5.3.1). Doors used in corridors and elevator lobbies are also required to be listed as smoke and draft control doors in accordance with UL 1784 (780 CMR 716.5.3, 710.5.2.2 & 3007.6.3).

| Wall Type        | Required Wall Rating | Minimum Fire Door Rating | Performance Criteria for Doors/Shutters <sup>8</sup> |
|------------------|----------------------|--------------------------|--|
| Fire Barriers    | 2-hours              | 1½-hours                 | NFPA 252 or UL 10C / NFPA 252 or UL 10B              |
|                  | 1-hour               | 1-hour                   |  |
| Fire Partitions  | 1/2-hour             | 1/3-hour                 | NFPA 252 or UL 10C w/o hose stream test, UL 1784     |
| Smoke-tight wall | No rating            | No rating                | No air transfer openings, max 3/4" undercut          |

TABLE 10: FIRE AND SMOKE DOOR RATING SUMMARY

## 4.6 Vertical Openings

### 4.6.1 Existing Vertical Openings

The buildings are served each by two exit stair enclosures, one passenger elevator, and numerous MEP shafts.

As the buildings will undergo change of occupancies to a higher hazard category for means of egress, interior stairs and other vertical shafts are required to be enclosed as required by 780 CMR for new construction, unless using like materials with the MEBC Chapter 12 historic provision for repairs (MEBC 1202.1). For existing vertical shafts other than interior stairs where connecting less than six stories are not required to be enclosed if the building is fully sprinklered (MEBC 1011.8.3 Exception 2).

Repairs to any portion of the historic building are permitted with original or like materials and original methods of construction, so long as those materials are not hazardous (i.e., asbestos) (MEBC 1202.1).

Replacement of existing or missing features using original materials is permitted. The partial replacement for repairs that match the original in configuration, size, and height is also permitted (MEBC 1202.4).

### 4.6.2 New Vertical Openings

New shafts or vertical openings are required to comply with the code for new construction, the new vertical openings should be enclosed in rated construction unless

<sup>8</sup> All doors are required to be self- or automatic closing and provided with an active latch bolt that will secure the door when it is closed (780 CMR 716.5.9.1).

they meet an exception in Chapter 7. At this time, there are no expected unenclosed vertical openings.

## 4.7 Fire Protection Systems

### 4.7.1 Automatic Sprinkler Systems

Sprinkler coverage is provided in the Basement of the 74 Pond Street building and the Third Floor of the 90 Pond Street building. The remainder of both buildings are not sprinklered.

#### MEBC

Where a change of occupancy introduces a new fire protection threshold, such system is required to be provided (MEBC 1011.2.1); for Group R buildings an automatic sprinkler system is required to be designed and installed per NFPA 13 and 527 CMR 1.00 throughout the structure regardless of square footage (780 CMR 903.2).

A third building, regardless of square footage would require sprinklers given a Group R-2 occupancy classification.



FIGURE 5: 74 – POND STREET - SPRINKLER COVERAGE PROVIDED IN THE BASEMENT



FIGURE 6: 90 POND STREET - SPRINKLER COVERAGE PROVIDED ON LEVEL 3

#### MGL

In addition to the requirements of the MEBC, Massachusetts General Law Ch. 148 Sec. 26G requires every building or structure, including major alterations thereto, which totals more than 7,500 gross square feet to be protected throughout with an automatic sprinkler system. The 7,500 sf threshold includes “the sum total of the combined floor areas for all levels, basements, sub-basements, and additions, in aggregate, measured

from the outside walls, irrespective of the existence of interior fire resistive walls, floors and ceilings”.

An advisory document published by the Sprinkler Appeals Board in 2009 expands upon the application of this MGL to existing buildings. An existing building is required to be protected with sprinklers where **all** of the following four conditions are satisfied:

1. Building gross square footage is more than 7,500 sf
2. Sufficient water and water pressure exist to serve the system.
3. The nature of work to the building is considered as “major”, including **any one** or more of the following:
  - a. The demolition or reconstruction of existing ceilings or installation of suspended ceilings;
  - b. The removal and/or installation of sub flooring, not merely the installation or replacement of carpeting or finished flooring;
  - c. The demolition and/or reconstruction or repositioning of walls or stairways or doors; or
  - d. The demolition and/or reconstruction or repositioning of walls or stairways or doors; or
  - e. The removal or relocation of a significant portion of the building’s HVAC, plumbing, or electrical systems involving the penetration of walls, floors, or ceilings.
4. The scope of work is proportional to the cost/benefit of sprinkler installation. To evaluate whether this is satisfied, the advisory document lists **either** of the following as thresholds for requiring sprinkler protection:
  - a. Work affects 33% or more of the total gross square footage<sup>[1]</sup>; or
  - b. Total cost of the work (excluding cost to install a sprinkler system) is equal to or greater than 33% of the assessed value of the building, as of the date of permit application.

It is the conclusion of the advisory document that if the nature of the work described in item (3) meets at least one of the conditions in item (4) then it is reasonable to conclude that the alterations and modifications are considered as “major”, thus requiring sprinkler protection. However, ultimately it is the determination of the local fire code official to determine whether the renovation is considered as “major” or not.

Note that if there is a series of modifications being conducted over a reasonably short period (approximately 5 years or less per the advisory document), it is reasonable to conclude that such work is cumulatively considered as a “major alteration” if it collectively satisfies the above conditions.

It is expected that the triggers above will be met such that a sprinkler system will be required.

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<sup>[1]</sup> Note that the “work affected” area per MGL is calculated differently than the work area per the MEBC. For example, the work affected area would include the area where ceilings or flooring is replaced.

#### 4.7.2 Alternate Suppression System

90 Pond Street is provided with a Halon system serving multiple defunct computer server rooms. Monitoring and alarm panels/beacons are still provided within the building but it is unclear whether the system is active. The renovation will not require alternate suppression and as such, the existing system should be appropriately decommissioned and removed with permission from the Braintree Fire Department (780 CMR 901.3).

#### 4.7.3 Standpipe System

74 Pond Street does not contain a standpipe system and 90 Pond Street is provided with a hose connection within one exit stair.



FIGURE 7: 90 POND STREET - EXISTING STANDPIPE

Within the new building, a Class I standpipe system in accordance with NFPA 14 will be required if the floor level of the highest story is more than 30 feet above the lowest level of fire department vehicle access (780 CMR 905.3.1 Exception 1). The Class I standpipe hose connections are required to be provided in all of the following locations (780 CMR 905.4):

- In every required stairway, hose connections must be located at an intermediate floor level between floors for every floor level above or below grade.
- Where the roof has a slope less than 33.3%, a hose connection must be located to serve the roof or at the highest landing of a stairway with stair access to the roof.
- Where the most remote portion of a floor is more than 200 feet from a hose connection, the fire code official is authorized to required additional hose connections to be provided.

The Class I standpipe system piping is required to be protected from mechanical damage. The feed mains, standpipes, horizontal standpipes, and branch lines supplied by the standpipes are required to be located in enclosed exit stairways or another

protected location with a degree of fire resistance equal to that required for enclosed exit stairways in the building in which they are located (NFPA 14 6.1.2).

## 4.8 Emergency Systems

### 4.8.1 Fire Alarm and Detection Systems

Both buildings are provided with fire alarm systems consisting of audible/visual notification devices, manual pull stations, smoke detectors, and sprinkler monitoring devices.



FIGURE 8: 74 POND STREET – FIRE ALARM PANEL – SILENT KNIGHT 5820XL



FIGURE 9: 90 POND STREET – FIRE ALARM PANEL - NOTIFIER

Where a change of occupancy introduces a new fire protection threshold, such system is required to be provided (MEBC 1011.2.2); a fire alarm system activating occupant notification in accordance with 780 CMR 907.5 is required in Group R-2 occupancies where any of the following are true:

- Any dwelling unit is located three or more stories above the lowest level of exit discharge.
- Any dwelling unit is located more than one story below the highest level of exit discharge of exits serving the dwelling unit.
- The building contains more than 16 dwelling units.

Based on the above, the buildings' fire alarm system will be required to be maintained or upgraded to meet the requirements of 780 CMR 907.5. All new fire alarm devices and any modifications to the existing fire alarm system are required to meet new construction requirements of NFPA 72 (2013 Edition) and 527 CMR 1.00 relative to their installation.

Additionally, the building is required to be provided with carbon monoxide detection in accordance with the requirements of 780 CMR 915.1 and 527 CMR (780 CMR 915.1).

## 4.9 Means of Egress

The building is undergoing a change of occupancy to a higher hazard relative to the means of egress in the building. Additionally, it is assumed that as part of the change of occupancy from Group B to Group R-2 the floors will be fully renovated, and the building will comply with new construction. As such, the means of egress systems serving these floors are required to comply with 780 CMR Chapter 10 for new construction (MEBC 1012.1.1.1 & 1012.4.1) with the exception of historic allowances as specified within their respective section below.

### 4.9.1 Occupant Load

The building is required to have adequate exit capacity to serve the calculated occupancy load (780 CMR 102.6.4(b); MEBC 1012.4.3). The number of occupants is computed at the rate of one occupant per unit of area as indicated in Table 11 (780 CMR 1004.1.2).

| Occupant Load Factors                               |   |
|---|---|
| Function of Space                                   | Occupant Load Factor (occ/ft <sup>2</sup> ) |
| Assembly Space (unconcentrated - tables and chairs) | 15 Net                                      |
| Residential   | 200 Gross                                   |
| Storage & MEP                                       | 300 Gross                                   |

TABLE 11: OCCUPANT LOAD FACTORS

The 74 Pond Street building would have approximately 123 occupants based on an 18,400 square feet residential area and 9,200 square feet of storage area.

The 90 Pond Street building would have approximately 85 occupants based on a 13,250 square feet residential area and 5,300 square feet of storage area.

### 4.9.2 Egress Capacity

The required egress capacity for any means of egress component is based on the following capacity factors (780 CMR 1005.3.1):

| Egress Width Factors (inches of width per person) |             |                      |
|---|-------------|----------------------|
| Voice Alarm System?                               | Stairways   | All Other Components |
| Not Provided                                      | 0.30 in/occ | 0.20 in/occ          |

TABLE 12: EGRESS WIDTH FACTORS

The following dimensions were measured from the existing buildings, it is understood that the available egress capacity in the two buildings is sufficient.

### 4.9.3 Number of Exits from Stories

The number of exits required from every story is not permitted to be less than that specified in Table 13 (780 CMR 1006.3.3):

| Minimum Number of Exits Required |                          |
|----------------------------------|--------------------------|
| Occupant Load                    | Number of Exits Required |
| 1 - 500                          | 2                        |
| 501 - 1,000                      | 3                        |
| > 1,000                          | 4                        |

TABLE 13: MINIMUM NUMBER OF EXITS REQUIRED

The number of exits provided in the existing building is sufficient for the planned occupant load of the building.

### 4.9.4 Exit Access

Two exits or exit access doorways are required to be provided from any space where one of the following limits is exceeded (780 CMR 1006.2.1):

| Spaces with One Exit or Exit Access Doorway |                       |  |
|---|-----------------------|--|
| Occupancy                                   | Maximum Occupant Load | Maximum Common Path of Travel Distance |
| R-2   | 10                    | 125 feet                               |
| S-2   | 29                    | 100 feet                               |

TABLE 14: SPACES WITH ONE EXIT OR EXIT ACCESS DOORWAY

Where two exits or exit access doorways are required from any portion of the exit access, the exit doors or exit access doorways are required to be placed a distance apart equal to not less than one-third of the length of the maximum overall diagonal dimension of the building or area served (780 CMR 1007.1.1 Exception 2).

### 4.9.5 Accessible Means of Egress

An accessible means of egress is required to be provided in the existing buildings (780 CMR 1009.1). Where more than one means of egress is required from any accessible space, the space must be serviced by not less than two accessible means of egress (780 CMR 1009.1).

Exit stairways will serve as the other accessible means of egress from the stories located above or below the level of exit discharge. The stairs are not required to be accessed from

an area of refuge in order to be considered as an accessible means of egress since the building will be fully sprinkler protected (780 CMR 1009.3.3, Exception 2).

A two-way communication system is required to be provided at the elevator landing in accordance with 780 CMR 1009.8 on each accessible floor that is one or more story above or below the story of exit discharge.

#### 4.9.6 Travel Distance

Exit access travel distances are not permitted to exceed the values specified in Table 15 (780 CMR 1017.2).

| Maximum Allowable Travel Distance |                 |
|-----------------------------------|-----------------|
| Occupancy                         | Travel Distance |
| R-2                               | 250 feet        |
| S-2                               | 400 feet        |

TABLE 15: MAXIMUM ALLOWABLE TRAVEL DISTANCE

#### 4.9.7 Doors

New doors are required to comply with 780 CMR Section 1010. Major requirements include:

- Width. Doors are required to be a minimum of 32 inches in clear width and are not permitted to have a swinging door leaf greater than 48 inches in nominal width (780 CMR 1010.1.1).
- Landings. Level landings are required to be provided on each side of the door (780 CMR 1010.1.5 & 1010.1.6).
- Door Swing. Egress doors are required to be of the pivoted or side-swinging type and are required to swing in the direction of egress travel where serving an occupant load of 50 or more persons (780 CMR 1010.1.2).
- Locking. Except as specifically permitted by 780 CMR Section 1010.1.9, doors are required to be readily operable in the direction of egress travel.
- Doors in Series. Space between two doors in series is required to be a minimum of 48 inches plus the width of the door swinging into the space. Doors in series are required to swing either in the same direction or away from the space between the doors (780 CMR 1010.1.8).
- Electrical Rooms. Electrical rooms with equipment rated over 800 amperes or more and over 6 feet in width that contain overcurrent devices, switching devices, or control devices with exit or exit access doors are required to be equipped with panic hardware or fire exit hardware and swing in the direction of egress travel (780 CMR 1010.1.10).

#### 4.9.8 Stairs

74 Pond Street is served by two exit stairs with both discharging directly to the exterior of the building. 90 Pond Street is served by two exit stairs with one discharging through the interior of the building and one directly to the exterior of the building. Up to 50% of the required exit stairs are permitted to discharge through the interior of the building where

all of the conditions of 780 CMR 1028.1(1) are met. The existing exit configuration is compliant.

74 Pond Street had all stair doors wedged open on the First Floor. Stair doors are required to be self-closing as they are fire protection rated doors. We recommend the wedges be removed such that they are self-closing and operational during emergencies.

Exit enclosure construction is required to limit the spread of smoke by the use of tight-fitting doors and solid elements but is not required to have a fire-resistance rating within building of three stories or less (MEBC 1203.6).

#### **4.9.9 Exit Signage**

The existing building is provided throughout with exit signage; however, in a handful of locations the signage was not internally lit.

Exit and exit access doors are required to be marked by approved exit signs readily visible from any direction of egress travel (780 CMR 1013.1). The path of egress travel to exits and within exits are required to be marked by readily visible exit signs to clearly indicate the direction of egress travel where the exit or path of travel is not immediately visible. Exit signs within corridors and exit passageways are required to be placed such that no point is more than 100 feet or the listed viewing distance for the sign, whichever is less, from the nearest visible exit sign. Exit signs are not required in rooms or areas that require only one exit or means of exit access.

#### **4.9.10 Egress Illumination**

74 Pond Street is provided with exit sign/emergency lighting combination devices and 90 Pond Street is provided with emergency lighting via independent devices. The coverage of such emergency lighting appeared to be sporadic.

The means of egress, including the exit discharge, are required to be illuminated at all times the building served by the means of egress is occupied (780 CMR 1008.1). The illumination level is not permitted to be less than 1 footcandle at the walking surface (780 CMR 1008.2)

In the event of power supply failure, an emergency electrical system is required to automatically illuminate all of the following areas (780 CMR 1008.3):

- Aisles in rooms and spaces that require two or more means of egress.
- Corridors.
- Exterior egress components at other than the level of exit discharge until exit discharge is accomplished.
- Interior exit discharge elements.
- Exterior landings for exit discharge doorways.

The emergency power system is required to provide power for a duration of not less than 90 minutes and is required to consist of storage batteries, unit equipment, or an on-site generator (780 CMR 1008.3.4). The initial illumination is required to be an average of 1

footcandle and a minimum at any point of 0.1 footcandle measured along the path of egress at the floor level. Illumination levels are permitted to decline to 0.6 footcandle average and a minimum of 0.06 footcandle at the end of the emergency lighting time duration (780 CMR 1008.3.5).

#### **4.10 Plumbing Fixtures**

248 CMR 10.00, *Uniform State Plumbing Code*, regulates the minimum number of plumbing fixtures. The requirements set forth in 248 CMR 10.10(15) Table 1 apply to plumbing system new construction, addition, or extension projects where a plumbing permit is required.

Residential apartment buildings are required to be provided with one bathroom group (toilet, sink, and bathtub or shower) and one kitchen sink per unit.

Additionally, at least one washing machine connection for every 20 elderly (10 non-elderly) dwelling units or fraction thereof that do not have a washing machine in the unit (248 CMR 10.02(6)(a)5(b)).

#### **4.11 Elevator**

Each building is served by one elevator. 90 Pond Street's elevator is currently not functional. We would recommend having an elevator audit performed on each of the elevators. Each building will be required to provide a vertical means of access throughout the building (521 CMR 28.1). If either elevator cab and shaft is replaced, it will be required to meet the requirements of new construction, however; will not be required to accommodate the stretcher if the new elevator is within the confines of the existing building's footprint (524 CMR 35.00 2.27.12).

Elevator hoistway protection is required where the elevator is opening onto a rated corridor. Such protection can be provided via a product at the elevator opening that complies with UL 1784, pressurized elevator shafts, or elevator lobbies.

#### **4.12 Accessibility**

Both buildings were generally inaccessible. A high-level list of non-accessible building elements is provided below. It should be noted that a full audit of the buildings was not conducted.

74 Pond Street:

- Stairs contained abrupt nosings and non-continuous handrails due to newel posts.
- Ramp within the Second Floor student recreation space measured a maximum slope of 10-11.4%.
- Ramp within First Floor leading from the lobby to the community center adjacent to the retirement department measured a maximum slope of 12.5 - 13% and contained non-compliant handrails.
- The exterior ramp adjacent to the main entrance measured a slope of 6.4% but is not currently designed as an accessible ramp as it does not have handrails. The ramp path is also degrading causing changes in level.

- Bathrooms appear to be generally noncompliant with the women's room not having pull side clearance an undersized stall and the men's room not having a turning radius and undersized stall.
- The elevator cab measured 54.5" by 49.5" which is acceptable in existing construction per 521 CMR and ADA as long as the existing shaft cannot accommodate a larger cab size.



FIGURE 10: 74 POND STREET – STAIR



FIGURE 11: 74 POND STREET - BATHROOM

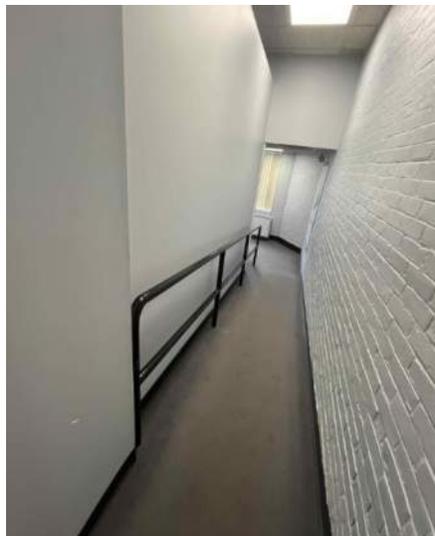


FIGURE 12: 74 POND STREET - EXISTING STANDPIPE

#### 90 Pond Street:

- The exterior ramp to the Basement entrance has handrails mounted at non-compliant heights.
- Bathrooms appear to be generally inaccessible.
- The elevator was not able to be measured.



FIGURE 13: 90 POND STREET - ELEVATOR



FIGURE 14: 90 POND STREET - EXTERIOR RAMP

#### 4.12.1 521 CMR Application

The requirements of 521 CMR are limited to buildings or portions thereof that are open to the public. Employee-only spaces are exempt from these requirements; however, employee-only spaces that are occasionally used by visitors are not.

All public portions of the building will be designed in accordance with the requirements of 521 CMR.

521 CMR Section 3.3 contains the following scoping requirements for projects in existing buildings. The costs referred to in the scoping requirements below are cumulative for all projects to the building within a rolling 36-month period:

1. If the work is less than \$100,000, then only the work being performed is required to comply with 521 CMR.
2. If the work costs more than \$100,000 but is less than 30% of the full and fair cash value of the building then in addition to the working being performed, the following accessible features are also required to be provided in the building:
  - a. Accessible entrance
  - b. Accessible toilet room
  - c. Accessible drinking fountain
  - d. Accessible public telephone
3. If the work, plus the cost of all work within the past 36-months, costs more than 30% of the full and fair cash value of the building, then all public portions of the building are subject to the requirements of 521 CMR. Full and fair cash value is defined as the assessed value of the property not including the land (521 CMR 5.38).

74 Pond Street:

The assessed building value is \$1,902,000, as shown on the Town of Braintree Assessor's website.

The Massachusetts Department of Revenue has assigned Braintree an assessment ratio of 0.99. The 30% threshold is therefore:

$$\$1,902,000 / 0.99 \times 30\% = \$576,363.63$$

90 Pond Street:

The assessed building value is \$1,517,000, as shown on the Town of Braintree Assessor's website.

The Massachusetts Department of Revenue has assigned Braintree an assessment ratio of 0.99. The 30% threshold is therefore:

$$\$1,517,000 / 0.99 \times 30\% = \$459,696.97$$

#### **4.12.2 ADA Application**

ADA only applies to the common areas of the building and does not apply to the residential units.

Although not enforced by any authority having jurisdiction on the project, the requirements of the 2010 Americans with Disabilities Act Accessibility Guidelines (ADA) are applicable and enforced through civil litigation only.

ADA requires that altered portions of an existing building be readily accessible to and usable by individuals with disabilities to the maximum extent feasible (ADA 36.402(a)(1)).

Alterations to primary function areas should be made such that the level of accessibility, including the path of travel to the space, is made accessible to the maximum extent feasible. When determining if the upgrade is feasible, the ADA requirements state that the upgrade to the path of travel is disproportionate to the project when the cost to perform the work exceeds 20% of the cost of the alteration to the primary function area (ADA 35.151(a)(4)). Primary function areas are not limited to public use areas and may include lobbies, offices, meeting rooms, etc. In choosing which accessible elements to provide if the cost is disproportionate, priority should be given to those elements that will provide the greatest access, in the following order:

- An accessible entrance
- An accessible route to the altered area
- At least one accessible restroom for each sex or a single unisex restroom
- Accessible drinking fountains
- Accessible telephones

# **74 & 90 POND STREET**

BRAINTREE, MA

**FIRE PROTECTION, PLUMBING, MECHANICAL, & ELECTRICAL**

## **EXISTING CONDITIONS NARRATIVE**



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Norwood, MA 02062  
CES Project #2024049.00

March 5, 2024 (Progress/Draft)

**PROJECT NAME**

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## Overview

This is an existing conditions narrative for the two existing buildings associated with the project - 74 Pond Street and 90 Pond Street. As of the date of this narrative, there is to CES' understanding no relative direction as to the extent that the buildings would be re-purposed for a project that is primarily senior housing related. Therefore this narrative does not include much more than descriptions of the existing mechanical, electrical, plumbing, and fire protection sprinkler systems (MEPFP) serving the two buildings; this narrative includes only relatively vague generalizations as to the potential for re-purposing the MEPFP systems serving the two buildings.

This narrative is broken up into two basic sections - one section for each of the two buildings. In general, except for the shared natural gas entrance, the buildings are stand alone buildings with respect to the MEPFP systems.

In general, some of the MEPFP equipment and systems serving 74 Pond Street have been installed within the past decade and, depending on the re-purposing of the building, there is potential for re-use of such equipment and systems, including the boiler plant, the air conditioning systems, the plumbing fixtures and systems, and the fire alarm system. In contrast, there is substantially less potential for re-use of MEPFP equipment and systems serving 90 Pond Street other than some components of the fire alarm system.

## 74 Pond Street

### Fire Protection

#### General

The fire protection sprinkler system is a wet type sprinkler system, and it generally consists of sprinklers in the basement and the attic only.

#### Fire Protection Service

The 4" fire protection (FP) service enters the building in the NW corner of the basement. The service is backflow protected, and the components of the service appear to be in fair condition.



FP Sprinkler System Backflow Preventer



FP Sprinkler System Alarm Riser Assembly

The water pressure (according to the gauges) is approximately 95 psig, therefore, assuming a reasonably sized water main under Pond Street, the expectation would be that a fire pump would not be required for any buildings up to as many as a half dozen stories on the site.

#### Piping & Sprinklers

The sprinkler piping is steel, and it generally appears to be in good condition. The sprinklers are the exposed upright type, and they generally appear to be in fair to good condition.



Sprinkler & FP Piping in Basement

## Plumbing

### General

It appears that there was a relatively recent renovation in the kitchen and restrooms areas of the building, as there is quite a bit of new piping (dated 2019) in the basement in this area.

### Drainage

Based on the exposed piping in the basement, the sanitary piping throughout the building is cast iron. There appears to have been two major renovations to the building. The original piping (red) is hub and spigot cast iron, and it generally appears to be in fair condition. The first renovation piping (cyan) is also hub and spigot cast iron, and it generally appears to be in good condition. The second renovation piping (green) is no-hub cast iron, and it generally appears to be in excellent condition.



Sanitary Piping in Basement

There is a sump pump in the boiler room that appears to be for basement/groundwater/foundation or similar drainage, but the usage was not verified during the site visit. The condition of the pumps was not determined.



Basement Sump

There is an interceptor in the basement that appears to be in fair condition. The function of this interceptor was not determined. There is a grease interceptor that serves only the triple pot sink

in the kitchen, so it is possible that this interceptor serves as a grease interceptor for floor drains and/or other fixtures in the kitchen.



Interceptor

### Water Heating

The water heating plant generally consists of an electric resistance tank type water heater that appears to be in excellent condition, and a recirculation pump that appears to be in fair condition. The water heating plant does not include a mixing valve.



Water Heater



Recirculation Pump

### Plumbing Fixtures

The plumbing fixtures are vitreous china, with floor mounted flush valve water closets, wall mounted flush valve urinals, and countertop mounted lavatories. The plumbing fixtures generally appear to be in good to excellent condition.



Water Closet



Lavatory & Urinal

There is a janitor's closet off of the Men's restroom with a janitor's sink that is fair to poor condition.



Janitor's Sink

### Kitchen

The kitchen is configured similar to a typical small commercial kitchens. The fixtures in the kitchen are in fair to good condition. There is a dedicated grease trap for the triple pot sink (floor mounted, to the left of the sink in the picture below).



Hand Sink



Triple Pot Sink



Dishwashing Station



Dishwashing Station



Food Prep Sink

## Mechanical (Heating, Ventilating, & Air Conditioning)

### Overview

The primary source of heat for the building is the natural gas fired boiler plant, which generally serves terminal finned tube baseboard convectors, cabinet unit heaters, unit heaters, and similar terminal heating equipment. A note on the boiler control panel indicates that the boiler plant serves both 74 Pond Street and 90 Pond Street.

Air conditioning is generally provided by five multi-zone heat pump systems, where each system generally consists of a single outdoor unit serving several indoor ductless fan coil units.

Ventilation is generally provided by a ventilation system located in the attic towards the front of the buildings.

The controls for the heating system, the cooling systems, and the ventilation system are independent of each other; there is no building automation system coordinating and monitoring the operation of the heating system, the cooling systems, and the ventilation system.

### Heating Plant

The heating plant generally consists of two 1,000 mbh (input) Lochinvar FXTL series condensing natural gas fired fire tube boilers that appear to be in excellent condition. Combustion air is piped directly to these two boilers. The boiler plant is provided with typical accessory components including an expansion tank and an air separator, and such components also appear to be in excellent condition.

The heating system pumps are in a primary/secondary configuration, with a primary pump dedicated to each of the two boilers, and four base mounted pumps controlled by variable that circulate hot water throughout the building. The pumps and the pump accessories (strainers, suction diffusers, check valves, triple duty valves, etc.) generally appear to be in good to excellent condition.



Natural Gas Fired Condensing Boilers



Primary (Boiler) Hot Water Pumps



Secondary (Building) Hot Water Pumps



VFDs for Secondary Pumps



Boiler Vents & Combustion Air Pipes

### Terminal Heating Equipment

The terminal heating units generally consist of various types of hydronic (hot water) finned tube baseboard convectors, cabinet unit heaters, and unit heaters. These units generally appear to be in fair condition.



Typical Hot Water Baseboard Convector



Auditorium Hot Water Baseboard Convector



Typical Hot Water Cabinet Unit Heater



Typical Hot Water Unit Heater

### Air Conditioning

Air conditioning is generally provided by five multi-zone heat pump systems. These systems are conventionally known as variable refrigerant flow (VRF) systems, where each VRF system consists of a single outdoor compressor unit serving multiple indoor ductless fan coil units, with refrigeration piping between the indoor units and the outdoor units. As these systems are heat pump systems, they also are capable of heating in addition to air conditioning. These systems are not heat recovery systems, and as such are not capable of supporting some indoor units operating in heating mode while other indoor units are simultaneously operating in cooling mode.

There are two nominal 3 ton VRF systems, one nominal 3.75 ton VRF system, and two nominal 10 ton VRF systems. The outdoor compressor units for one of the two nominal 3 ton systems and the nominal 3.75 ton system are on the flat roof (towards the Southeast) and the three other outdoor compressor units are located at grade (towards the Southwest). The indoor units generally consist of ceiling mounted ductless cassette type units.

Both the indoor units and the outdoor units appear to be in good to excellent condition.



VRF Outdoor Compressor Units on Roof



VRF Outdoor Compressor Units at Grade



Typical Ceiling Mounted VRF Fan Coil Unit

### General Ventilation

General outside air ventilation is provided by an air handling unit (AHU) located in the attic towards the front of the building. At one point in time the unit was capable of both heating and cooling the (mixed) outside air, but those functions are no longer provided by the unit. Likely the unit is balanced to provide on the order of 10% to 20% outside air, and the untempered mixed air from the unit is delivered directly to the spaces via ceiling mounted outside air grilles. This unit appears to be fair condition.



Ventilation AHU in Attic



Ventilation AHU in Attic

Restroom and similar spaces (Janitor's closet, etc.) is provided by an exhaust fan also located in the attic towards the front of the building, that appears to be in fair condition.



General Exhaust Fan in Attic

The outside air and exhaust air are via louvered roof mounted penthouse structures.

### Local (Kitchen) Ventilation

The kitchen is provided with a Type 1 grease hood that appears to be in fair condition, with a dry chemical type fire suppression system.

The exhaust fan for the grease hood, which appears to be in fair to poor condition, is located on the flat roof (towards the Southeast), and it almost certainly is not listed for grease exhaust.

Make-up air for the kitchen appears to be provided by an air handling unit in the basement, with make-up air from the basement (not from outdoors).



Grease Hood



Roof Mounted Grease Exhaust Fan



Kitchen Make-up Air Unit



Kitchen Make-up Air Grilles

### Controls

With the exception of the boiler plant, which has a local programmable controller with a digital interface to coordinate the operation of the boiler plant components, the mechanical controls generally consist of local independently operating thermostats controlling the various terminal hydronic heating units and the terminal VRF air conditioning fan coil units. There is no building automation system (BAS).

Such a controls configuration - heating and air conditioning thermostats operating independently - is conducive to heating and cooling energy consumption greater than necessary, as, because the

heating and cooling controls do not communicate, it is possible, even likely, that at times the hydronic units are heating simultaneous with the VRF fan coils cooling, unless the staff and the users of the building are very cognizant of the independent controls.

However, it is also possible that, because the VRF systems were installed relatively recently, that they could be retrofitted with BACnet controls, such that a BACnet compliant BAS could be installed that would allow for integrating the controls for the terminal hydronic heating equipment with the VRF system controls, thereby not only preventing simultaneous heating and cooling, but thereby also allowing for the VRF systems to be the source of heat during milder weather (when the VRF systems are at their maximum heating efficiency), which would reduce the carbon footprint of the building with likely minimal to no change in the heating energy bills.

There is a panel at the main vestibule that, based solely on the labelling, measures methane levels, however it was not apparent during the site visit the location(s) where the methane levels were being monitored.



Methane Monitoring Panel

## Electrical

### Power

The service is 800 amp 208 three phase. The service entrance is below grade, from a pole on the site to a grade mounted 500 kVA transformer, and thence to the main distribution panel in the basement. The transformer also serves 90 Pond Street via below grade cables per information from

the Braintree Electric Light Department (BELD). There is a generator at the site that is not in service, and it does not appear to be connected to the building power system.



Pole (red), Transformer (cyan), Generator (green)



Transformer



Generator

## Lighting

The fixtures generally consists of 2'x2' fixtures in suspended lay-in ceilings, with the exception of the auditorium, where the fixtures are 1'x4'. The fixtures are controlled by manual wall mounted switches.



Typical Fixtures (other than Auditorium)



Auditorium Fixtures

### Emergency Lighting & Egress

The spaces throughout are served by either wall mounted combination exit and battery powered emergency fixtures or by wall mounted battery operated emergency fixtures.



Combination Exit Sign/Emergency Fixture



Emergency Fixture

### Fire Alarm

The main panel is an addressable Honeywell Model 5820XL fire system control panel that appears to have been installed relatively recently and appears to be in excellent condition. This panel could likely be re-used for any renovation of this building.



Fire Alarm Panel

Ceiling mounted detectors are located throughout the building. The detectors generally appear to be in good condition, and likely were installed concurrent with the installation of the fire alarm panel.



Typical Ceiling Mounted Smoke Detector



Typical Basement Smoke Detector

Alarm devices are located throughout the building. It appears as though some of the alarm devices were installed concurrent with the installation of the fire alarm panel, and some of the devices pre-date the installation of the fire alarm panel. In general, the older alarm devices appear to be in fair to good condition, whereas the newer alarm devices appear to be in excellent condition.



Typical Older Alarm Horn



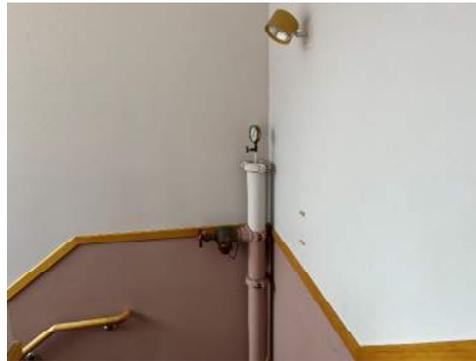
Typical Newer Alarm Strobe

## 90 Pond Street

### Fire Protection

#### General

The fire protection sprinkler system is a combination wet and dry type sprinkler system, and it generally consists of wet standpipes in the stairwells and dry sprinklers serving the top floor and the attic only.



Standpipe in Rear Stairwell

#### Fire Protection Service

The fire protection (FP) service enters the building in the NE corner of the building. The service room was not accessible during the site visit.

A dry system alarm check valve assembly is located in the attic, to convert the wet system to dry to serve the top floor and the adjoining attic spaces.



Dry Alarm Check Valve in Attic



Dry Air Compressor in Attic

## Sprinklers

The sprinklers on the top floor are the pendant type, and the sprinklers in the attic are the upright pendant type. The sprinklers appear to be in fair to good condition.



Top Floor Pendant Sprinkler



Attic Upright Sprinkler

## Plumbing

### Gas Entrance

The gas entrance for both 74 Pond Street and 90 Pond Street is at the NE corner of 90 Pond Street. Therefore, were there a requirement for separate gas entrances for the two buildings at the site, a new gas entrance would be required for 90 Pond Street.



Natural Gas Entrance

### Plumbing Fixtures

The plumbing fixtures are vitreous china, with floor mounted flush valve water closets, wall mounted flush valve urinals, and both counter mounted and wall hung lavatories. There also are several wall mounted water coolers. The plumbing fixtures generally appear to be in fair condition,

although many of the flush valves, faucets, and trim have been demolished and or damaged beyond repair.



Water Closet



Urinal & Wall Mounted Lavatory



Counter Mounted Lavatories



Water Cooler

### Water Heating

The water heating plant generally consists of an electric resistance tank type water heater that appears to be in fair condition, however the date on the water heater indicates that it is 20 years old, and 20 years far exceeds the typical life of a this type of water heater. Therefore the water heater should be replaced in any renovation. The water heating plant also includes a recirculation pump that appears to be in poor to fair condition. The water heating plant does not include a mixing valve.



Water Heater



Recirculation Pump

## Mechanical (Heating, Ventilating, & Air Conditioning)

### General

The gas fired hydronic heating plant at 74 Pond Street serves this building.

The cast iron boiler in this building is no longer operable, and it appears to be in fair condition. However, judging the condition of a cast iron boiler such as this one, by merely looking at it from the outside, is not reliable.



Boiler

### Terminal Heating Equipment

The terminal heating units generally consist of various types of hydronic (hot water) finned tube baseboard convectors, cabinet unit heaters, and unit heaters. These units generally appear to be in poor to fair condition.



Typical Hot Water Baseboard Convectors



Typical Cabinet Unit Heater

### Air Conditioning & Ventilation

There are two abandoned grade mounted condensing units that presumably at one point in time served the evaporator coils in the two ventilation units in the attic. Both of these units appear to be in poor condition.



Condensing Unit

Ventilation is provided by two air handling systems located in the attic - towards the East and the West of the building. The air handling systems generally consists of air handling units and an exhaust fan serving restrooms and similar spaces. It was not determined during the site visit which spaces and floors were served by the two air handling systems. Ventilation air is provide via louvered dormers at the front of the building and exhaust air is via the chimney towards the East. The ductwork and the equipment of these systems appears to be in fair to poor condition.



East AHU, Ductwork, & Exhaust Fan



West AHU & Ductwork

## Humidification

There are several self-contained electric canister type humidifiers with top mounted discharge plenums, controlled by wall mounted humidistats, that appear to be in fair to good condition.



Humidifier

## Controls

The mechanical controls generally consist of local independently operating thermostats controlling the various terminal hydronic heating units. There is no building automation system (BAS).

There also is a methane level monitoring panel in the main vestibule, similar to the methane level monitoring panel at 74 Pond Street.

## Electrical

### Power

The main distribution panel is 800 amp 208 three phase, and the power to the panels is via underground cables from the grade mounted transformer at 74 Pond Street.

## Lighting

Fixtures serving the lower floors generally consists of 2'x2' and 2'x4' fixtures in suspended lay-in ceilings. The fixtures serving the top floor consist of surface mounted fixtures and recessed can type fixtures. The fixtures are controlled by manual wall mounted switches.



Typical 2'x2' Fixture (Lower Floors)



Typical 2'x4' Fixture (Lower Floors)



Typical Surface Mounted Fixture (Top Floor)



Typical Recessed Can Fixture (Top Floor)

## Emergency Lighting & Egress

The spaces throughout are served by either wall mounted combination exit and battery powered emergency fixtures or by wall mounted battery powered emergency fixtures.



Combination Exit Sign/Emergency Fixture



Emergency Fixture

## Fire Alarm

The fire alarm system appears to be connected to the fire alarm system at 74 Pond Street, with the main panel at 74 Pond Street and a remote annunciator at this building.



Remote Annunciator

Ceiling mounted detectors are located throughout the building. The detectors generally appear to be in good condition, and likely were installed concurrent with the installation of the remote annunciator.



Typical Ceiling Mounted Smoke Detector

Alarm devices are located throughout the building. It appears as though some of the alarm devices were installed concurrent with the installation of the remote annunciator, and some of the devices pre-date the installation of the remote annunciator. In general, the older alarm devices appear to be in fair to good condition, whereas the newer alarm devices appear to be in excellent condition.



Typical Older Alarm Horn & Bell



Typical Newer Alarm Horn Strobe



## **Braintree Affordable Housing**

**74 Pond St.**

**Braintree, MA**

### **Existing Conditions Review**

March 4<sup>th</sup>, 2024

The following are the findings based on a review of the structural components accessible at the time of our site visit and excludes members that were covered with finishes and below grade elements such as footings, etc. The existing building located at 74 Pond St. is a two-story masonry and wood framed structure that was built circa 1927, with an addition built later to the rear. The one-story addition is believed to have CMU bearing walls at the exterior that are supported on concrete foundation walls, with steel beams and tectum panels at the roof. The structure of the two-story addition was not able to be observed while on site.

#### **1.1 Foundation**

It is believed that the existing structure is supported on shallow foundations based on the stone foundation walls that were visible in the basement level (Photos 1-3). There is terracotta tile at the upper portion of the foundation wall with brick facing at the exterior (Photo 7). The rear portion of the building has concrete foundation walls that were in good condition (Photo 7). The slab on grade at the lower-level mechanical room had some areas of spalling and the steel column in this space had rust at the bottom (Photo 4). Overall, the slab on grade that was visible was in good condition. There were some cracks running along the hallway into the storage room (Photos 5 & 6), there was no evidence of settlement. The concrete piers that were visible in the basement were in good condition with no significant cracks or signs of distress (Photos 6, 9 & 10).

#### **1.1 First Floor Framing**

The exposed first-floor wood floor framing visible in the basement was in good condition (Photos 8-11). The floor joists measured 1 $\frac{3}{4}$ " x 7 $\frac{1}{2}$ " @ 16" o.c. joists at the front of the building and 1 $\frac{3}{4}$ " x 9 $\frac{1}{2}$ " @ 16" o.c. joists at the middle. There is a reinforced concrete flat slab supported on 24" diameter concrete sonotubes at the rear of the building below the existing kitchen space above (Photo 12). The framing below the auditorium and front lobby was not accessible at the time of our visit, there were no significant signs of deflection or distress observed in those spaces (Photo 13).

#### **1.2 Second Floor Framing**

The second-floor framing was covered with finishes and could not be observed (Photos 14 & 15). There is a dropped ceiling and upon inspection above the dropped ceiling there is gypsum covering the framing. There were no areas of concern observed at the second floor, the gypsum was not cracked which indicates the joists are not significantly deflecting. The second-floor framing is assumed to be of similar construction to the first-floor wood framing observed in the basement. The floor finishes and walls were in good condition which indicates the framing is also in good condition (Photo 16).

## **1.4 Roof Framing**

The kitchen space does not have a second floor above. The flat roof here could be observed at certain locations and was found to be steel beams supporting tectum roof panels (Photos 17 & 18). The hip and gable roof framing at the main building could be observed from an attic space and was found to be wood framed and in good condition (Photos 19 & 20). The flat roof at the open office space above the auditorium could not be observed but there were no signs of significant deflection or distress.

## **2.0 Recommendations**

The majority of the structural framing members that could be seen during the site visit were in good condition and can remain in place. Based on the proposed future use of the building the code prescribed live load will likely range from 40 psf (living spaces) to 100 psf (common areas, lobbies, stair wells). It is anticipated that the current framing will be able to carry the live load of 40 psf provided any notched or damaged members that are encountered are replaced or reinforced. For areas where the code prescribed live load will be 100 psf reinforcement of the existing structure may be required. This can be done by sistering or adding steel plates to the existing wood floor framing members. For areas where the structure is currently unknown an appropriate method of reinforcement if required will need to be determined. Any existing structural members that are found to be damaged will need to be evaluated to determine the required reinforcement or if replacement is necessary.

Photos:



Photo 1- Stone foundation wall with terracotta tile above



Photo 2 – Stone foundation wall with terracotta tile above



Photo 3 – Stone foundation wall



Photo 4 – Steel column in lower mechanical room with rust at bottom.



Photo 5 – Cracks in slab on grade



Photo 6 – Concrete pier and crack at slab on grade



Photo 7 – Exterior brick with concrete foundation walls at rear kitchen space



Photo 8 - First Floor Framing



Photo 9 – First Floor Framing



Photo 10 – First Floor wood beam supported on concrete pier



Photo 11 – First floor wood beam supported on concrete pier

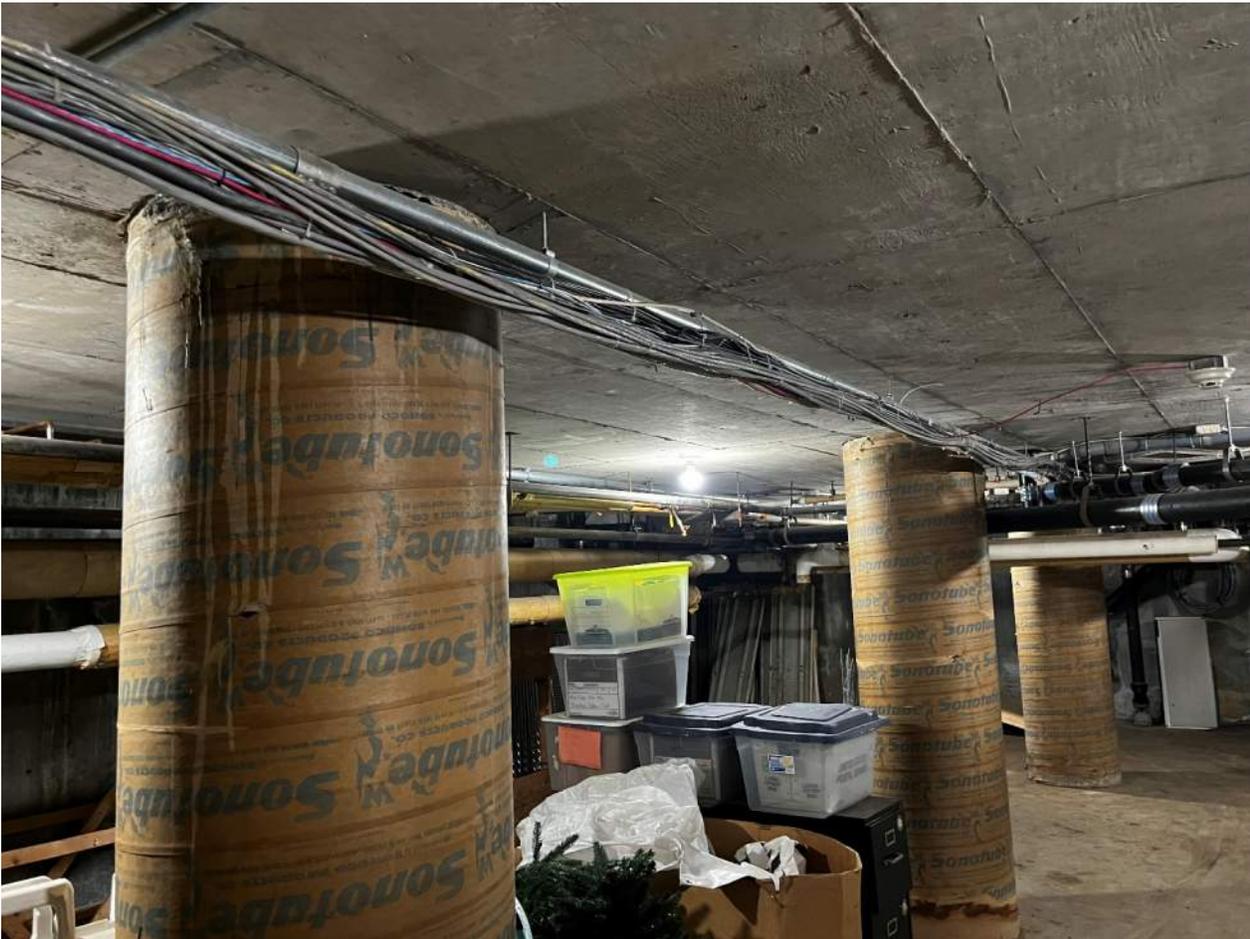


Photo 12 - Sonotubes supporting concrete flat slab at first floor above



Photo 13 – Auditorium Floor in good condition with no signs of significant distress



Photo 14 - Drop ceiling at auditorium.



Photo 15 – Second floor framing observed above dropped ceiling was covered with finishes.



Photo 16 – Open office space above auditorium



Photo 17 – Steel beams and tectum panels at kitchen roof



Photo 18 – Steel beam supported on CMU exterior wall at kitchen roof



Photo 19 – Roof Framing



Photo 20 – Roof Framing



**Braintree Affordable Housing  
90 Pond St.  
Braintree, MA**

**Existing Conditions Review**

March 4<sup>th</sup>, 2024

The following are the findings based on a review of the structural components accessible at the time of our site visit and excludes members that were covered with finishes and below grade elements such as footings, etc. The existing building located at 90 Pond St. is a three-story masonry and wood framed structure that was built circa 1905.

**1.1 Foundation**

It is believed that the existing structure is supported on shallow foundations similar to the building at 74 Pond St. There is a concrete ramp at the rear of the building that leads to the walk out basement level. The ramp was in good condition with no major cracks or signs of distress (Photo 1). The foundation walls were covered with finishes at the interior and could not be observed while on site. The exterior portion of the foundation walls that was visible is brick on granite blocks (Photos 2 & 3). There were no signs of settlement to these masonry foundation walls that were visible from the exterior. Rusted steel lintels were observed at the basement window locations (Photo 3). The slab on grade at the basement level had extensive cracking (Photos 4-6). It is assumed this is from a poor concrete mix or lack of welded wire mesh in the slab. Other than the cracks the slab was in generally good condition with no signs of differential settlement.

**1.1 First Floor Framing**

The majority of the first-floor framing was covered with finishes. There is a dropped ceiling and upon inspection above the dropped ceiling there is gypsum covering the framing. There are dropped 9" deep wood beams that were visible that are supported on steel or cast-iron posts (Photos 7-9). In a few locations where the finishes had been removed wood joists could be observed (Photos 10 & 11). There were no areas of concern observed at the first floor, the gypsum was not cracked which indicates the joists are not significantly deflecting.

**1.2 Second and Third Floor Framing**

The majority of the second and third-floor framing was also covered with finishes. There is a dropped ceiling and upon inspection above the dropped ceiling there are various finishes covering the framing (Photos 12 & 13). The second-floor framing is assumed to be of similar construction to the first-floor wood framing observed in the basement. There were a few areas where the finishes had been removed at the second-floor ceiling and the third-floor framing could be observed. A heavy timber wood beam and wood joists were seen to be in good condition (Photos 14 & 15). There was one location of water damage observed (Photo 16). The finishes should be fully removed in this area to determine the condition of the wood framing and if there is rot.

## **1.4 Roof Framing**

The roof framing was largely covered with finishes and could not be observed, the finishes were in good condition with no significant cracks (Photos 17 & 18). There was one location where the finishes had been removed and the roof framing could be observed (Photo 19). There are 2x8 wood rafters framing to a 2x10 valley beam. The wood rafters and beam were in good condition with no signs of deflection or distress.

## **2.0 Recommendations**

Many of the structural framing members that could be seen during the site visit were in good condition and can remain in place. The heavily rusted steel window lintels should be replaced. If there are issues with water in the basement then waterproofing measures should be considered, and repairing/sealing the cracks in the basement is recommended. Based on the proposed future use of the building the code prescribed live load will likely range from 40 psf (living spaces) to 100psf (common areas, lobbies, stair wells). It is anticipated that the current framing will be able to carry the live load of 40 psf provided any notched or damaged members that are encountered are replaced or reinforced. For areas where the code prescribed live load will be 100 psf reinforcement of the existing structure may be required. Any existing structural members that are found to be damaged due to rot or insect damage should be replaced in kind or sistered with LVLs.

Photos:



Photo 1 – Concrete ramp to lower level



Photo 2 – Exterior masonry



Photo 3 – Rusted steel lintel at exterior masonry



Photo 4 - Cracks in slab on grade

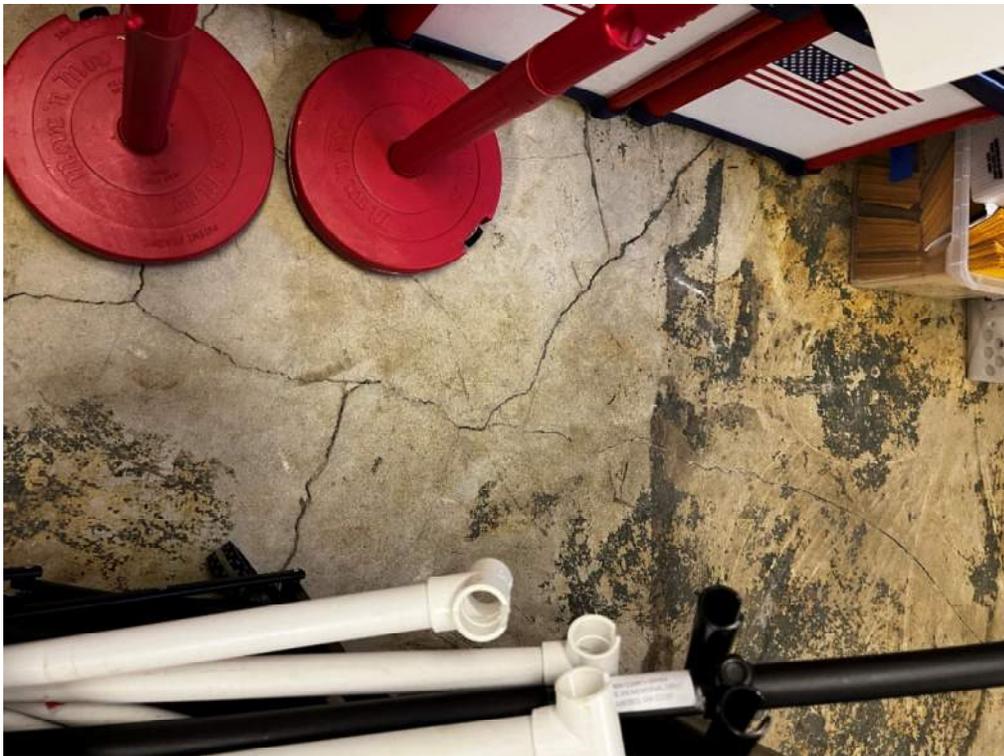


Photo 5 - Cracks in slab on grade



Photo 6 – Cracks in slab on grade



Photo 7 – Wood beam at first floor (basement ceiling) supported on steel/cast iron post.

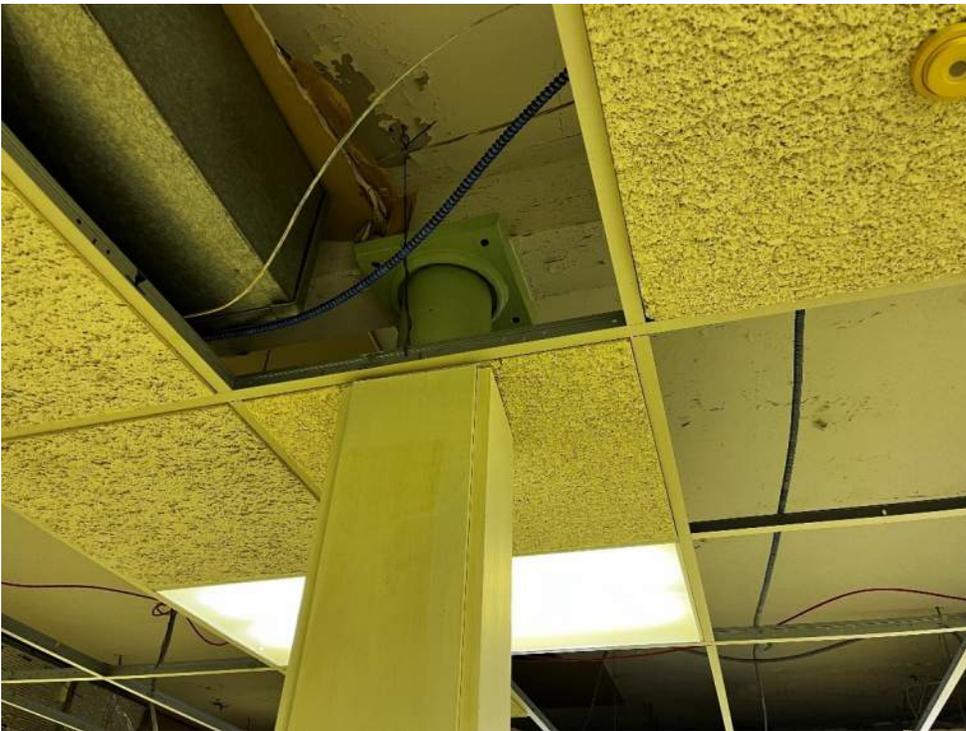


Photo 8 - Wood beam at first floor (basement ceiling) supported on steel/cast iron post.



Photo 9 – First floor wood beams, joists covered with gypsum



Photo 10 – Wood joist at first floor (basement ceiling)

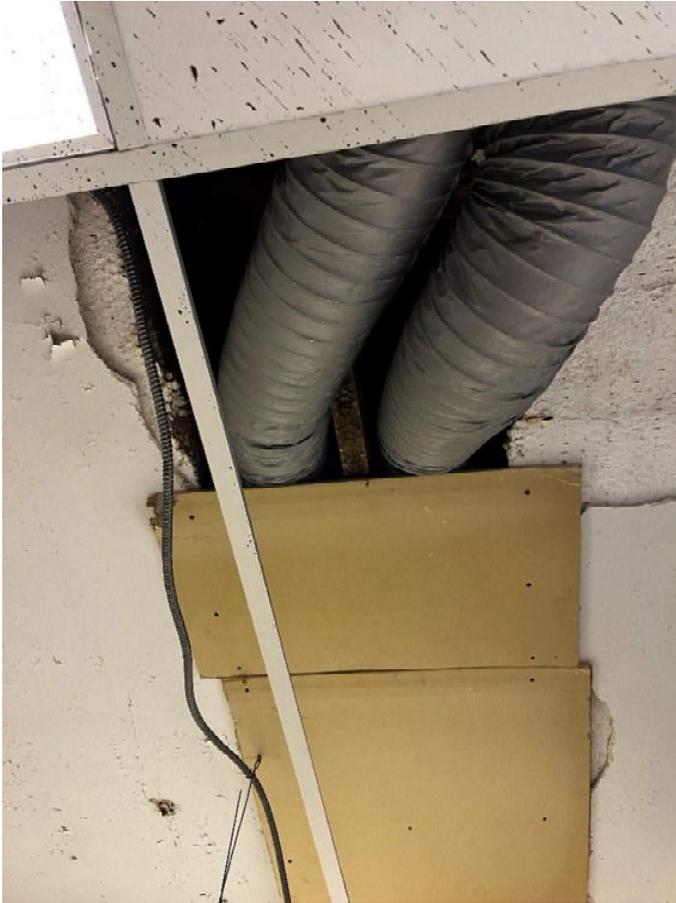


Photo 11 - Wood joist at first floor (basement ceiling)



Photo 12 – Second floor framing (first floor ceiling) covered with finishes.



Photo 13 - Second floor framing (first floor ceiling) covered with finishes.



Photo 14 – Wood joists at third floor (Second floor ceiling)



Photo 15 – Wood beam at third floor (second floor ceiling)



Photo 16 – Water damage at third floor framing (second floor ceiling)



Photo 17 – Roof framing covered with finishes.



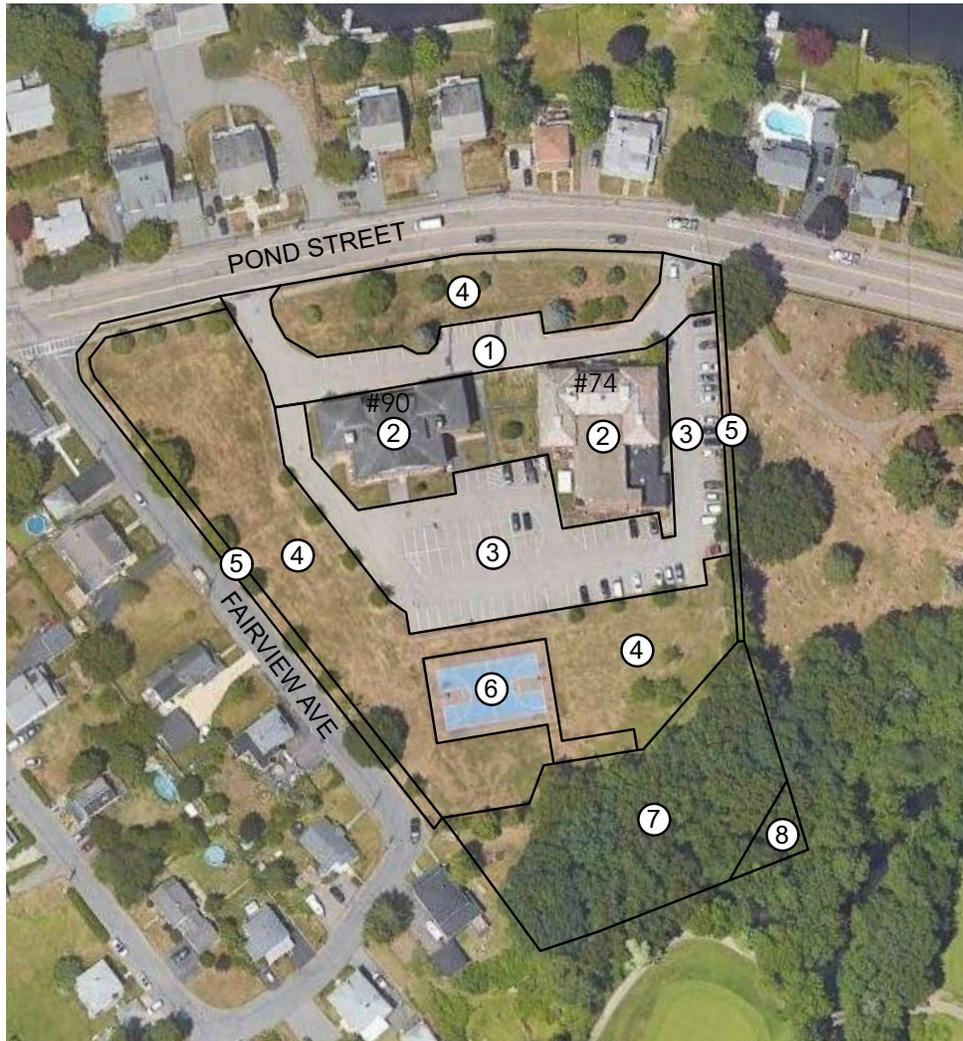
Photo 18 – Roof framing covered with finishes.



Photo 19 – Roof framing



# Braintree Housing Existing Conditions Report



- ① Front Drive
- ② Building Exteriors
- ③ Parking Lots
- ④ Lawn
- ⑤ Perimeter along Fairview Ave and Cemetery
- ⑥ Sport / Play Area
- ⑦ Edge Condition of Woods
- ⑧ Buffer of Vegetated Wetland



## 1. Front Drive

It appears that the front drive has an adequate width to accommodate space for drop off and pick up to occur. It was observed that a bus could pull off to the side and still allow a car to pass by. There are granite curbs along Pond Street that appear to be in good condition. These curbs end shortly after the curb cut that leads into the site. The absence of curbs along the front drive has resulted in the edge of the asphalt drive being in disrepair. The rest of the asphalt paving is in fair condition. There are three parallel parking spaces in front of 90 Pond Street and seven handicap spaces in between the two buildings.



## 2. Building Exteriors

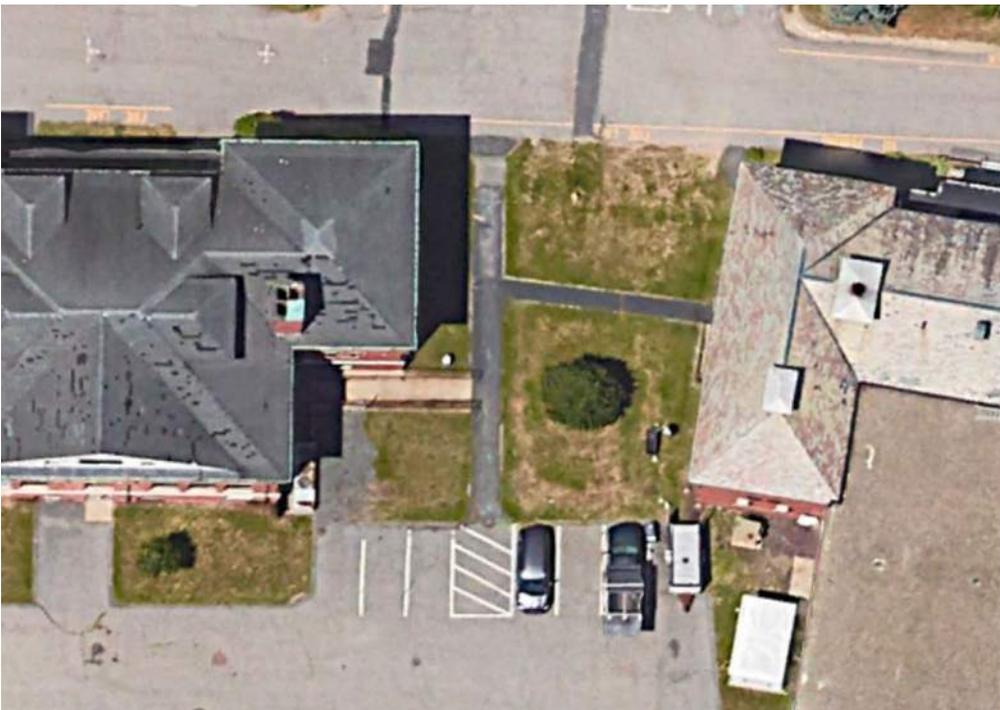
The front entrance to 90 Pond Street has two sets of granite and concrete steps in good condition. The handrails for these steps are rusted and need to be replaced. There is no accessible entrance in the front. There is a significant elevation difference between grade and the main floor of the building which would make it challenging to provide an accessible entrance in the future. The east entrance to 90 Pond Street is accessed by a ramp that appears to be accessible with the exception that its handrails need to be replaced. The ramp's handrails are metal and have rusted over time. The two entrances in the south have small steps up and could be made flush with minor interventions.



A sloped path leads up to 74 Pond Street's main entrance and appears to be accessible. There is also a set of three brick stairs with stone caps that lead up to the entrance. The handrails along the stairs and brick landing appear to be in good condition. The west entrance of 74 Pond Street has a set of stairs that leads down to the basement level. The metal handrails are rusted and need to be replaced. There is an entrance to the east that consists of a set of concrete stairs with rusted metal handrails. There are three utility entrances to the south that appear to be flush with grade. An additional entrance on the south is accessed via a set of concrete stairs in poor condition with rusted metal handrails.



There is a lack of circulation between the two buildings; to get from one building to the other you must walk along the side of the front drive. In between the buildings, an asphalt path connects the front drive to the back parking area and another path intersects it that connects two side entrances of the buildings. The asphalt paths are in poor condition. The space between the buildings is very open, there is one tree that provides little shade. There is little to no planting around the building. Service areas and utilities are located around the building's foundation without any screening.



### 3. Parking Lots

The parking lots consist of uninterrupted pavement with few trees along the perimeter that are too small to provide much shade. The team identified two drains in the parking lot that collect all the stormwater on site due to the paving being lower than the existing landscape. The paving is in fair condition - there are some cracks and the area near the drain is in especially poor condition. The edges of the asphalt paving show signs of deterioration due to having no proper curbs. There are sixty parking spaces in the back lot, five parallel spaces along the west side of the lot, and 20 parking spaces in the east lot.



#### 4. Lawn

The landscape outside the parking lots is primarily exposed open lawns with few trees. The front lawn has a gradual slope towards the street. The west and south lawn areas are flat. The front lawn has one larger evergreen tree and then small oaks scattered throughout. The west and south lawn areas are more open with small oaks dotted around the perimeter that provide little shade.



#### 5. Perimeter along Fairview Ave and Cemetery

A fence runs along the edge of both Fairview Ave and the cemetery. This chain link fence is about four feet high and in poor condition. There is a break in the fence on Fairview Ave that serves as a public entrance into the park and there is also a vehicular gate located further down the road. It is unclear whether this fence is necessary. The cemetery has no fence on the other side of its property, indicating that the fence is not a requirement of the cemetery. We assume that the fence is a remnant from its previous use as a school yard and it should be considered for removal.



## 6. Sport / Play Area

Behind the back parking lot there is a basketball court, a metal swing set, and a metal slide. The swing set and slide appear to be aged and will need to be replaced soon. There is no play surfacing underneath the play equipment. The basketball court paving is in poor condition and has many cracks and areas of discoloration. There is no accessible path to get to the play equipment or basketball court.



## 7. Edge Condition of Woods

A chain link fence about six feet tall separates the lawn from the woods. There is a gate that is used as a public entrance into the woods with signage that indicates that the wooded area is closed to the public at night. There is a hole in the fence behind the swing set that appears to be used more frequently as an entrance into the woods. Directly behind the fence is a steep decline that slopes down towards the river. There are several informal mulch/dirt paths that connect the site to the river, golf course, and cemetery. It was observed that vegetation had been cut along these paths, indicating that they are maintained.



## 8. Buffer of Vegetated Wetland

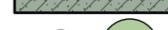
There are wetlands associated with the Monaquot River. It is anticipated that improvements to the site will trigger conservation restrictions and regulations. The southern side of the site within the woodland will need wetland flagging so the extents of the buffer can be understood.





**APPENDIX C:  
COST ESTIMATE BACK-UP  
INFORMATION**

**KEY**

-  PROPERTY LINE
-  ASPHALT
-  CONCRETE
-  GRAVEL
-  GRASS
-  WOODED
-  PLANTING BED
-  WETLAND
-  DECIDUOUS TREE
-  EVERGREEN TREE
-  SHRUB
-  CHAIN LINK FENCE



**KEY**

-  PROPERTY LINE
-  ASPHALT
-  CONCRETE
-  GRAVEL
-  GRASS
-  WOODED
-  PLANTING BED
-  WETLAND
-  DECIDUOUS TREE
-  EVERGREEN TREE
-  SHRUB
-  CHAIN LINK FENCE



**KEY**

-  PROPERTY LINE
-  ASPHALT
-  CONCRETE
-  GRAVEL
-  GRASS
-  WOODED
-  PLANTING BED
-  WETLAND
-  DECIDUOUS TREE
-  EVERGREEN TREE
-  SHRUB
-  CHAIN LINK FENCE



New 2-story townhouses

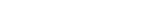
New 2-story addition

KEY

-  PROPERTY LINE
-  ASPHALT
-  CONCRETE
-  GRAVEL
-  GRASS
-  WOODED
-  PLANTING BED
-  WETLAND
-  DECIDUOUS TREE
-  EVERGREEN TREE
-  SHRUB
-  CHAIN LINK FENCE



**KEY**

-  PROPERTY LINE
-  ASPHALT
-  CONCRETE
-  GRAVEL
-  GRASS
-  WOODED
-  PLANTING BED
-  WETLAND
-  DECIDUOUS TREE
-  EVERGREEN TREE
-  SHRUB
-  CHAIN LINK FENCE

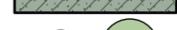


**KEY**

-  PROPERTY LINE
-  ASPHALT
-  CONCRETE
-  GRAVEL
-  GRASS
-  WOODED
-  PLANTING BED
-  WETLAND
-  DECIDUOUS TREE
-  EVERGREEN TREE
-  SHRUB
-  CHAIN LINK FENCE



**KEY**

-  PROPERTY LINE
-  ASPHALT
-  CONCRETE
-  GRAVEL
-  GRASS
-  WOODED
-  PLANTING BED
-  WETLAND
-  DECIDUOUS TREE
-  EVERGREEN TREE
-  SHRUB
-  CHAIN LINK FENCE

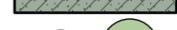


New 2-story townhouses

New 1-story shared entry

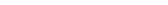
New 3-story building

KEY

-  PROPERTY LINE
-  ASPHALT
-  CONCRETE
-  GRAVEL
-  GRASS
-  WOODED
-  PLANTING BED
-  WETLAND
-  DECIDUOUS TREE
-  EVERGREEN TREE
-  SHRUB
-  CHAIN LINK FENCE



**KEY**

-  PROPERTY LINE
-  ASPHALT
-  CONCRETE
-  GRAVEL
-  GRASS
-  WOODED
-  PLANTING BED
-  WETLAND
-  DECIDUOUS TREE
-  EVERGREEN TREE
-  SHRUB
-  CHAIN LINK FENCE

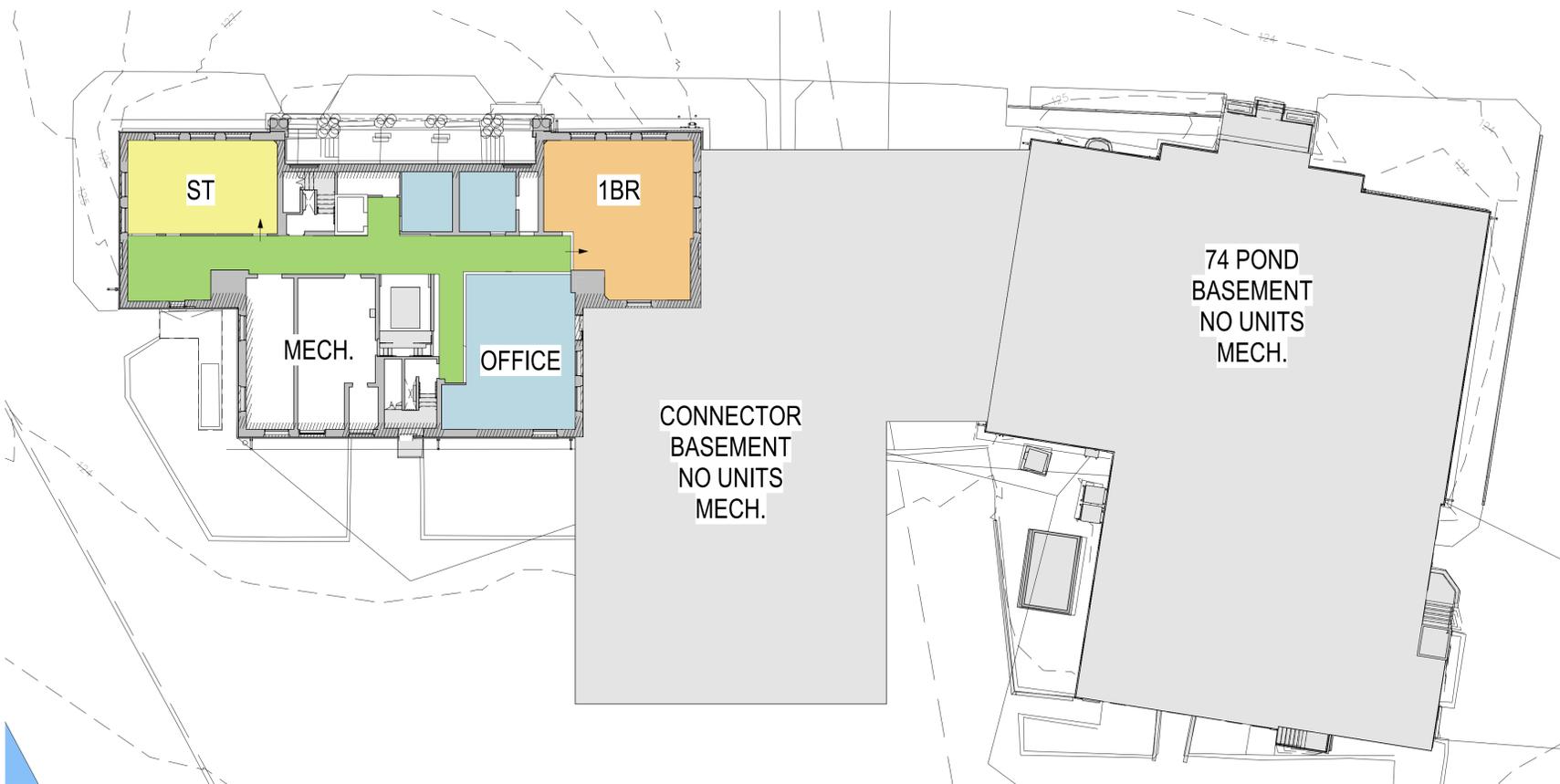




2 FIRST FLOOR PLAN - CONNECTOR OPTION  
SCALE: 1/16" = 1'-0"

COLOR KEY

- COMMON SPACE
- CIRCULATIONS
- STUDIO
- ONE BEDROOM UNIT
- TWO BEDROOM UNIT
- THREE BEDROOM UNIT
- ONE BEDROOM TOWN HOUSE



1 BASEMENT PLAN - CONNECTOR OPTION  
SCALE: 1/16" = 1'-0"

OPTION 2 - CONNECTOR DISTRIBUTION

| UNIT TYPE | 74 POND | 90 POND | CONNECTOR | TOTAL |
|-----------|---------|---------|-----------|-------|
| STUDIO    | 9       | 2       | 16        | 27    |
| 1 BR      | 7       | 8       | 4         | 19    |
| 2 BR      | 2       | 4       | 0         | 6     |
| 3 BR      | 1       | 0       | 0         | 1     |
| TOTAL     | 19      | 14      | 20        | 53    |

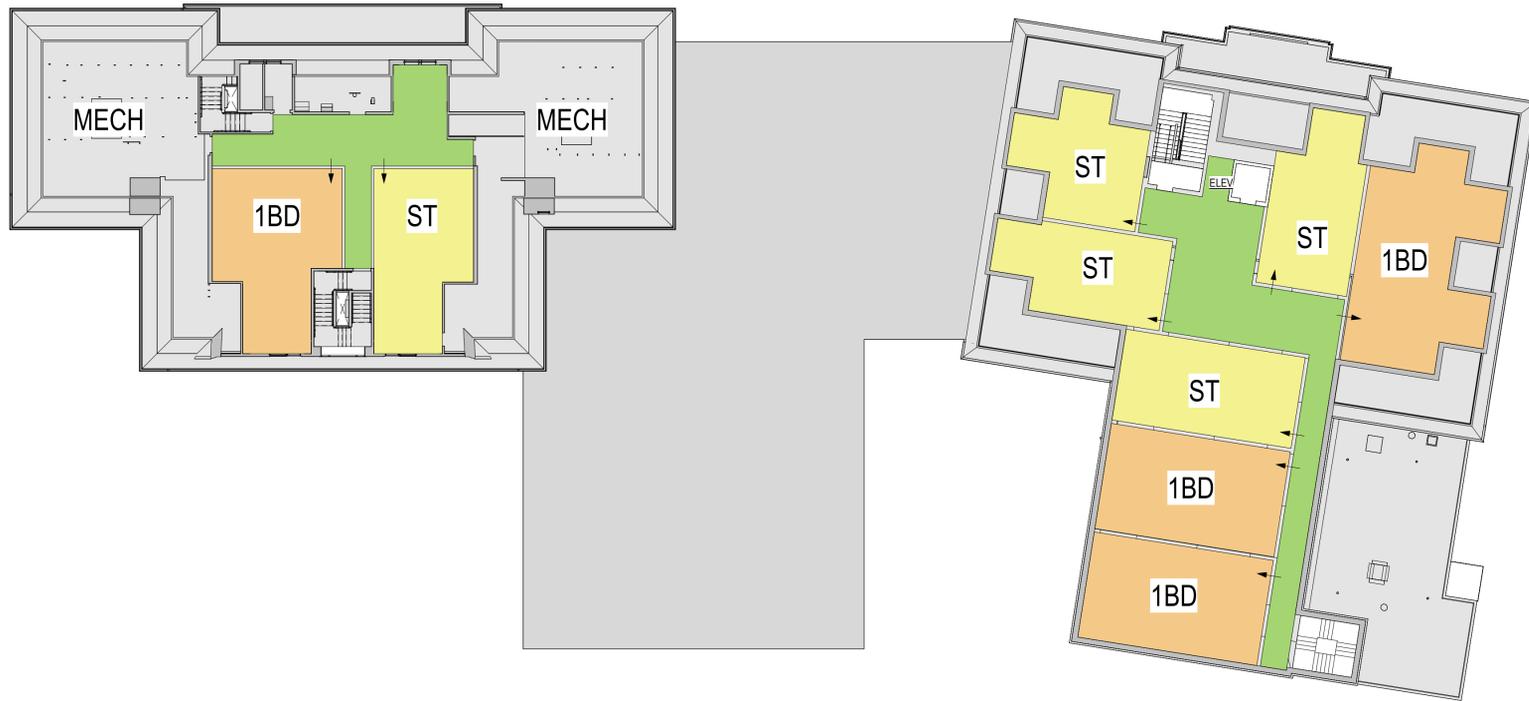
  
 ARCHITECTURE & INTERIORS  
  
  
  
**Affordable Housing Study**  
**- 74 & 90 Pond St**  
P31727.00  
 74 & 90 Pond St.  
 Braintree, MA

LDa Architecture & Interiors, LLP  
 500 Harrison Avenue, Suite 3F  
 Boston, MA 02118  
 617 621-1455 fax 617 621-1477  
 www.LDa-Architects.com

ISSUANCE:  
 CONCEPTUAL LAYOUTS  
 REVISION:

DATE: 04-26-2024  
 SCALE: As indicated  
 DRAWN: SA/GRB  
 CHECKED: GRB/KB

SHEET INFO:  
 OPTION 1 - BASEMENT AND 1ST FLOOR  
 PLAN DIAGRAM



1 EXISTING THIRD FLOOR PLAN  
SCALE: 1/16" = 1'-0"



2 SECOND FLOOR PLAN - CONNECTOR OPTION  
SCALE: 1/16" = 1'-0"

OPTION 2 - CONNECTOR DISTRIBUTION

| UNIT TYPE | 74 POND | 90 POND | CONNECTOR | TOTAL |
|-----------|---------|---------|-----------|-------|
| STUDIO    | 9       | 2       | 16        | 27    |
| 1 BR      | 7       | 8       | 4         | 19    |
| 2 BR      | 2       | 4       | 0         | 6     |
| 3 BR      | 1       | 0       | 0         | 1     |
| TOTAL     | 19      | 14      | 20        | 53    |

COLOR KEY

- COMMON SPACE
- CIRCULATIONS
- STUDIO
- ONE BEDROOM UNIT
- TWO BEDROOM UNIT
- THREE BEDROOM UNIT
- ONE BEDROOM TOWN HOUSE

  
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REVISION:

DATE: 04-26-2024  
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 DRAWN: SA/GRB  
 CHECKED: GRB/KB

SHEET INFO:  
 OPTION 1 - 2ND FLOOR AND ATTIC  
 PLAN DIAGRAM

COLOR KEY

- COMMON SPACE
- CIRCULATIONS
- STUDIO
- ONE BEDROOM UNIT
- TWO BEDROOM UNIT
- THREE BEDROOM UNIT
- ONE BEDROOM TOWN HOUSE



2 FIRST FLOOR PLAN - OPTION 3  
SCALE: 1/16" = 1'-0"

Total  
Res + Hall = 63606 (2A) 68976 (2B)  
Stairs + Mech. = 22925  
Amenity = 7327

Stairs = 2715  
Mechanical = 15260  
Stairs and Mech. = 17975  
Amenity = 6612  
Residential units and hall = 26,806

1 BASEMENT PLAN - OPTION 3  
SCALE: 1/16" = 1'-0"

OPTION 2 - ADDITIONAL BUILDING

| UNIT TYPE   | 74 POND | 90 POND | ADDITIONAL | TOTAL |
|-------------|---------|---------|------------|-------|
| STUDIO      | 8       | 6       | 20         | 34    |
| 1 BR        | 9       | 4       | 9          | 22    |
| 2 BR        | 2       | 4       | 3          | 9     |
| 3 BR        | 1       | 0       | 0          | 1     |
| TOTAL UNITS | 20      | 14      | 32         | 66    |

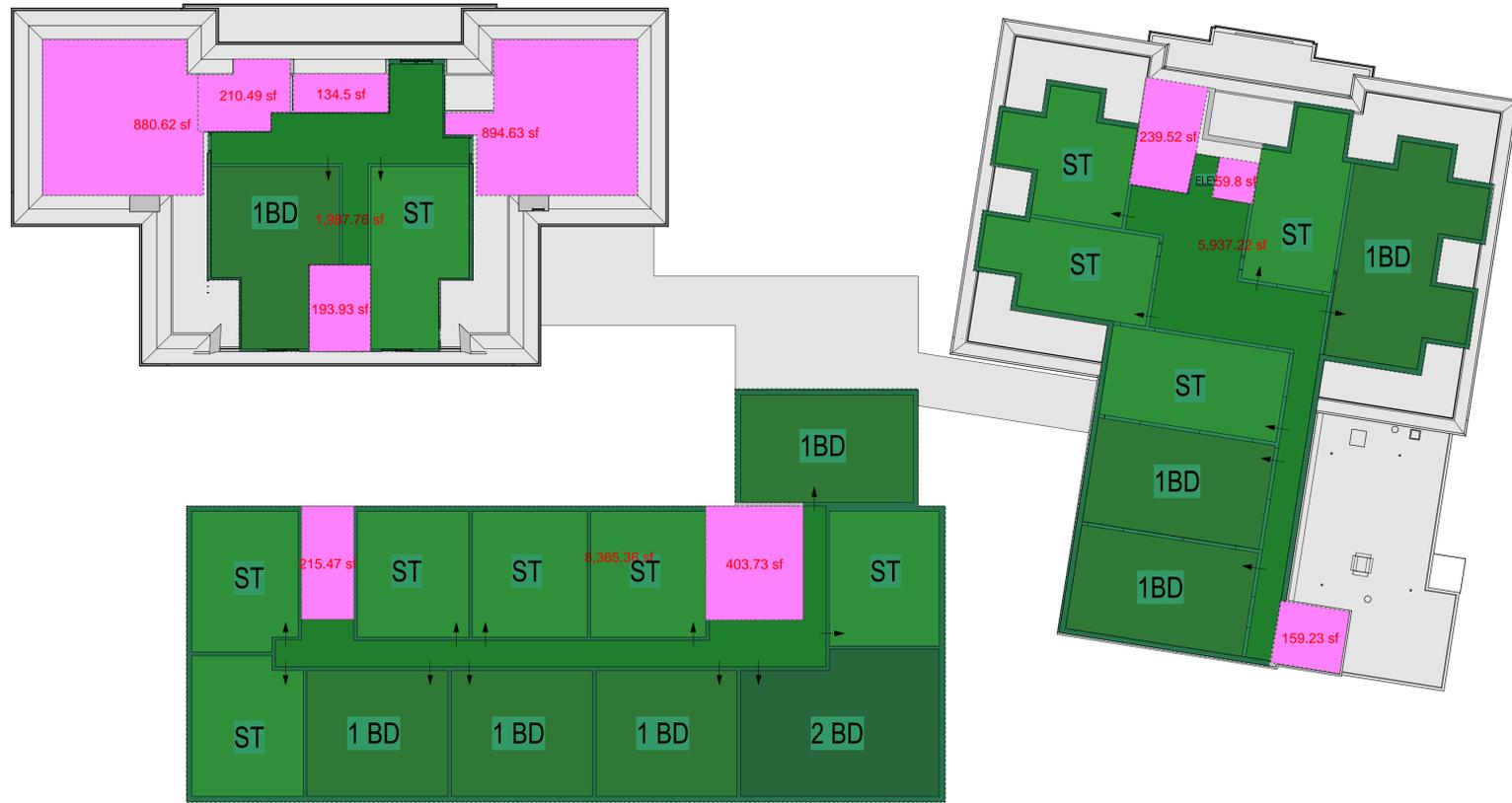
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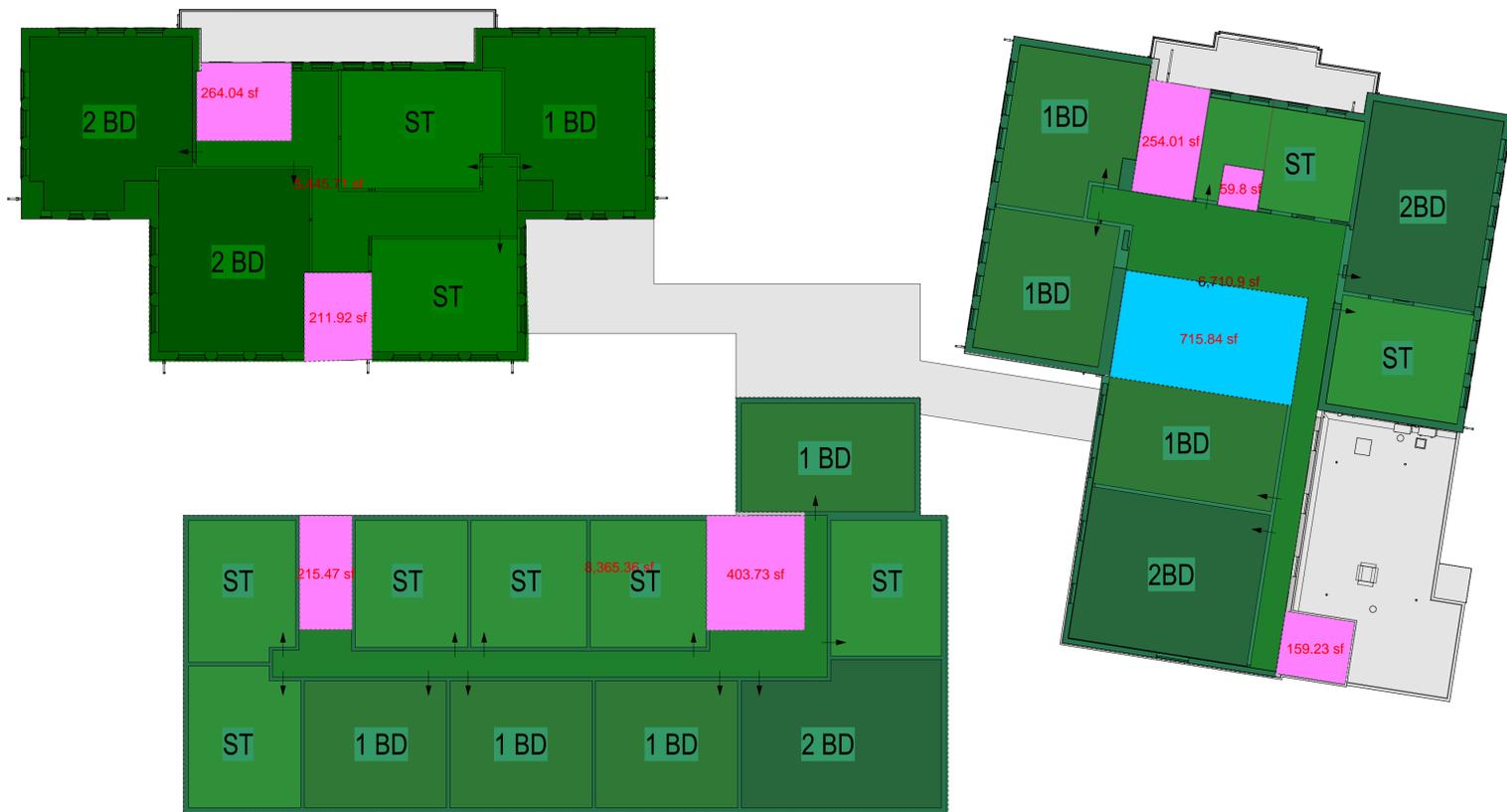
REVISION:

DATE: 04-26-2024  
SCALE: As indicated  
DRAWN: SA/GRB  
CHECKED: GRB/KB

SHEET INFO:  
OPTION 2 - BASEMENT AND 1ST FLOOR  
PLAN DIAGRAM



2 THIRD FLOOR PLAN - OPTION 3  
SCALE: 1/16" = 1'-0"



1 SECOND FLOOR PLAN - OPTION 3  
SCALE: 1/16" = 1'-0"

stairs= 3050  
Mechanical = 1900  
Stair + Mech. = 4950  
Amenity = 715  
Residential units and hall = 36800

OPTION 3 - ADDITIONAL BUILDING

| UNIT TYPE   | 74 POND | 90 POND | ADDITIONAL | TOTAL |
|-------------|---------|---------|------------|-------|
| STUDIO      | 8       | 6       | 20         | 34    |
| 1 BR        | 9       | 4       | 9          | 22    |
| 2 BR        | 2       | 4       | 3          | 9     |
| 3 BR        | 1       | 0       | 0          | 1     |
| TOTAL UNITS | 20      | 14      | 32         | 66    |

COLOR KEY

- COMMON SPACE
- CIRCULATIONS
- STUDIO
- ONE BEDROOM UNIT
- TWO BEDROOM UNIT
- THREE BEDROOM UNIT
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REVISION:

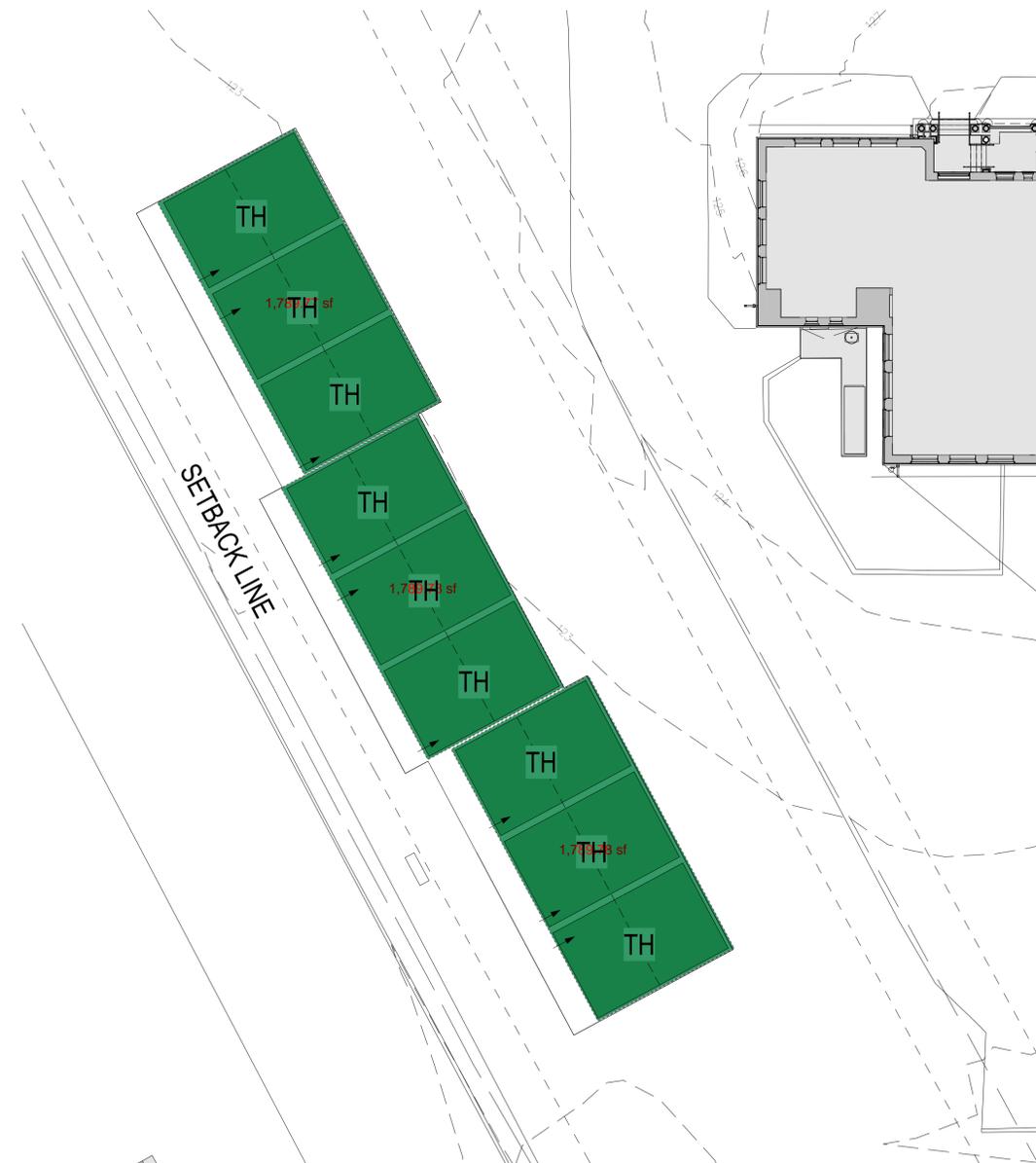
DATE: 04-26-2024  
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 CHECKED: GRB/KB

SHEET INFO:  
 OPTION 2 - 2ND FLOOR AND ATTIC  
 PLAN DIAGRAM

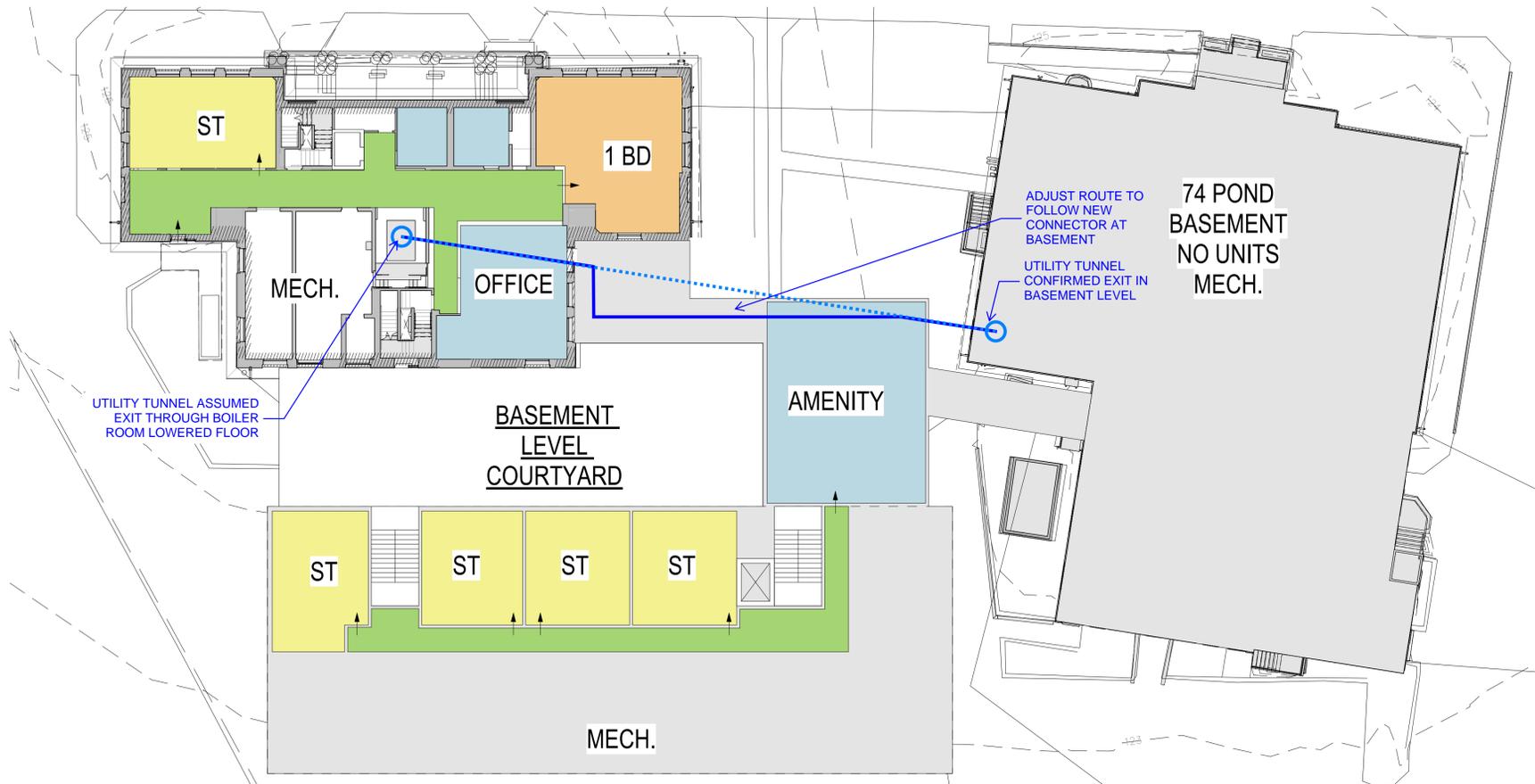
COLOR KEY

- COMMON SPACE
- CIRCULATIONS
- STUDIO
- ONE BEDROOM UNIT
- TWO BEDROOM UNIT
- THREE BEDROOM UNIT
- ONE BEDROOM TOWN HOUSE

Residential units = 5370



1 OPTION B - TOWNHOUSE PLAN DIAGRAM  
SCALE: 1/16" = 1'-0"



OPTION 2 - ADDITIONAL BUILDING

| UNIT TYPE   | 74 POND | 90 POND | ADDITIONAL | TOTAL |
|-------------|---------|---------|------------|-------|
| STUDIO      | 8       | 6       | 20         | 34    |
| 1 BR        | 9       | 4       | 9          | 22    |
| 2 BR        | 2       | 4       | 3          | 9     |
| 3 BR        | 1       | 0       | 0          | 1     |
| TOTAL UNITS | 20      | 14      | 32         | 66    |

COLOR KEY

- COMMON SPACE
- CIRCULATIONS
- STUDIO
- ONE BEDROOM UNIT
- TWO BEDROOM UNIT
- THREE BEDROOM UNIT
- ONE BEDROOM TOWN HOUSE

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DATE: 04-26-2024  
 SCALE: As indicated  
 DRAWN: SA/GRB  
 CHECKED: GRB/KB

SHEET INFO:  
 OPTION 2 - BASEMENT AND 1ST FLOOR  
 PLAN DIAGRAM



## MEMORANDUM

TO: Ellana INC. FROM: LDa  
RE: Town of Braintree – Affordable Housing Study – Cost estimation DATE: 05-10-2024

---

Please see below information on material selections for Schematic Design Pricing.

### Existing 74 & 90 Pond St. buildings

#### EXTERIOR

##### 1) Roof / Roofing:

- a) 74 Pond St has slate roofing. Minor repairs are needed. 90 Pond St. has asphalt shingle roofs. Replace the asphalt shingles using 50-year architecture asphalt shingles.
- b) Ice, and water shield underlayment at pitched roofs.
- c) Repair the gutter downspout and flashing system on the roofs.
- d) Full lighting protection is required for the building.
- e) Exterior envelope insulation and infiltration should meet Mass. Energy Code (Braintree is a stretch community) Ceiling R-60.
- f) A full 3<sup>rd</sup> floor is added on 74 Pond St with flat roof, membrane roofing, solar ready.
- g) Add dormers per drawing on 74 Pond St. attic level, slate roofing.

##### 2) Walls / Siding & Trim:

- a) Repoint brick masonry walls.
- b) Repair damaged steel lintels at the basement of 90 Pond Street.
- c) Replace all the windows in both buildings. Assume bottom half is operable sliding window with fixed glass above. Aluminum exterior, painted wood interior.
- d) For Option 1: add new windows to the north side of 74 Pond Street with the same spec.
- e) Exterior envelope insulation and infiltration should meet Mass. Energy Code (Braintree is a stretch community) walls R-30.

##### 3) Foundations:

- a) Minor repair is needed in both foundation walls and slab.

##### 4) Entries:

- a) New entry doors & hardware.
- b) Add new ramp at the 90 Pond st.
- c) Add railings to the existing ramps.
- d) Parking lot entries into back of both buildings will require new awnings on exterior and new wheelchair lifts to go up/down 1 level on the interior.

#### INTERIOR

##### 1) New Amenity spaces – Dining, Office, Public Restrooms

- a) Walls - painted GWB.
- b) LVT flooring. (Keep wood flooring in the dining area from existing auditorium)
- c) Rubber base.

- d) ACT ceiling.
- e) Reuse the Existing Kitchen.

## 2) Corridors and vestibules

- a) Carpet tile.
- b) Rubber base.
- c) GWB walls with vinyl wall covering 50%, paint 50%.
- d) Painted GWB ceiling.
- e) Wood doors with hollow metal frames.

## 3) Stairways

- a) Keep existing stair Structures.
- b) Refinish the stair treads and risers.
- c) New painted metal stair handrails and guardrails – all stairs.
- d) Extend stairs up to new 3<sup>rd</sup> floor at 74 Pond St.

## 4) Elevators

- a) New elevators in existing shafts.
- b) Extend elevator to new 3<sup>rd</sup> floor at 74 Pond Street.

## 5) Residential Units

- a) LVT flooring.
- b) Painted wood trim at the base, door & window.
- c) Wood doors and frames.
- d) Painted GWB walls.
- e) Painted GWB ceilings.
- f) Tile floors & walls in bathrooms.
- g) Wood veneer kitchen cabinetry.
- h) Solid surface kitchen countertops.
- i) All electric kitchen appliances.

## FIRE PROTECTION

- a) Reuse existing fire alarm panels, ceiling-mounted detectors, and good/new alarm devices.
- b) Modify the system for new layout residential spaces. Carbon Monoxide detection will need to be added.
- c) 74 Pond St. only has sprinklers in the basement and 90 Pond St has sprinklers in the attic. Add automatic sprinkler systems throughout both buildings.
- d) Add a Standpipe system at all the stairs and landings in both of the buildings.

## PLUMBING

- a) Reuse the Plumbing supplies and systems in the existing buildings.
- b) All new distribution and plumbing fixtures for the new residential layout.

## STRUCTURE

- a) Repair minor structural members.

## MECHANICAL SYSTEM

- a) Natural gas-fired boiler serving both buildings to re-use.

- b) Air conditioning in 74 Pond St. to remain and re-use.
- c) Replace the Air conditioning system in 90 Pond St.
- d) Reuse the existing MEP systems and add new electric units to cover the added load.
- e) All new ductwork for the new residential layout.
- f) Bathroom, and kitchen exhaust direct to exterior wall.
- g) Replace the kitchen exhaust fan and grease hood.
- h) Provide new integrated controls and monitoring for shared spaces. Individual controls for residential spaces.

## **ELECTRICAL**

- a) Demolish all the devices and rewiring all new residential spaces. Some of the common space devices and wiring may be able to remain.
- b) LED fixtures throughout.
- c) Roof-mounted PV solar.

## **New Construction**

### **EXTERIOR**

#### **1) Roof / Roofing:**

- h) 50-year architecture asphalt shingles, ice, and water shield underlayment at pitched roofs.
- i) Adhered TPO membrane roof, and ice, and water shield underlayment at all the flat roofs.
- j) Full gutter and downspout system on the roof.
- k) Full lighting protection is required for the building.
- l) Exterior envelope insulation and infiltration should meet Mass. Energy Code (Braintree is a stretch community) Ceiling R-60.

#### **2) Walls / Siding & Trim:**

- f) 75% of the exterior wall is prefinished fiber cement clapboard siding or cementitious panel over vertical strapping (rain-screen construction).
- g) 25% of the exterior wall is brick veneer.
- h) Composite trim.
- i) Aluminum and glass storefront system at commercial spaces and building entries.
- j) Triple-pane insulated low-e glass windows (Basis of Design Pella). Aluminum exterior, painted wood interior.
- k) Exterior envelope insulation and infiltration should meet Mass. Energy Code (Braintree is a stretch community) wood frame walls R-30.

#### **3) Foundations:**

- a) Assume no piles are needed, no soil improvement under the slab is needed, and no ledge.

### **INTERIOR**

#### **1) Amenity spaces/Entry Lobby**

- a) Walls are painted GWB.
- b) LVT flooring.
- c) Rubber base.
- d) ACT ceiling.

**2) Corridors and vestibules**

- a) Carpet tile.
- b) Rubber base.
- c) GWB walls with vinyl wall covering 50%, paint 50%.
- d) Painted GWB ceiling.
- e) Wood doors with hollow metal frames.

**3) Stairways & Elevator**

- a) Wood framed stairs. One set of stairs at option 1, Two stairs at option 2.
- b) Rubber stair tread and riser, over plywood substrate.
- c) Painted metal handrails and guardrails.
- d) No added Elevator at option 1. One elevator at the new building at option 2.

**4) Residential Units**

- j) LVT flooring.
- k) Painted wood trim at the base, door & window.
- l) Wood doors and frames.
- m) Painted GWB walls.
- n) Painted GWB ceilings.
- o) Tile floors & walls in bathrooms.
- p) Wood veneer kitchen cabinetry.
- q) Solid surface kitchen countertops.
- r) All electric kitchen appliances.

**STRUCTURE**

- a) 2x6 Wood Framed construction.
- b) For buildings with Basement, add concrete walls and slab.

**FIRE PROTECTION**

- e) Fully Sprinkled.

**PLUMBING**

- c) Low flow fixtures throughout.

**MECHANICAL SYSTEM**

- i) All electric heating and cooling.
- j) Each unit is to have an individual VRV Air Cooled Heat Pump with a roof-mounted compressor.
- k) Single room ventilation units in exterior walls.
- l) Bathroom, and kitchen exhaust direct to exterior wall.

**ELECTRICAL**

- d) LED fixtures throughout.
  - e) Roof-mounted PV solar.
-

**MEMORANDUM**

TO: Ellana INC.  
Town of Braintree – Pond Street

FROM: Kim Barnett

RE: Affordable Housing Study – Scope summary

DATE: 10-9-23

The purpose of the conceptual cost estimates for the Affordable Housing Study are to provide realistic construction costs to be included in the overall development proforma.

In addition to this scope summary, please also review the following documents:

**Additional Documents:**

1. Meeting presentation 4/11/24 identifying existing building improvements.
2. Consulting engineer’s existing building assessments.
3. Existing buildings existing conditions plans.
4. Meeting presentation 5/9/24 outlining conceptual design options
5. Conceptual site plan & building plans to scale for existing building reconfiguration and proposed new building.
  - a. Option 1A
  - b. Option 1B
  - c. Option 2A
  - d. Option 2B
6. Conceptual architectural specifications
7. Example building which represents exterior envelope, building finish and building system expectations for new addition/building (note – the example building is all studio/1-bedroom units; please use unit counts and types noted on the conceptual study drawings)
8. Conceptual landscape specifications
9. TO BE SENT SEPARATELY: Civil drawings
10. TO BE SENT SEPARATELY: Stormwater and Sanitary memo.

**SCOPE SUMMARY:**

**Existing Buildings**

– Renovation to existing buildings is the same in both Option 1 and Option 2, except as noted below.

| 74 Pond Street |   |
|----------------|---|
| Age:           | Built 1926 (98 years old)   |
| Size:          | 33,569 GSF  |
| Existing Use:  | In-use by some town offices & non-profits. <ul style="list-style-type: none"> <li>• Basement: Mechanical &amp; Storage (boiler for both buildings is in basement of 74, there is a utility trench connecting the buildings)</li> <li>• 1<sup>st</sup> Floor: Offices, Restrooms, Auditorium, Commercial Kitchen.</li> <li>• 2<sup>nd</sup> Floor: Offices, Restrooms, Teen Center</li> <li>• Attic: Unfinished, Mechanical</li> </ul> |

|                            |   |
|----------------------------|---|
| <p>Repairs/Renovations</p> | <ul style="list-style-type: none"> <li>• See presentation 4/11/24 &amp; engineer’s existing building assessments.</li> <li>• Architectural:             <ul style="list-style-type: none"> <li>○ Repair roofing &amp; roof flashing.</li> <li>○ New roof insulation between roof rafters.</li> <li>○ Repoint both chimneys. Install new fitted caps.</li> <li>○ Replace flashing around gutters, repair dented gutters &amp; disconnected downspouts.</li> <li>○ Repair or replace wood eave trim.</li> <li>○ Repoint masonry.</li> <li>○ Add flashing at water table.</li> <li>○ New wall insulation</li> <li>○ New operable windows (assume bottom half of windows will be operable sliding window, with fixed glass above)</li> <li>○ New entry doors.</li> <li>○ New wood window &amp; door trim.</li> <li>○ Reuse existing kitchen.</li> <li>○ New finishes &amp; fixtures throughout interior (keep existing auditorium wood floor).</li> </ul> </li> <li>• Structural:             <ul style="list-style-type: none"> <li>No observable issues.</li> <li>Modify structure to serve new layout.</li> </ul> </li> <li>• Mechanical:             <ul style="list-style-type: none"> <li>Mechanical infrastructure to remain and be modified to serve the new layout, including the heating plant and the baseboard heaters, the air conditioning systems, and the domestic hot water heating plant. Add new temperature controls &amp; building management system to integrate the baseboard heaters with the air conditioning systems - such that they do not operate independently. Replace the baseboard heating units.</li> <li>Replace the existing air handling unit in the attic. New ductwork to serve the new layout.</li> </ul> </li> <li>• Electrical:             <ul style="list-style-type: none"> <li>All new devices &amp; wiring to match new layouts.</li> </ul> </li> <li>• Plumbing:             <ul style="list-style-type: none"> <li>Maintain plumbing infrastructure &amp; modify to serve new layout.</li> <li>All new fixtures &amp; distribution piping to match new layouts.</li> </ul> </li> <li>• Fire Protection:             <ul style="list-style-type: none"> <li>Extend the sprinkler system to serve all levels of the building (currently serves basement and attic).</li> </ul> </li> </ul> |
| <p>Proposed Use:</p>       | <ul style="list-style-type: none"> <li>• See proposed floorplans.</li> <li>• New elevator in existing elevator shaft.</li> <li>• Existing stairs to remain.</li> <li>• Basement: Mechanical &amp; Storage (no change)</li> <li>• 1st Floor:</li> </ul>  |

|                       |   |
|-----------------------|---|
|                       | <ul style="list-style-type: none"> <li>○ Renovate existing accessible entry ramp on north side of the building.</li> <li>○ New entry doors.</li> <li>○ Reconfigure foyer to eliminate stairs and install new ramp to traverse ½ level change.</li> <li>○ Renovate small portion of foyer for offices.</li> <li>○ 2 New single-user accessible restrooms.</li> <li>○ Maintain ~ ½ of existing auditorium as new dining hall.</li> <li>○ Convert ~1/2 of auditorium &amp; stage area into unit.</li> <li>○ Maintain existing commercial kitchen with minor renovations/repairs.</li> <li>○ Modify &amp; improve existing south entry with new doors &amp; awning.</li> <li>○ Install new lift, to go up ½ level, at improved south entry.</li> <li>○ Convert existing office spaces into units.</li> <li>● 2nd Floor: <ul style="list-style-type: none"> <li>○ Reframe floor over auditorium at lower elevation, even with the rest of the 2<sup>nd</sup> floor.</li> <li>○ New amenity space.</li> <li>○ Convert existing office spaces into units.</li> </ul> </li> <li>● Attic: <ul style="list-style-type: none"> <li>○ Extend both stairs up to attic.</li> <li>○ Extend elevator shaft to attic.</li> <li>○ Add new dormers on north, east &amp; west.</li> <li>○ Finish attic space.</li> <li>○ Add new 3<sup>rd</sup> floor wing on south.</li> </ul> </li> </ul> |
| Proposed Unit Count   | <ul style="list-style-type: none"> <li>● 9 Studios</li> <li>● 7 One bed</li> <li>● 2 Two bed</li> <li>● 1 Three bed</li> </ul>  |
| <b>90 Pond Street</b> |   |
| Age:                  | Built 1905 (119 years old)  |
| Size:                 | 20,231 GSF  |
| Existing Use:         | <p>Not currently in use. Most recently used as town offices.</p> <ul style="list-style-type: none"> <li>● Basement: Multi-purpose room, restrooms, mechanical, storage.</li> <li>● 1<sup>st</sup> Floor: Offices, Restrooms.</li> <li>● 2<sup>nd</sup> Floor: Offices, Restrooms.</li> <li>● Attic: Center portion finished open office space. Wings unfinished mechanical space.</li> </ul>  |
| Repairs/Renovations   | <ul style="list-style-type: none"> <li>● See presentation 4/11/24 &amp; engineer's existing building assessments.</li> <li>● Architectural: <ul style="list-style-type: none"> <li>○ Replace asphalt shingle roofing &amp; roof flashing.</li> <li>○ New roof insulation between roof rafters.</li> <li>○ Repoint both chimneys. Install new fitted caps.</li> </ul> </li> </ul>  |

|                      |  |
|----------------------|--|
|                      | <ul style="list-style-type: none"> <li>○ Replace flashing around gutters, repair dented gutters &amp; disconnected downspouts.</li> <li>○ Repair or replace wood eave trim.</li> <li>○ Repoint masonry.</li> <li>○ New wall insulation</li> <li>○ New operable windows (assume bottom half of windows will be operable sliding window, with fixed glass above)</li> <li>○ New entry doors.</li> <li>○ New wood window &amp; door trim.</li> <li>○ New finishes &amp; fixtures throughout interior.</li> <li>● Structural:             <ul style="list-style-type: none"> <li>○ Minor observable issues: Seal cosmetic cracks in basement slab, replace steel lintels at basement windows.</li> <li>○ Modify structure to serve new layout.</li> </ul> </li> <li>● Mechanical:             <ul style="list-style-type: none"> <li>○ Reuse existing mechanical infrastructure serving the baseboard heaters and domestic hot water heating plant. Replace baseboard heating units.</li> <li>○ New air conditioning system.</li> <li>○ Add new temperature controls &amp; building management system to integrate the baseboard heaters with the air conditioning systems - such that they do not operate independently.</li> <li>○ Replace the existing air handling unit in the attic. New ductwork to serve the new layout.</li> </ul> </li> <li>● Electrical:             <ul style="list-style-type: none"> <li>○ All new devices &amp; wiring to match new layouts.</li> </ul> </li> <li>● Plumbing:             <ul style="list-style-type: none"> <li>○ All new plumbing mains, distribution piping &amp; fixtures.</li> </ul> </li> <li>● Fire Protection:             <ul style="list-style-type: none"> <li>○ Extend the sprinkler system to serve all levels of the building (currently serves attic).</li> </ul> </li> </ul> |
| <p>Proposed Use:</p> | <ul style="list-style-type: none"> <li>● See proposed floorplans.</li> <li>● New elevator in existing elevator shaft.</li> <li>● Existing stairs to remain.</li> <li>● Basement:             <ul style="list-style-type: none"> <li>○ Convert existing multipurpose space into office space &amp; 1 unit.</li> <li>○ Renovate existing restrooms.</li> <li>○ Convert existing storage space into 1 unit.</li> <li>○ Modify &amp; improve existing west entry with new doors &amp; awning.</li> <li>○ Install new lift, to go down ½ level, at improved west entry.</li> </ul> </li> <li>● 1st Floor:</li> </ul>  |

|                     |   |
|---------------------|---|
|                     | <ul style="list-style-type: none"> <li>○ Option 1: modify &amp; expand existing north entry porch &amp; vestibule to provide new ramp to site &amp; new handrails on existing stairs.</li> <li>○ Option 2: modify existing north entry porch &amp; vestibule to remove existing stairs &amp; keep covered porch.</li> <li>○ New entry doors.</li> <li>○ Remove existing restrooms.</li> <li>○ Convert existing office spaces into units.</li> <li>● 2nd Floor:             <ul style="list-style-type: none"> <li>○ Remove existing restrooms.</li> <li>○ Convert existing office spaces into units.</li> </ul> </li> <li>● Attic:             <ul style="list-style-type: none"> <li>○ Convert existing office spaces into units.</li> </ul> </li> </ul> |
| Proposed Unit Count | <ul style="list-style-type: none"> <li>● 2 Studios</li> <li>● 8 One bed</li> <li>● 4 Two bed</li> <li>● 0 Three bed</li> </ul>  |

**Option 1A –Connector between Existing Buildings**

|  |  |
|--|--|
| <b>Proposed Scope - Building</b>           |  |
| Size:                                      | 30,012 gsf   |
| Proposed Use:                              | <ul style="list-style-type: none"> <li>● Basement: Crawlspace / mechanical</li> <li>● 1st Floor: Units &amp; corridor with ramps to mediate heigh difference between existing buildings.</li> <li>● 2nd Floor: Units &amp; corridor with ramps to mediate heigh difference between existing buildings.</li> <li>● Flat roof: Mechanical equipment, solar ready.</li> </ul> |
| Proposed Unit Count                        | <ul style="list-style-type: none"> <li>● 17 Studios</li> <li>● 3 One bed</li> <li>● 0 Two bed</li> <li>● 0 Three bed</li> </ul>  |
| <b>Proposed Scope - Landscape</b>          |  |
| Paving:                                    | <p>New asphalt parking.<br/>                 New concrete sidewalks.<br/>                 Hardscape pavers at entry courtyard South side of building.</p>  |
| Plantings:                                 | <p>Entry garden North &amp; West side of building.<br/>                 Enhanced front lawn area along Pond Street<br/>                 Screening trees west side of property.</p>   |
| Site features:                             | <p>Site lighting, site furniture.<br/>                 Do not include updated recreation area in project costs.</p>  |
| <b>Proposed Scope - Site &amp; Utility</b> |  |
|  | TO BE SENT SEPERATELY  |

**Option 2A – New 3<sup>rd</sup> Building**

| <b>Proposed Scope - Building</b>           |  |
|--|--|
| Size:                                      | 45,706 gsf   |
| Proposed Use:                              | <ul style="list-style-type: none"> <li>• Basement: Amenity space, units, mechanical &amp; storage.</li> <li>• 1st Floor: Shared Entry, Units</li> <li>• 2nd Floor: Units</li> <li>• 3rd Floor: Units</li> <li>• Flat roof: Mechanical equipment, solar ready.</li> </ul> |
| Proposed Unit Count                        | <ul style="list-style-type: none"> <li>• 22 Studios</li> <li>• 11 One bed</li> <li>• 3 Two bed</li> <li>• 0 Three bed</li> </ul>   |
| <b>Proposed Scope - Landscape</b>          |  |
| Paving:                                    | New asphalt parking.<br>New concrete sidewalks.<br>Hardscape pavers at entry courtyard between 90 Pond and new building.<br>Assume retaining wall will be required.  |
| Plantings:                                 | Entry garden North & South side of building.<br>Enhanced front lawn area along Pond Street<br>Screening trees west side of property.   |
| Site features:                             | Site lighting, site furniture.<br>Do not include updated recreation area in project costs.   |
| <b>Proposed Scope - Site &amp; Utility</b> |  |
|  | TO BE SENT SEPERATELY  |

**Option 1B & 2B – Add townhouses**

| <b>Proposed Scope - Building</b>           |  |
|--|--|
| Size:                                      | 10,800 gsf   |
| Proposed Use:                              | <ul style="list-style-type: none"> <li>• Basement: Slab on Grade</li> <li>• 1st Floor: Front porch, kitchen, living room, powder room</li> <li>• 2nd Floor: 2 bedrooms, 1 bathroom</li> <li>• Attic: Mechanical</li> </ul> |
| Proposed Unit Count                        | <ul style="list-style-type: none"> <li>• 0 Studios</li> <li>• 0 One bed</li> <li>• 9 Two bed</li> <li>• 0 Three bed</li> </ul>   |
| <b>Proposed Scope - Landscape</b>          |  |
| Paving:                                    | Small amount of additional sidewalk.   |
| Plantings:                                 | Front lawn along Fairview  |
| Site features:                             | Site lighting along Fairview   |
| <b>Proposed Scope - Site &amp; Utility</b> |  |
|  | TO BE SENT SEPERATELY  |

# Lexington Housing

## Site / Landscape

### Site Preparation and Demolition

1. Strip and stockpile topsoil
2. Tree removal and stump grinding
3. Remove pedestrian asphalt paving
4. Remove pedestrian concrete paving
5. Remove asphalt parking and curbs

### Paving

1. Asphalt vehicular paving and parking lot striping
2. Vertical granite curbs, transition curbs at pedestrian crossings
3. Fire lane for Site A. Permeable concrete pavers. Turfstone as manufactured by Unilock [unilock.com](http://unilock.com). Contact: Ashley Allard-LaCroix phone: 508-277-4413 email: [Ashley.allardlacroix@unilock.com](mailto:Ashley.allardlacroix@unilock.com)
4. Fire lane for Site C. Grasspave2 by Invisible Structures, Inc. High density polyethylene (HDPE): 100% recycled materials  
Color: black, uniformity  
Carbon black for ultraviolet light stabilization  
303-233-8383, [www.invisiblestructures.com](http://www.invisiblestructures.com)
5. Concrete pavement for sidewalks
6. Duracast Iron Warning Plate cast into concrete at pedestrian crossings
7. Concrete unit paver plazas (Ex: Hanover Prest Pavers)

### Landscape Wall

1. Cast-in-Place concrete retaining wall

### Planting

1. TREES
  - a. Canopy Trees such as *acer rubrum* red maple or *quercus alba* white oak ( 3.5" caliper)
  - b. Flowering Understory Trees such as *cornus florida* flowering dogwood, *cornus kousa* or *magnolia x soulangiana* (8-10' height)
2. PLANTING BEDS
  - a. Shrubs #2 container at 2' O.C.
  - b. Perennials #1 container at 1' O.C.
3. LAWN
  - a. Sod

### Soils & Amendments

1. Landscape planting soils shall be manufactured by amending existing soils and based on results of soil testing of existing soils; planting zones will have specific mixes.
2. Incorporate 8" of manufactured soils for planting in lawn areas
3. 8" of manufactured planting soils in areas disturbed by grading or construction activities. (Included in turf areas)

### Site Lighting

1. Pole mounted walkway fixtures

### Site Furniture

1. Waste and Recycle Bins
2. Backed Benches
3. Bike Racks
4. Movable Table with 4 Chairs Set
5. ADA parking signs

### Playground

1. Playground equipment
2. Swing set
3. Rubber play surfacing
4. 4' high wooden Fence

**Town of Braintree**  
**Affordable Housing Study**  
Braintree, MA

**Study Estimate**

**June 6, 2024**

**LDa Architecture & Interiors**  
500 Harrison Ave Suite 3F  
Boston, MA 02118



98 N Washington St, Suite 109  
Boston MA 02114

**Town of Braintree  
Affordable Housing Study  
Study Estimate**

| <b>MAIN SUMMARY</b>             |              |                  |                     |
|---------------------------------|--------------|------------------|---------------------|
|                                 | <b>UNITS</b> | <b>COST/UNIT</b> | <b>TOTAL COST</b>   |
| <b>OPTION 2A</b>                | 70           | \$591,624        | <b>\$41,413,656</b> |
| <b>OPTION 2B (w/TOWNHOUSES)</b> | 79           | \$615,034        | <b>\$48,587,697</b> |
| HVAC OPTION 2                   |              |                  | \$643,022           |



**Town of Braintree  
Affordable Housing Study  
Study Estimate**

06/06/24

| OPTION 2A SUMMARY  | RESIDENTIAL BUILDING |                     | SITEWORK           |                    | TOTAL               |                 |
|--|----------------------|---------------------|--------------------|--------------------|---------------------|-----------------|
| BUILDING AREA (bgsf)   | 93,113               |                     |                    |                    | \$ 444.77 /unit     | 93,113 gsf      |
|  | Subtotal Trade       | Total               | Subtotal Trade     | Total              | Cost                | Cost/sf         |
| <b>A SUBSTRUCTURE</b>  |                      | <b>\$1,016,855</b>  |                    | <b>\$0</b>         | <b>\$1,016,855</b>  | <b>\$10.92</b>  |
| A10 Foundations  | \$903,602            |                     |                    |                    | \$903,602           |                 |
| A20 Basement Construction                                    | \$113,253            |                     |                    |                    | \$113,253           |                 |
| <b>B SHELL</b>   |                      | <b>\$8,784,992</b>  |                    | <b>\$0</b>         | <b>\$8,784,992</b>  | <b>\$94.35</b>  |
| B10 Superstructure   | \$1,463,609          |                     |                    |                    | \$1,463,609         |                 |
| B20 Exterior Enclosure                                       | \$6,146,409          |                     |                    |                    | \$6,146,409         |                 |
| B30 Roofing  | \$1,174,974          |                     |                    |                    | \$1,174,974         |                 |
| <b>C INTERIORS</b>   |                      | <b>\$6,741,245</b>  |                    | <b>\$0</b>         | <b>\$6,741,245</b>  | <b>\$72.40</b>  |
| C10 Interior Construction                                    | \$3,697,616          |                     |                    |                    | \$3,697,616         |                 |
| C20 Stairs   | \$354,000            |                     |                    |                    | \$354,000           |                 |
| C30 Interior Finishes  | \$2,689,629          |                     |                    |                    | \$2,689,629         |                 |
| <b>D SERVICES</b>  |                      | <b>\$13,568,670</b> |                    | <b>\$0</b>         | <b>\$13,568,670</b> | <b>\$145.72</b> |
| D10 Conveying  | \$930,000            |                     |                    |                    | \$930,000           |                 |
| D20 Plumbing   | \$2,786,894          |                     |                    |                    | \$2,786,894         |                 |
| D30 HVAC   | \$4,522,824          |                     |                    |                    | \$4,522,824         |                 |
| D40 Fire Protection  | \$923,157            |                     |                    |                    | \$923,157           |                 |
| D50 Electrical   | \$4,405,794          |                     |                    |                    | \$4,405,794         |                 |
| <b>E FITTINGS &amp; FIXED EQUIPMENT</b>                      |                      | <b>\$1,316,000</b>  |                    | <b>\$0</b>         | <b>\$1,316,000</b>  | <b>\$14.13</b>  |
| E10 Equipment  | \$371,000            |                     |                    |                    | \$371,000           |                 |
| E20 Fixed Furnishings / Millwork                             | \$945,000            |                     |                    |                    | \$945,000           |                 |
| <b>F SPECIAL CONSTRUCTION &amp; DEMOLITION</b>               |                      | <b>\$1,002,076</b>  |                    | <b>\$0</b>         | <b>\$1,002,076</b>  | <b>\$10.76</b>  |
| F10 Special Construction                                     | \$0                  |                     |                    |                    | \$0                 |                 |
| F20 Selective Building Demolition                            | \$1,002,076          |                     |                    |                    | \$1,002,076         |                 |
| <b>G SITEWORK</b>  |                      | <b>\$0</b>          |                    | <b>\$2,949,939</b> | <b>\$2,949,939</b>  | <b>\$31.68</b>  |
| G10 Site Preparation   |                      |                     | \$566,708          |                    | \$566,708           |                 |
| G20 Site Improvements  |                      |                     | \$1,268,245        |                    | \$1,268,245         |                 |
| G30 Site Mechanical Utilities                                |                      |                     | \$764,985          |                    | \$764,985           |                 |
| G40 Site Electrical Utilities                                |                      |                     | \$350,000          |                    | \$350,000           |                 |
| <b>SUBTOTAL DIRECT COST</b>                                  | <b>\$32,429,837</b>  | <b>\$32,429,837</b> | <b>\$2,949,939</b> | <b>\$2,949,939</b> | <b>\$35,379,775</b> | <b>\$380</b>    |
| Adjustment for open shop labor rates                         | -15.00%              | (\$4,864,475)       |                    | (\$442,491)        | (\$5,306,966)       | (\$57)          |
| <b>TOTAL DIRECT COST</b>                                     | <b>\$296.04</b>      | <b>\$27,565,361</b> | <b>\$2,949,939</b> | <b>\$2,507,448</b> | <b>\$30,072,809</b> | <b>\$323</b>    |
| Design and Pricing Contingency                               | 15.00%               | \$4,134,804         |                    | \$376,117          | \$4,510,921         | \$48.45         |
| <b>Subtotal - Direct Construction Cost + Contingencies</b>   | <b>\$340.45</b>      | <b>\$31,700,165</b> | <b>\$30.97</b>     | <b>\$2,883,565</b> | <b>\$34,583,730</b> | <b>\$371.42</b> |
| General Conditions, General Requirements, Insurances & Bonds | 12.75%               | \$4,041,771         |                    | \$367,655          | \$4,409,426         | \$47.36         |
| Building Permit  | 1.15%                | \$411,032           |                    | \$37,389           | \$448,421           | \$4.82          |
| OH & Profit  | 5.00%                | \$1,807,648         |                    | \$164,430          | \$1,972,079         | \$21.18         |
| <b>TOTAL ESTIMATED CONSTRUCTION COST</b>                     | <b>\$407.68</b>      | <b>\$37,960,617</b> | <b>\$37.08</b>     | <b>\$3,453,039</b> | <b>\$41,413,656</b> | <b>\$444.77</b> |



**Town of Braintree  
Affordable Housing Study  
Study Estimate**

06/06/24

| OPTION 2A |                    |   | BUILDING AREA (bgsf) |              |                             | 93,113          |  |
|-----------|--------------------|---|----------------------|--------------|-----------------------------|-----------------|--|
|           | Description        | Quantity  | Unit                 | Unit Price   | Total \$                    | Subtotal Trades |  |
|           |                    |   |                      | New Addition | Add to Exist 74 Pond street |                 |  |
|           | Existing Buildings | 47,407  | gsf                  |              |                             |                 |  |
|           | New Addition       | 45,706  | gsf                  | 39,267.00    | 6,439                       |                 |  |
|           | <b>Total GSF</b>   | <b>93,113</b>   | <b>gsf</b>           |              |                             |                 |  |
| 5         | <b>A</b>           | <b>SUBSTRUCTURE</b>   |                      |              |                             |                 |  |
| 6         | <b>A10</b>         | <b>FOUNDATIONS</b>  |                      |              |                             |                 |  |
| 7         | A1010              | Standard Foundations  |                      |              |                             |                 |  |
| 8         |                    | Standard Foundations (new addition)   | 39,267               | gsf          | 12.50                       | 490,838         |  |
| 9         |                    | Concrete spread footing / tie beam  |                      |              |                             | incl above      |  |
| 10        |                    | Concrete interior spread footings   |                      |              |                             | incl above      |  |
| 11        |                    | Foundation walls  |                      |              |                             | incl above      |  |
| 12        |                    | Columns   |                      |              |                             | incl above      |  |
| 13        |                    | Misc tie beams, etc   |                      |              |                             | incl above      |  |
| 14        |                    | Perimeter drain   |                      |              |                             | incl above      |  |
| 15        |                    | Gravel base, footings   |                      |              |                             | incl above      |  |
| 16        |                    | Elevator pit  | 1                    | ea           | 27,500.00                   | 27,500          |  |
| 17        |                    | Crystalline waterproof elevator pit   | 1                    | ea           | 8,500.00                    | 8,500           |  |
| 18        |                    | Minor repair as needed to foundation walls at exist buildings                       | 1                    | ls           | 95,000.00                   | 95,000          |  |
| 19        |                    |   |                      |              |                             |                 |  |
| 20        |                    | Sub Total : Standard Foundations  |                      |              |                             | <b>621,838</b>  |  |
| 21        |                    |   |                      |              |                             |                 |  |
| 22        | A1020              | Special Foundations   |                      |              |                             |                 |  |
| 23        |                    | no work shown   |                      |              |                             | -               |  |
| 24        |                    |   |                      |              |                             |                 |  |
| 25        |                    | Sub Total : Special Foundations   |                      |              |                             | -               |  |
| 26        |                    |   |                      |              |                             |                 |  |
| 27        | A1030              | Slab On Grade   |                      |              |                             |                 |  |
| 28        |                    | Excavation for slab on grade  | 629                  | cy           | 28.00                       | 17,612          |  |
| 29        |                    | Stockpile soil for reuse  |                      |              |                             | incl above      |  |
| 30        |                    | Structural fill   |                      |              |                             | incl above      |  |
| 31        |                    | Concrete  |                      |              |                             | -               |  |
| 32        |                    | Slab on grade over vapor retarder, reinforced with 6x6-W2.9xW2.9 WWF, vapor barrier | 10,786               | sf           | 14.50                       | 156,397         |  |
| 33        |                    | Water vapor reducing admixture  |                      |              |                             | incl above      |  |
| 34        |                    | 8" min compacted gravel under slab  | 299                  | cy           | 45.00                       | 13,455          |  |
| 35        |                    | Misc concrete   | 1                    | ls           | 35,000.00                   | 35,000          |  |
| 36        |                    | Minor repair as needed to slabs at exist buildings                                  | 1                    | ls           | 59,300.00                   | 59,300          |  |
| 37        |                    |   |                      |              |                             |                 |  |
| 38        |                    | Sub Total : Slab On Grade   |                      |              |                             | <b>281,764</b>  |  |
| 39        |                    |   |                      |              |                             |                 |  |
| 40        | <b>A20</b>         | <b>BASEMENT CONSTRUCTION</b>  |                      |              |                             |                 |  |
| 41        | A2010              | Basement Excavation   |                      |              |                             |                 |  |
| 42        |                    | See Basement walls  |                      |              |                             | -               |  |
| 43        |                    |   |                      |              |                             |                 |  |
| 44        |                    | Sub Total : Basement Excavation   |                      |              |                             | -               |  |
| 45        |                    |   |                      |              |                             |                 |  |



**Town of Braintree  
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| OPTION 2A |            |  | BUILDING AREA (bgsf) |      |              | 93,113                      |   |
|-----------|------------|--|----------------------|------|--------------|-----------------------------|---|
|           |            | Description  | Quantity             | Unit | Unit Price   | Total \$                    | Subtotal Trades   |
|           |            |  |                      |      | New Addition | Add to Exist 74 Pond street |   |
| 46        | A2020      | Basement Walls   |                      |      |              |                             |   |
| 47        |            | Basement concrete foundation and walls incl excavation   | 10,786               | sf   | 10.50        | 113,253                     |   |
| 48        |            |  |                      |      |              |                             |   |
| 49        |            | Sub Total : Basement Walls   |                      |      |              | 113,253                     |   |
| 50        |            |  |                      |      |              |                             |   |
| 51        |            | <b><u>SUBTOTAL FOR SUBSTRUCTURE</u></b>  |                      |      |              | <b>End of Trade</b>         | <b>\$ 1,016,855</b>                                     |
| 52        |            |  |                      |      |              |                             |   |
| 53        |            |  |                      |      |              |                             |   |
| 54        | <b>B</b>   | <b><u>SHELL</u></b>  |                      |      |              |                             |   |
| 55        | <b>B10</b> | <b><u>SUPERSTRUCTURE</u></b>   |                      |      |              |                             |   |
| 56        | B1010      | Floor Construction   |                      |      |              |                             |   |
| 57        |            | Structural wood framing; Level 1   | 10,786               | sf   | 25.00        | 269,650                     |   |
| 58        |            | Misc struct steel associated with wood framing; assumed 2#/sf  | 11                   | ton  | 5,400.00     | 59,400                      |   |
| 59        |            | Upper levels   |                      |      |              |                             | Fire-retardant treated (FRT) wood framing 2-hour rating |
| 60        |            | Structural wood framing;   | 17,695               | sf   | 22.83        | 403,888                     |   |
| 61        |            | Misc struct steel associated with wood framing; assumed 2#/sf  | 18                   | ton  | 5,400.00     | 97,200                      |   |
| 62        |            |  |                      |      |              |                             |   |
| 63        |            | Structural wood framing; 3rd floor at 74 Pond Street   | 6,439                | sf   | 22.83        | 146,970                     |   |
| 64        |            | Misc struct steel associated with wood framing; assumed 2#/sf  | 6                    | ton  | 5,400.00     | 32,400                      |   |
| 65        |            |  |                      |      |              |                             |   |
| 66        |            | Sub Total : Floor Construction   |                      |      |              | 1,009,509                   |   |
| 67        |            |  |                      |      |              |                             |   |
| 68        | B1020      | Roof Construction  |                      |      |              |                             |   |
| 69        |            | Structural wood framing; roof at new addition  | 11,325               | sf   | 25.11        | 284,350                     |   |
| 70        |            | Structural wood framing; roof at 74 Pond st new 3rd floor addition   | 6,761                | sf   | 25.11        | 169,751                     |   |
| 71        |            |  |                      |      |              |                             |   |
| 72        |            | Sub Total : Roof Construction  |                      |      |              | 454,101                     |   |
| 73        |            |  |                      |      |              |                             |   |
| 74        |            |  |                      |      |              |                             |   |
| 75        | <b>B20</b> | <b><u>EXTERIOR CLOSURE</u></b>   |                      |      |              |                             |   |
| 76        | B2010      | Exterior Walls   |                      |      |              |                             |   |
| 77        |            | <i>Façades at new additions</i>  | 53,467               | sf   |              |                             |   |
| 78        |            | Exterior wall; 75% fiber cement clapboard siding & trim, 25% brick veneer  | 18,243               | sf   | 62.50        | 1,140,209                   | assumed 70% of exterior façade                          |
| 79        |            | Exterior wall assembly (2x6 wood studs, insulation, AVB, sheathing)  | 18,243               | sf   | 25.25        | 460,644                     |   |
| 80        |            | Exterior wall, (2) layer GWB type X at inside face of exterior wall  | 18,243               | sf   | 5.50         | 100,338                     |   |
| 81        |            | Misc metals for exterior brick wall assembly   |                      |      |              | incl above                  |   |
| 82        |            | Exterior façade, caulking and sealing  | 26,062               | sf   | 2.50         | 65,155                      |   |
| 83        |            | Staging, access and lifts for exterior façade work   | 26,062               | sf   | 4.95         | 129,006                     |   |
| 84        |            | Façades at both existing buildings; repoint brick masonry walls, assumed 25'   | 5,553                | sf   | 55.00        | 305,388                     | incl chimneys   |
| 85        |            | Add flashing at water table  |                      |      |              | incl above                  |   |
| 86        |            | Repair damaged steel lintels at basement of 90 Pond Street   | 25                   | ea   | 2,150.00     | 53,750                      |   |
| 87        |            | (R-30) 4" closed cell spray foam insulation at exterior wall from inside, av barrier, sheathing, furring strips, GWB layer | 22,210               | sf   | 31.25        | 694,063                     |   |
| 88        |            | New awnings at parking lot entries into back of both buildings (2 loc/bldg)  | 1                    | ls   | 60,000.00    | 60,000                      |   |
| 89        |            |  |                      |      |              |                             |   |
| 90        |            |  |                      |      |              |                             |   |
| 91        |            | Sub Total : Exterior Walls   |                      |      |              | 3,008,553                   |   |



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| OPTION 2A |             |  | BUILDING AREA (bgsf) |              |                             | 93,113              |  |
|-----------|-------------|--|----------------------|--------------|-----------------------------|---------------------|--|
|           | Description | Quantity   | Unit                 | Unit Price   | Total \$                    | Subtotal Trades     |  |
|           |             |  |                      | New Addition | Add to Exist 74 Pond street |                     |  |
| 92        |             |  |                      |              |                             |                     |  |
| 93        | B2020       | Exterior windows   |                      |              |                             |                     |  |
| 94        |             | Exterior aluminum cladd wood windows; triple-pane insulated low-e glass, aluminum and glass storefront system at commercial spaces and building entries  | 7,819                | sf           | 220.00                      | 1,720,086           | windows and storefronts assumed 30% of exterior façade |
| 95        |             | Remove and replace exterior windows at both existing buildings; aluminum cladd wood windows; triple-pane insulated low-e glass, aluminum and glass storefront system at commercial spaces and building entries | 5,195                | sf           | 220.00                      | 1,142,900           |  |
|           |             | Window sill  | 318                  | lf           | 75.00                       | 23,850              |  |
| 97        |             | Rod and sealant, flashing at windows   | 3,801                | lf           | 20.00                       | 76,020              |  |
| 98        |             |  |                      |              |                             |                     |  |
| 99        |             | Sub Total : Exterior windows   |                      |              |                             | <b>2,962,856</b>    |  |
| 100       |             |  |                      |              |                             |                     |  |
| 101       | B2030       | Exterior doors   |                      |              |                             |                     |  |
| 102       |             | Exterior doors including frames and hardware   | 1                    | ls           | 75,000.00                   | 75,000              | assumed qty  |
| 103       |             | New entry doors & hardware to match existing at exist buildings, allow   | 1                    | ls           | 100,000.00                  | 100,000             |  |
| 104       |             |  |                      |              |                             |                     |  |
| 105       |             | Sub Total : Exterior doors   |                      |              |                             | <b>175,000</b>      |  |
| 106       |             |  |                      |              |                             |                     |  |
| 107       |             |  |                      |              |                             |                     |  |
| 108       | <b>B30</b>  | <b>ROOFING</b>   |                      |              |                             |                     |  |
| 109       | B3010       | Roof Coverings   |                      |              |                             |                     |  |
| 110       |             | New membrane roofing system, incl insulation, sheathing wood blocking, metal flashing and coping, roof accessories and specialties at new addition   | 11,325               | sf           | 45.00                       | 509,639             |  |
| 111       |             | New membrane roofing system, incl insulation, sheathing wood blocking, metal flashing and coping, roof accessories and specialties at 74 Pond st addition  | 5,734                | sf           | 45.00                       | 258,030             |  |
|           |             | Add dormers on 74 Pond St. attic level, slate roofing  | 1,027                | sf           | 105.00                      | 107,830             |  |
| 113       |             | Roof repairs to existing slate roofing at 74 Pond St   | 1                    | ls           | 25,000.00                   | 25,000              |  |
| 114       |             | New 50-year architecture asphalt shingles at 90 Pond St, repair gutter, downspout and flashing system on the roofs   | 8,577                | sf           | 32.00                       | 274,476             |  |
| 115       |             |  |                      |              |                             |                     |  |
| 116       |             | Sub Total : Roof Coverings   |                      |              |                             | <b>1,174,974</b>    |  |
| 117       |             |  |                      |              |                             |                     |  |
| 118       |             | <b><u>SUBTOTAL FOR SHELL</u></b>   |                      |              |                             | <b>End of Trade</b> | <b>\$ 8,784,992</b>                                    |
| 119       |             |  |                      |              |                             |                     |  |
| 120       |             |  |                      |              |                             |                     |  |
| 121       | <b>C</b>    | <b>INTERIORS</b>   |                      |              |                             |                     |  |
| 122       | <b>C10</b>  | <b>INTERIOR CONSTRUCTION</b>   |                      |              |                             |                     |  |
| 123       | C1010       | Partitions, Rough Carpentry  |                      |              |                             |                     |  |
| 124       |             | Extend elevator CMU shaft to new 3rd floor at 74 Pond Street   | 480                  | sf           | 45.00                       | 21,600              |  |
| 125       |             | New elevator shaft at new addition   | 1,344                | sf           | 40.00                       | 53,760              |  |
| 126       |             | Interior partitions w/wood framing, 5/8" GWB and batt insulation (excluding basement)  | 83,492               | gsf          | 30.00                       | 2,504,760           | no scope at 74 Pond St basement                        |
| 127       |             | Interior storefront, glazing/ sidelight/ vision panels   |                      |              |                             | incl above          |  |



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| OPTION 2A |       |  | BUILDING AREA (bgsf) |      |              |                             | 93,113          |              |
|-----------|-------|--|----------------------|------|--------------|-----------------------------|-----------------|--------------|
|           |       | Description  | Quantity             | Unit | Unit Price   | Total \$                    | Subtotal Trades |              |
|           |       |  |                      |      | New Addition | Add to Exist 74 Pond street |                 |              |
| 128       |       | Misc blocking, misc metals, firestopping, caulking   |                      |      |              | incl above                  |                 |              |
| 129       |       |  |                      |      |              |                             |                 |              |
| 130       |       | Sub Total : Partitions, Rough Carpentry  |                      |      |              | <b>2,580,120</b>            |                 |              |
| 131       |       |  |                      |      |              |                             |                 |              |
| 132       |       |  |                      |      |              |                             |                 |              |
| 133       | C1020 | <b>Interior Doors</b>  |                      |      |              |                             |                 |              |
| 134       |       | Interior doors at units; unit entry  | 70                   | ea   | 2,350.00     | 164,500                     |                 |              |
| 135       |       | bedroom, bathroom  | 118                  | ea   | 1,750.00     | 206,500                     |                 |              |
| 136       |       | closet   | 47                   | ea   | 1,450.00     | 68,150                      |                 |              |
| 137       |       | Interior doors at corridors, stairs, amenities area  | 83,492               | gsf  | 1.51         | 125,800                     |                 |              |
| 138       |       | Access door/panel, specialty doors and hardware, misc metals and blocking  | 83,492               | gsf  | 0.75         | 62,619                      |                 |              |
| 139       |       |  |                      |      |              |                             |                 |              |
| 140       |       | Sub Total : Interior Doors   |                      |      |              | <b>627,569</b>              |                 |              |
| 141       |       |  |                      |      |              |                             |                 |              |
| 142       |       |  |                      |      |              |                             |                 |              |
| 143       | C1030 | <b>Fittings</b>  |                      |      |              |                             |                 |              |
| 144       |       | Interior signage   | 83,492               | gsf  | 0.50         | 41,746                      |                 |              |
| 145       |       | Toilet accessories; medicine cabinet w/mirror, grab bars, toilet paper dispenser   | 71                   | rms  | 735.00       | 52,185                      |                 |              |
| 146       |       | Add shower curtain rod for full bathroom   | 70                   | rms  | 215.00       | 15,050                      |                 |              |
| 147       |       | Fire extinguisher and cabinets   | 22                   | ea   | 550.00       | 11,930                      |                 |              |
| 148       |       | Painted wood wall base, door & window wood trim at units   | 70                   | unit | 3,900.00     | 273,000                     |                 | average cost |
| 149       |       | Misc metals, rough carpentry, casework at common areas, caulking and sealant, corner guards, etc.  | 83,492               | gsf  | 1.15         | 96,016                      |                 |              |
| 150       |       |  |                      |      |              |                             |                 |              |
| 151       |       | Sub Total : Fittings   |                      |      |              | <b>489,927</b>              |                 |              |
| 152       |       |  |                      |      |              |                             |                 |              |
| 153       | C20   | <b>STAIRCASES</b>  |                      |      |              |                             |                 |              |
| 154       | C2010 | <b>Stair Construction</b>  |                      |      |              |                             |                 |              |
| 155       |       | Wood stairs structure; exist to remain, code upgrade railing; (2)1st-2nd floor at 74 Pond St bldg and (2) basement to 3rd floor at 90 Pond St. | 8                    | ft   | 10,000.00    | 80,000                      |                 |              |
| 156       |       |  |                      |      |              |                             |                 |              |
| 157       |       | Extend wood stairs up to new 3rd floor at 74 Pond St   | 1                    | ft   | 27,500.00    | 27,500                      |                 |              |
| 158       |       | New wood stairs structure and metal railing at addition; (2) from basement - 3rd Floor   | 6                    | ft   | 25,000.00    | 150,000                     |                 |              |
| 159       |       |  |                      |      |              |                             |                 |              |
| 160       |       | Sub Total : Stair Construction   |                      |      |              | <b>257,500</b>              |                 |              |
| 161       |       |  |                      |      |              |                             |                 |              |
| 162       | C2020 | <b>Stair Finishes</b>  |                      |      |              |                             |                 |              |
| 163       |       | Refinish stair treads and risers at existing stairs to remain  | 8                    | ft   | 5,500.00     | 44,000                      |                 |              |
| 164       |       | New stair finish, rubber landing, treads and risers  | 7                    | ft   | 7,500.00     | 52,500                      |                 |              |
| 165       |       |  |                      |      |              |                             |                 |              |
| 166       |       | Sub Total : Stair Finishes   |                      |      |              | <b>96,500</b>               |                 |              |
| 167       |       |  |                      |      |              |                             |                 |              |
| 168       | C30   | <b>INTERIOR FINISHES</b>   |                      |      |              |                             |                 |              |
| 169       | C3010 | <b>Wall Finishes</b>   |                      |      |              |                             |                 |              |
| 170       |       | Paint walls  | 83,492               | gsf  | 2.50         | 208,730                     |                 |              |

**Town of Braintree  
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| OPTION 2A |   |          | BUILDING AREA (bgsf) |              |                             | 93,113              |                                |
|-----------|---|----------|----------------------|--------------|-----------------------------|---------------------|--------------------------------|
|           | Description   | Quantity | Unit                 | Unit Price   | Total \$                    | Subtotal Trades     |                                |
|           |   |          |                      | New Addition | Add to Exist 74 Pond street |                     |                                |
| 171       | Ceramic tile, toilet rooms assumed 7' high changed to paint GWB walls         | 18,389   | sf                   | 2.50         | 45,973                      |                     |                                |
| 172       | GWB walls with vinyl wall covering 50%, paint 50% at corridors and vestibules | 13,972   | sf                   | 15.00        | 209,580                     |                     |                                |
| 173       | Painted wood trim at base, door & window at residential                       | 41,115   | sf                   | 2.25         | 92,509                      |                     |                                |
| 174       |   |          |                      |              |                             |                     |                                |
| 175       | Sub Total : Wall Finishes   |          |                      |              | <b>556,791</b>              |                     |                                |
| 176       |   |          |                      |              |                             |                     |                                |
| 177       | C3020 Floor Finishes  |          |                      |              |                             |                     |                                |
| 178       | Floor prep for new flooring finishes  | 88,457   | sf                   | 2.95         | 260,949                     |                     |                                |
| 179       | Tile at toilets   | 6,035    | sf                   | 28.00        | 168,980                     |                     | assumed qty based on 85sf/room |
| 180       | LVT flooring at residential units   | 41,115   | sf                   | 7.50         | 308,363                     |                     |                                |
| 181       | LVT flooring at Amenity spaces, Office, Public Restrooms                      | 26,887   | sf                   | 7.50         | 201,655                     |                     |                                |
| 182       | Refinish wood flooring in dining area from existing auditorium                | 997      | sf                   | 20.00        | 19,940                      |                     |                                |
| 183       | Carpet tile, rubber base at corridors and vestibules                          | 13,423   | sf                   | 6.00         | 80,538                      |                     |                                |
| 184       | Rubber base   | 83,492   | gsf                  | 0.95         | 79,317                      |                     |                                |
| 185       |   |          |                      |              |                             |                     |                                |
| 186       | Sub Total : Floor Finishes  |          |                      |              | <b>1,119,742</b>            |                     |                                |
| 187       |   |          |                      |              |                             |                     |                                |
| 188       |   |          |                      |              |                             |                     |                                |
| 189       | C3030 Ceiling Finishes  |          |                      |              |                             |                     |                                |
| 190       | Painted 'GWB ceiling at residential units                                     | 47,150   | sf                   | 12.05        | 568,158                     |                     |                                |
| 191       | Painted 'GWB ceiling at corridors and vestibules                              | 13,423   | sf                   | 12.50        | 167,788                     |                     |                                |
| 192       | Stairs; assumed GWB ceiling, paint  | 4,083    | sf                   | 12.50        | 51,038                      |                     |                                |
| 193       | ACT ceiling at Amenity spaces/Dining, Office, Public Restrooms                | 23,801   | sf                   | 9.50         | 226,113                     |                     |                                |
| 194       |   |          |                      |              |                             |                     |                                |
| 195       | Sub Total : Ceiling Finishes  |          |                      |              | <b>1,013,095</b>            |                     |                                |
| 196       |   |          |                      |              |                             |                     |                                |
| 197       | <b><u>SUBTOTAL FOR INTERIORS</u></b>  |          |                      |              | <b>End of Trade</b>         | <b>\$ 6,741,245</b> |                                |
| 198       |   |          |                      |              |                             |                     |                                |
| 199       | <b><u>D SERVICES</u></b>  |          |                      |              |                             |                     |                                |
| 200       | <b>D10 Elevators &amp; Lifts</b>  |          |                      |              |                             |                     |                                |
| 201       | New 3-stop elevator at exist elevator shafts                                  | 2        | ea                   | 285,000.00   | 570,000                     |                     |                                |
| 202       | 4-stop elevator at new addition   | 1        | ea                   | 360,000.00   | 360,000                     |                     |                                |
| 203       |   |          |                      |              |                             |                     |                                |
| 204       | Sub Total : Elevators & Lifts   |          |                      |              | <b>930,000</b>              |                     |                                |
| 205       |   |          |                      |              |                             |                     |                                |
| 206       | <b>D20 Plumbing</b>   |          |                      |              |                             |                     |                                |
| 207       | <b><u>74 Pond Street</u></b>  |          |                      |              |                             |                     |                                |
| 208       | Selective demolition  | 25,107   | gsf                  | 0.80         | 20,086                      |                     |                                |
| 209       | Equipment   |          |                      |              |                             |                     |                                |
| 210       | Replace existing grease interceptor   | 1        | ea                   | 20,000.00    | 20,000                      |                     |                                |
| 211       | Replace existing recirculation pump   | 1        | ea                   | 6,400.00     | 6,400                       |                     |                                |
| 212       | Provide electric water heaters for each residential unit                      | 19       | ea                   | 3,800.00     | 72,200                      |                     |                                |
| 213       | Piping system   |          |                      |              |                             |                     |                                |
| 214       | Modify existing piping system due room layout change                          | 25,107   | gsf                  | 12.50        | 313,838                     |                     |                                |
| 215       | Plumbing fixtures   |          |                      |              |                             |                     |                                |
| 216       | Water closet @ New single-user accessible restroom                            | 2        | ea                   | 2,100.00     | 4,200                       |                     |                                |

**Town of Braintree  
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| OPTION 2A |   |          | BUILDING AREA (bgsf) |              |                             | 93,113          |  |
|-----------|---|----------|----------------------|--------------|-----------------------------|-----------------|--|
|           | Description   | Quantity | Unit                 | Unit Price   | Total \$                    | Subtotal Trades |  |
|           |   |          |                      | New Addition | Add to Exist 74 Pond street |                 |  |
| 217       | Lavatory @ New single-user accessible restroom              | 2        | ea                   | 1,880.00     | 3,760                       |                 |  |
| 218       | Water closet @ New residential unit                         | 19       | ea                   | 2,100.00     | 39,900                      |                 |  |
| 219       | Lavatory @ New residential unit                             | 19       | ea                   | 1,880.00     | 35,720                      |                 |  |
| 220       | Bathtub shower combo @ New residential unit - assume        | 19       | ea                   | 4,200.00     | 79,800                      |                 |  |
| 221       | Kitchen sink @ New residential unit - assume                | 19       | ea                   | 1,820.00     | 34,580                      |                 |  |
| 222       | Fixture rough-in  | 80       | ea                   | 690.00       | 55,200                      |                 |  |
| 223       | Other   | 25,107   | gsf                  | 2.00         | 50,214                      |                 |  |
| 224       | Access door   | 1        | ls                   |              | included                    |                 |  |
| 225       | Penetrations and sleeves                                    | 1        | ls                   |              | included                    |                 |  |
| 226       | Core drill, cutting, patching, fire stopping                | 1        | ls                   |              | included                    |                 |  |
| 227       | Clean, flush and test                                       | 1        | ls                   |              | included                    |                 |  |
| 228       | Disinfection  | 1        | ls                   |              | included                    |                 |  |
| 229       | System validate / Certification                             | 1        | ls                   |              | included                    |                 |  |
| 230       | Equipment handling and material distribution                | 1        | ls                   |              | included                    |                 |  |
| 231       | System ID / Valve tags                                      | 1        | ls                   |              | included                    |                 |  |
| 232       | Shop co-ordination drawings                                 | 1        | ls                   |              | included                    |                 |  |
| 233       | Supports  | 1        | ls                   |              | included                    |                 |  |
| 234       | Coordination with other trades                              | 1        | ls                   |              | included                    |                 |  |
| 235       |   |          |                      |              |                             |                 |  |
| 236       | <u>90 Pond Street</u>                                       |          |                      |              |                             |                 |  |
| 237       | Selective demolition  | 22,300   | gsf                  | 0.80         | 17,840                      |                 |  |
| 238       | Equipment   |          |                      |              |                             |                 |  |
| 239       | Replace existing electric hot water heater @ Amenity spaces | 1        | ea                   | 14,200.00    | 14,200                      |                 |  |
| 240       | Replace existing recirculation pump                         | 1        | ea                   | 6,400.00     | 6,400                       |                 |  |
| 241       | Provide electric water heaters for each residential unit    | 14       | ea                   | 3,800.00     | 53,200                      |                 |  |
| 242       | Piping system   |          |                      |              |                             |                 |  |
| 243       | Modify existing piping system due room layout change        | 22,300   | gsf                  | 12.50        | 278,750                     |                 |  |
| 244       | New gas service requirements                                | 1        | ls                   | 10,000.00    | 10,000                      |                 |  |
| 245       | Plumbing fixtures   |          |                      |              |                             |                 |  |
| 246       | Water closet @ Renovate existing restrooms on the basement  | 3        | ea                   | 2,100.00     | 6,300                       |                 |  |
| 247       | Urinal @ Renovate existing restrooms on the basement        | 1        | ea                   | 2,000.00     | 2,000                       |                 |  |
| 248       | Lavatory @ Renovate existing restrooms on the basement      | 4        | ea                   | 1,880.00     | 7,520                       |                 |  |
| 249       | Water closet @ New residential unit                         | 14       | ea                   | 2,100.00     | 29,400                      |                 |  |
| 250       | Lavatory @ New residential unit                             | 14       | ea                   | 1,880.00     | 26,320                      |                 |  |
| 251       | Bathtub shower combo @ New residential unit - assume        | 14       | ea                   | 4,200.00     | 58,800                      |                 |  |
| 252       | Kitchen sink @ New residential unit - assume                | 14       | ea                   | 1,820.00     | 25,480                      |                 |  |
| 253       | Fixture rough-in  | 64       | ea                   | 690.00       | 44,160                      |                 |  |
| 254       | Other   | 22,300   | gsf                  | 2.00         | 44,600                      |                 |  |
| 255       | Access door   | 1        | ls                   |              | included                    |                 |  |
| 256       | Penetrations and sleeves                                    | 1        | ls                   |              | included                    |                 |  |
| 257       | Core drill, cutting, patching, fire stopping                | 1        | ls                   |              | included                    |                 |  |
| 258       | Clean, flush and test                                       | 1        | ls                   |              | included                    |                 |  |
| 259       | Disinfection  | 1        | ls                   |              | included                    |                 |  |
| 260       | System validate / Certification                             | 1        | ls                   |              | included                    |                 |  |
| 261       | Equipment handling and material distribution                | 1        | ls                   |              | included                    |                 |  |
| 262       | System ID / Valve tags                                      | 1        | ls                   |              | included                    |                 |  |
| 263       | Shop co-ordination drawings                                 | 1        | ls                   |              | included                    |                 |  |

**Town of Braintree  
Affordable Housing Study  
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| OPTION 2A |   |          | BUILDING AREA (bgsf) |              |                             | 93,113          |  |
|-----------|---|----------|----------------------|--------------|-----------------------------|-----------------|--|
|           | Description   | Quantity | Unit                 | Unit Price   | Total \$                    | Subtotal Trades |  |
|           |   |          |                      | New Addition | Add to Exist 74 Pond street |                 |  |
| 264       | Supports  | 1        | ls                   |              | included                    |                 |  |
| 265       | Coordination with other trades  | 1        | ls                   |              | included                    |                 |  |
| 266       |   |          |                      |              |                             |                 |  |
| 267       | <u>New Addition</u>   |          |                      |              |                             |                 |  |
| 268       | Equipment (incl. electric water heater, recirculation pump, expansion tank, etc.)                   | 45,706   | gsf                  | 1.20         | 54,847                      |                 |  |
| 269       | Piping system   | 45,706   | gsf                  | 18.00        | 822,708                     |                 |  |
| 270       | Domestic water pipe with insulation   | 1        | ls                   |              | included                    |                 |  |
| 271       | Sanitary waste and vent pipe  | 1        | ls                   |              | included                    |                 |  |
| 272       | Storm water pipe with insulation  | 1        | ls                   |              | included                    |                 |  |
| 273       | Valves and specialties (incl. hook-up equipment)  | 1        | ls                   |              | included                    |                 |  |
| 274       | Plumbing fixtures (incl. rough-in)  | 45,706   | gsf                  | 9.50         | 434,207                     |                 |  |
| 275       | Other   | 45,706   | gsf                  | 2.50         | 114,265                     |                 |  |
| 276       | Access door   | 1        | ls                   |              | included                    |                 |  |
| 277       | Penetrations and sleeves  | 1        | ls                   |              | included                    |                 |  |
| 278       | Core drill, cutting, patching, fire stopping  | 1        | ls                   |              | included                    |                 |  |
| 279       | Clean, flush and test   | 1        | ls                   |              | included                    |                 |  |
| 280       | Disinfection  | 1        | ls                   |              | included                    |                 |  |
| 281       | System validate / Certification   | 1        | ls                   |              | included                    |                 |  |
| 282       | Equipment handling and material distribution  | 1        | ls                   |              | included                    |                 |  |
| 283       | System ID / Valve tags  | 1        | ls                   |              | included                    |                 |  |
| 284       | Shop co-ordination drawings   | 1        | ls                   |              | included                    |                 |  |
| 285       | Supports  | 1        | ls                   |              | included                    |                 |  |
| 286       | Coordination with other trades  | 1        | ls                   |              | included                    |                 |  |
| 287       |   |          |                      |              |                             |                 |  |
| 288       | <b>Sub Total : Plumbing</b>   |          |                      |              | <b>2,786,894</b>            |                 |  |
| 289       |   |          |                      |              |                             |                 |  |
| 290       | <b>D30 HVAC</b>   |          |                      |              |                             |                 |  |
| 291       | <u>74 Pond Street - Option-1: Reuse existing boilers and heat pumps</u>                             |          |                      |              |                             |                 |  |
| 292       | Selective demolition  | 25,107   | gsf                  | 1.50         | 37,661                      |                 |  |
| 293       | Equipment   |          |                      |              |                             |                 |  |
| 294       | Modify baseboard heaters for shared community spaces and new residential layout                     | 25,107   | gsf                  | 3.00         | 75,321                      |                 |  |
| 295       | Replace air handling unit to include ERV for ventilation  | 1        | unit                 | 340,000.00   | 340,000                     |                 |  |
| 296       | Replace kitchen exhaust fan   | 1        | ea                   | 5,800.00     | 5,800                       |                 |  |
| 297       | Piping system   | 25,107   | gsf                  | 2.00         | 50,214                      |                 |  |
| 298       | Modify existing heating hot water piping system   | 1        | ls                   |              | included                    |                 |  |
| 299       | Hook-up equipment   | 1        | ls                   |              | included                    |                 |  |
| 300       | Air side system   | 25,107   | gsf                  | 12.00        | 301,284                     |                 |  |
| 301       | Modify existing air side system due room layout change  | 1        | ls                   |              | included                    |                 |  |
| 302       | New ductwork @ Replaced air handling unit with ERV  | 1        | ls                   |              | included                    |                 |  |
| 303       | Replace kitchen grease hood   | 1        | ea                   | 24,000.00    | 24,000                      |                 |  |
| 304       | System controls (incl. new BMS system)  | 25,107   | gsf                  | 8.00         | 200,856                     |                 |  |
| 305       | Individual controls for residential spaces  | 1        | ls                   |              | included                    |                 |  |
| 306       | New temperature controls & BMS to integrate the baseboard heaters with the air conditioning systems | 1        | ls                   |              | included                    |                 |  |
| 307       | Other   | 25,107   | gsf                  | 3.50         | 87,875                      |                 |  |
| 308       | Access doors  | 1        | ls                   |              | included                    |                 |  |

**Town of Braintree  
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| OPTION 2A |   |          | BUILDING AREA (bgsf) |              |                             | 93,113          |  |
|-----------|---|----------|----------------------|--------------|-----------------------------|-----------------|--|
|           | Description   | Quantity | Unit                 | Unit Price   | Total \$                    | Subtotal Trades |  |
|           |   |          |                      | New Addition | Add to Exist 74 Pond street |                 |  |
| 309       | Vibration isolation / Seismic   | 1        | ls                   |              | included                    |                 |  |
| 310       | Penetrations and sleeves  | 1        | ls                   |              | included                    |                 |  |
| 311       | Core drill, cutting, patching, fire stopping  | 1        | ls                   |              | included                    |                 |  |
| 312       | Test and balance  | 1        | ls                   |              | included                    |                 |  |
| 313       | Clean, flush and test (piping system)   | 1        | ls                   |              | included                    |                 |  |
| 314       | System start-up / Commissioning   | 1        | ls                   |              | included                    |                 |  |
| 315       | Equipment handling and material distribution  | 1        | ls                   |              | included                    |                 |  |
| 316       | System ID / Valve tags  | 1        | ls                   |              | included                    |                 |  |
| 317       | Shop co-ordination drawings   | 1        | ls                   |              | included                    |                 |  |
| 318       | O&M manuals   | 1        | ls                   |              | included                    |                 |  |
| 319       | Supports  | 1        | ls                   |              | included                    |                 |  |
| 320       | Coordination with other trades  | 1        | ls                   |              | included                    |                 |  |
| 321       |   |          |                      |              |                             |                 |  |
| 322       | <u>90 Pond Street - Option-1: Reuse existing boilers and heat pumps</u>                             |          |                      |              |                             |                 |  |
| 323       | Selective demolition  | 22,300   | gsf                  | 1.50         | 33,450                      |                 |  |
| 324       | Equipment   |          |                      |              |                             |                 |  |
| 325       | Replace existing baseboard heating units  | 22,300   | gsf                  | 2.00         | 44,600                      |                 |  |
| 326       | New electric mini-split for heating and cooling in each space                                       | 22,300   | gsf                  | 3.20         | 71,360                      |                 |  |
| 327       | Replace air handling unit to include ERV for ventilation  | 1        | unit                 | 260,000.00   | 260,000                     |                 |  |
| 328       | Piping system   | 22,300   | gsf                  | 3.20         | 71,360                      |                 |  |
| 329       | Refrigerant pipe with insulation  | 1        | ls                   |              | included                    |                 |  |
| 330       | Condensate drain pipe with insulation   | 1        | ls                   |              | included                    |                 |  |
| 331       | Hook-up equipment   | 1        | ls                   |              | included                    |                 |  |
| 332       | Air side system   | 22,300   | gsf                  | 12.00        | 267,600                     |                 |  |
| 333       | Modify existing air side system due room layout change  | 1        | ls                   |              | included                    |                 |  |
| 334       | New ductwork @ Replaced air handling unit with ERV  | 1        | ls                   |              | included                    |                 |  |
| 335       | System controls (incl. new BMS system)  | 22,300   | gsf                  | 8.00         | 178,400                     |                 |  |
| 336       | Individual controls for residential spaces  | 1        | ls                   |              | included                    |                 |  |
| 337       | New temperature controls & BMS to integrate the baseboard heaters with the air conditioning systems | 1        | ls                   |              | included                    |                 |  |
| 338       | Other   | 22,300   | gsf                  | 3.50         | 78,050                      |                 |  |
| 339       | Access doors  | 1        | ls                   |              | included                    |                 |  |
| 340       | Vibration isolation / Seismic   | 1        | ls                   |              | included                    |                 |  |
| 341       | Penetrations and sleeves  | 1        | ls                   |              | included                    |                 |  |
| 342       | Core drill, cutting, patching, fire stopping  | 1        | ls                   |              | included                    |                 |  |
| 343       | Test and balance  | 1        | ls                   |              | included                    |                 |  |
| 344       | Clean, flush and test (piping system)   | 1        | ls                   |              | included                    |                 |  |
| 345       | System start-up / Commissioning   | 1        | ls                   |              | included                    |                 |  |
| 346       | Equipment handling and material distribution  | 1        | ls                   |              | included                    |                 |  |
| 347       | System ID / Valve tags  | 1        | ls                   |              | included                    |                 |  |
| 348       | Shop co-ordination drawings   | 1        | ls                   |              | included                    |                 |  |
| 349       | O&M manuals   | 1        | ls                   |              | included                    |                 |  |
| 350       | Supports  | 1        | ls                   |              | included                    |                 |  |
| 351       | Coordination with other trades  | 1        | ls                   |              | included                    |                 |  |
| 352       |   |          |                      |              |                             |                 |  |
| 353       | <u>New Addition</u>   |          |                      |              |                             |                 |  |
| 354       | Equipment   | 45,706   | gsf                  | 16.00        | 731,296                     |                 |  |

**Town of Braintree  
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| OPTION 2A |  |          | BUILDING AREA (bgsf) |              |                             | 93,113          |  |
|-----------|--|----------|----------------------|--------------|-----------------------------|-----------------|--|
|           | Description  | Quantity | Unit                 | Unit Price   | Total \$                    | Subtotal Trades |  |
|           |  |          |                      | New Addition | Add to Exist 74 Pond street |                 |  |
| 355       | Piping system (incl. refrigerant and condensate drain pipe with insulation, valves and specialties)    | 45,706   | gsf                  | 5.40         | 246,812                     |                 |  |
| 356       | Air side system  | 45,706   | gsf                  | 18.00        | 822,708                     |                 |  |
| 357       | System controls  | 45,706   | gsf                  | 9.50         | 434,207                     |                 |  |
| 358       | Other  | 45,706   | gsf                  | 3.50         | 159,971                     |                 |  |
| 359       | Access doors   | 1        | ls                   |              | included                    |                 |  |
| 360       | Vibration isolation / Seismic  | 1        | ls                   |              | included                    |                 |  |
| 361       | Penetrations and sleeves   | 1        | ls                   |              | included                    |                 |  |
| 362       | Core drill, cutting, patching, fire stopping   | 1        | ls                   |              | included                    |                 |  |
| 363       | Test and balance   | 1        | ls                   |              | included                    |                 |  |
| 364       | Clean, flush and test (piping system)  | 1        | ls                   |              | included                    |                 |  |
| 365       | System start-up / Commissioning  | 1        | ls                   |              | included                    |                 |  |
| 366       | Equipment handling and material distribution   | 1        | ls                   |              | included                    |                 |  |
| 367       | System ID / Valve tags   | 1        | ls                   |              | included                    |                 |  |
| 368       | Shop co-ordination drawings  | 1        | ls                   |              | included                    |                 |  |
| 369       | O&M manuals  | 1        | ls                   |              | included                    |                 |  |
| 370       | Supports   | 1        | ls                   |              | included                    |                 |  |
| 371       | Coordination with other trades   | 1        | ls                   |              | included                    |                 |  |
| 372       |  |          |                      |              |                             |                 |  |
| 373       | <b>Sub Total : HVAC</b>  |          |                      |              | <b>4,522,824</b>            |                 |  |
| 374       |  |          |                      |              |                             |                 |  |
| 375       | <b>D40 Fire Protection</b>   |          |                      |              |                             |                 |  |
| 376       | <u>74 Pond Street</u>  |          |                      |              |                             |                 |  |
| 377       | Wet sprinkler system   |          |                      |              |                             |                 |  |
| 378       | Modify existing wet sprinkler system / Extend the sprinkler system to serve all levels of the building | 25,107   | gsf                  | 6.50         | 163,196                     |                 |  |
| 379       | Other  | 25,107   | gsf                  | 1.50         | 37,661                      |                 |  |
| 380       | System drain down and fill   | 1        | ls                   |              | included                    |                 |  |
| 381       | System ID, labels and color coding   | 1        | ls                   |              | included                    |                 |  |
| 382       | Painting piping  | 1        | ls                   |              | included                    |                 |  |
| 383       | Seismic restraints   | 1        | ls                   |              | included                    |                 |  |
| 384       | Design calculations  | 1        | ls                   |              | included                    |                 |  |
| 385       | Core drill, cutting, patching, fire stopping   | 1        | ls                   |              | included                    |                 |  |
| 386       | Clean, flush and test  | 1        | ls                   |              | included                    |                 |  |
| 387       | Commissioning  | 1        | ls                   |              | included                    |                 |  |
| 388       | Material distribution  | 1        | ls                   |              | included                    |                 |  |
| 389       | Shop co-ordination drawings  | 1        | ls                   |              | included                    |                 |  |
| 390       | Coordination with other trades   | 1        | ls                   |              | included                    |                 |  |
| 391       |  |          |                      |              |                             |                 |  |
| 392       | <u>90 Pond Street</u>  |          |                      |              |                             |                 |  |
| 393       | Wet sprinkler system   |          |                      |              |                             |                 |  |
| 394       | Modify existing wet sprinkler system / Extend the sprinkler system to serve all levels of the building | 22,300   | gsf                  | 6.50         | 144,950                     |                 |  |
| 395       | Other  | 22,300   | gsf                  | 1.50         | 33,450                      |                 |  |
| 396       | System drain down and fill   | 1        | ls                   |              | included                    |                 |  |
| 397       | System ID, labels and color coding   | 1        | ls                   |              | included                    |                 |  |
| 398       | Painting piping  | 1        | ls                   |              | included                    |                 |  |

**Town of Braintree  
Affordable Housing Study  
Study Estimate**

| OPTION 2A |  | BUILDING AREA (bgsf) |      |              |                             | 93,113          |                                 |
|-----------|--|----------------------|------|--------------|-----------------------------|-----------------|---------------------------------|
|           | Description  | Quantity             | Unit | Unit Price   | Total \$                    | Subtotal Trades |                                 |
|           |  |                      |      | New Addition | Add to Exist 74 Pond street |                 |                                 |
| 399       | Seismic restraints   | 1                    | ls   |              | included                    |                 |                                 |
| 400       | Design calculations  | 1                    | ls   |              | included                    |                 |                                 |
| 401       | Core drill, cutting, patching, fire stopping   | 1                    | ls   |              | included                    |                 |                                 |
| 402       | Clean, flush and test  | 1                    | ls   |              | included                    |                 |                                 |
| 403       | Commissioning  | 1                    | ls   |              | included                    |                 |                                 |
| 404       | Material distribution  | 1                    | ls   |              | included                    |                 |                                 |
| 405       | Shop co-ordination drawings  | 1                    | ls   |              | included                    |                 |                                 |
| 406       | Coordination with other trades   | 1                    | ls   |              | included                    |                 |                                 |
| 407       |  |                      |      |              |                             |                 |                                 |
| 408       | <u>New Addition</u>  |                      |      |              |                             |                 |                                 |
| 409       | Wet sprinkler system   | 45,706               | gsf  | 10.50        | 479,913                     |                 |                                 |
| 410       | Other  | 45,706               | gsf  | 1.40         | 63,988                      |                 |                                 |
| 411       | System ID, labels and color coding   | 1                    | ls   |              | included                    |                 |                                 |
| 412       | Painting piping  | 1                    | ls   |              | included                    |                 |                                 |
| 413       | Seismic restraints   | 1                    | ls   |              | included                    |                 |                                 |
| 414       | Design calculations  | 1                    | ls   |              | included                    |                 |                                 |
| 415       | Core drill, cutting, patching, fire stopping   | 1                    | ls   |              | included                    |                 |                                 |
| 416       | Clean, flush and test  | 1                    | ls   |              | included                    |                 |                                 |
| 417       | Commissioning  | 1                    | ls   |              | included                    |                 |                                 |
| 418       | Material distribution  | 1                    | ls   |              | included                    |                 |                                 |
| 419       | Shop co-ordination drawings  | 1                    | ls   |              | included                    |                 |                                 |
| 420       | Coordination with other trades   | 1                    | ls   |              | included                    |                 |                                 |
| 421       |  |                      |      |              |                             |                 |                                 |
| 422       | <b>Sub Total : Fire Protection</b>   |                      |      |              | <b>923,157</b>              |                 |                                 |
| 423       |  |                      |      |              |                             |                 |                                 |
| 424       | <b>D50 Electrical</b>  |                      |      |              |                             |                 |                                 |
| 425       | Demolition at existing buildings, cut, cap and make safe   | 47,407               | gsf  | 1.00         | 47,407                      |                 |                                 |
| 426       |  |                      |      |              |                             |                 |                                 |
| 427       | Service and Distribution (new addition)  | 45,706               | gsf  | 6.50         | 297,089                     |                 |                                 |
| 428       |  |                      |      |              |                             |                 |                                 |
| 429       | Emergency power (new addition)   | 1                    | ls   | 45,000.00    | 45,000                      |                 |                                 |
| 430       |  |                      |      |              |                             |                 |                                 |
| 431       | Feeders (Normal and Emergency power)   | 45,706               | gsf  | 6.50         | 297,089                     |                 |                                 |
| 432       |  |                      |      |              |                             |                 |                                 |
| 433       | Incoming service   |                      |      |              | w/Site Work                 |                 |                                 |
| 434       |  |                      |      |              |                             |                 |                                 |
| 435       | Lighting (new addition + two existing buildings)   | 83,492               | gsf  | 10.00        | 834,920                     |                 | no scope at 74 Pond St basement |
| 436       |  |                      |      |              |                             |                 |                                 |
| 437       | Lighting Control (new addition + two existing buildings)   | 83,492               | gsf  | 2.00         | 166,984                     |                 |                                 |
| 438       |  |                      |      |              |                             |                 |                                 |
| 439       | Branch Circuitry (new addition + two existing buildings)   | 83,492               | gsf  | 5.55         | 463,381                     |                 |                                 |
| 440       |  |                      |      |              |                             |                 |                                 |
| 441       | Mechanical Requirements (new addition + two existing buildings)                                  | 83,492               | gsf  | 5.00         | 417,460                     |                 |                                 |
| 442       |  |                      |      |              |                             |                 |                                 |
| 443       | Low Voltage Systems (Tel/data, Security) - empty conduit (new addition + two existing buildings) | 83,492               | gsf  | 2.00         | 166,984                     |                 |                                 |
| 444       |  |                      |      |              |                             |                 |                                 |
| 445       | Grounding system (new addition)  | 45,706               | gsf  | 1.50         | 68,559                      |                 |                                 |

**Town of Braintree  
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Study Estimate**

| OPTION 2A |  | BUILDING AREA (bgsf) |       |              |                             | 93,113               |  |
|-----------|--|----------------------|-------|--------------|-----------------------------|----------------------|--|
|           | Description  | Quantity             | Unit  | Unit Price   | Total \$                    | Subtotal Trades      |  |
|           |  |                      |       | New Addition | Add to Exist 74 Pond street |                      |  |
| 446       |  |                      |       |              |                             |                      |  |
| 447       | Temporary power and light (two existing buildings)                               | 47,407               | gsf   | 1.40         | 66,370                      |                      |  |
| 448       | Short circuit study 'overcurrent protection/arc flash hazard calculation         | 1                    | ls    | 10,000.00    | 10,000                      |                      |  |
| 449       | Lightning protection/grounding system  | 1                    | ls    | 15,000.00    | 15,000                      |                      |  |
| 450       | Testing/commissioning  | 1                    | ls    | 15,000.00    | 15,000                      |                      |  |
| 451       | Supervision/PM   | 1                    | ls    | 20,000.00    | 20,000                      |                      |  |
| 452       | Miscellaneous (sleeves/firestopping, vibration isolation/seismic bracing, ID)    | 83,492               | gsf   | 1.50         | 125,238                     |                      |  |
| 453       |  |                      |       |              |                             |                      |  |
| 454       | <b>Communications</b>  |                      |       |              |                             |                      |  |
| 455       | Tel/Data System (new addition + two existing buildings)                          | 93,113               | gsf   | 5.00         | 465,565                     |                      |  |
| 456       | Emergency Responder System   | 93,113               | gsf   | 1.00         | 93,113                      |                      |  |
| 457       | Two-way Communication System   | 93,113               | gsf   | 0.50         | 46,557                      |                      |  |
| 458       |  |                      |       |              |                             |                      |  |
| 459       | <b>Electronic Safety and Security</b>  |                      |       |              |                             |                      |  |
| 460       | Fire alarm system (new addition + two existing buildings)                        | 93,113               | gsf   | 5.25         | 488,843                     |                      |  |
| 461       |  |                      |       |              |                             |                      |  |
| 462       | <b>Solar System</b>  |                      |       |              |                             |                      |  |
| 463       | Solar panel system (only at new building)  | 39,267               | gsf   | 6.50         | 255,236                     |                      |  |
| 464       |  |                      |       |              |                             |                      |  |
| 465       | <b>Sub Total : Electrical</b>  |                      |       |              | <b>4,405,794</b>            |                      |  |
| 466       |  |                      |       |              |                             |                      |  |
| 467       | <b><u>SUBTOTAL FOR SERVICES</u></b>  |                      |       |              | <b>End of Trade</b>         | <b>\$ 13,568,670</b> |  |
| 468       |  |                      |       |              |                             |                      |  |
| 469       |  |                      |       |              |                             |                      |  |
| 470       | <b><u>E</u></b>  |                      |       |              |                             |                      |  |
| 471       | <b><u>E10</u></b>  |                      |       |              |                             |                      |  |
| 472       | E1010 Residential Appliances; refrigerator, cooktop, oven and hood, all electric | 70                   | units | 5,300.00     | 371,000                     |                      |  |
| 473       |  |                      |       |              |                             |                      |  |
| 474       | <b>Sub Total : Equipment</b>   |                      |       |              | <b>371,000</b>              |                      |  |
| 475       |  |                      |       |              |                             |                      |  |
| 476       |  |                      |       |              |                             |                      |  |
| 477       | <b><u>E20</u></b>  |                      |       |              |                             |                      |  |
| 478       | E2010 <b>Fixed Furnishings</b>   |                      |       |              |                             |                      |  |
| 479       | Wood veneer kitchen cabinetry, solid surface countertops                         | 70                   | units | 13,500.00    | 945,000                     |                      |  |
| 480       |  |                      |       |              |                             |                      |  |
| 481       | <b>Sub Total : Fixed Furnishings</b>   |                      |       |              | <b>945,000</b>              |                      |  |
| 482       |  |                      |       |              |                             |                      |  |
| 483       | <b><u>SUBTOTAL FOR EQUIPMENT &amp; FURNISHINGS</u></b>                           |                      |       |              | <b>End of Trade</b>         | <b>\$ 1,316,000</b>  |  |
| 484       |  |                      |       |              |                             |                      |  |
| 485       |  |                      |       |              |                             |                      |  |
| 486       | <b><u>F</u></b>  |                      |       |              |                             |                      |  |
| 487       | <b><u>F10</u></b>  |                      |       |              |                             |                      |  |
| 488       | No work this section   |                      |       | -            | -                           |                      |  |
| 489       |  |                      |       |              |                             |                      |  |
| 490       | <b>Sub Total : Special Construction</b>  |                      |       |              | <b>-</b>                    |                      |  |
| 491       |  |                      |       |              |                             |                      |  |

**Town of Braintree  
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| OPTION 2A |            | BUILDING AREA (bgsf)   |                |           |              | 93,113                      |                     |
|-----------|------------|--|----------------|-----------|--------------|-----------------------------|---------------------|
|           |            | Description  | Quantity       | Unit      | Unit Price   | Total \$                    | Subtotal Trades     |
|           |            |  |                |           | New Addition | Add to Exist 74 Pond street |                     |
| 492       |            |  |                |           |              |                             |                     |
| 493       | <b>F20</b> | <b>Selective Building Demolition</b>   |                |           |              |                             |                     |
| 494       |            | <b>F2010 Building Elements Demolition</b>  |                |           |              |                             |                     |
| 495       |            | Selective demolition of interior finishes, partitions, doors, fittings and specialties at existing buildings | 47,407         | sf        | 16.50        | 782,216                     |                     |
| 496       |            | Remove interior of exterior wall for new insulation  | 22,210         | sf        | 7.00         | 155,470                     |                     |
| 497       |            | Demo roof for 3rd floor addition at 74 Pond Street   | 6,439          | sf        | 10.00        | 64,390                      |                     |
| 498       |            |  |                |           |              | -                           |                     |
| 499       |            |  |                |           |              |                             |                     |
| 500       |            | <b>Sub Total : Building Elements Demolition</b>  |                |           |              | <b>1,002,076</b>            |                     |
| 501       |            |  |                |           |              |                             |                     |
| 502       |            | <b>F2020 Hazardous Components Abatement</b>  |                |           |              |                             |                     |
| 503       |            | Hazardous Components Abatement   |                |           |              |                             |                     |
| 504       |            | Abatement  |                |           |              | NIC                         |                     |
| 505       |            |  |                |           |              |                             |                     |
| 506       |            | <b>Sub Total : Hazardous Components Abatement</b>  |                |           |              | -                           |                     |
| 507       |            |  |                |           |              |                             |                     |
| 508       |            | <b><u>SUBTOTAL FOR SPECIAL CONSTRUCTION &amp; DEMOLITION</u></b>   |                |           |              | <b>End of Trade</b>         | <b>\$ 1,002,076</b> |
| 509       |            |  |                |           |              |                             |                     |
| 510       |            |  |                |           |              |                             |                     |
| 511       | <b>G</b>   | <b><u>SITWORK</u></b>  |                |           |              |                             |                     |
| 512       | <b>G10</b> | <b>Site Preparation</b>  |                |           |              |                             |                     |
| 513       |            | <b>G1010 Site Clearing</b>   | <b>186,402</b> | <b>sf</b> |              |                             |                     |
| 514       |            | Sawcut   | 1              | ls        | 2,500.00     | 2,500                       |                     |
| 515       |            | Construction fence   | 2,021          | lf        | 14.00        | 28,294                      |                     |
| 516       |            | Gates  | 2              | pr        | 7,500.00     | 15,000                      |                     |
| 517       |            | Stabilized construction entrance   | 2              | ea        | 6,500.00     | 13,000                      |                     |
| 518       |            | Temporary construction signs   | 1              | ls        | 6,500.00     | 6,500                       |                     |
| 519       |            | Erosion control barrier - silt fence   | 2,021          | lf        | 12.00        | 24,252                      |                     |
| 520       |            | Inlet protection   | 1              | ls        | 5,000.00     | 5,000                       |                     |
| 521       |            | Protection of existing structures at site  | 1              | ls        | 10,000.00    | 10,000                      |                     |
| 522       |            | Clear site   | 4.0            | acres     | 10,000.00    | 40,000                      |                     |
| 523       |            |  |                |           |              |                             |                     |
| 524       |            | <b>G1020 Site Demolition &amp; Relocations</b>   |                |           |              |                             |                     |
| 525       |            | <i>Site demolition for new work</i>  |                |           |              |                             |                     |
| 526       |            | Remove asphalt paving and curbs, pedestrian asphalt paving, concrete paving, etc.                            | 59,523         | sf        | 1.50         | 89,285                      |                     |
| 527       |            | Partial demo of utility tunnel (approx. 65 lf)   | 1              | ls        | 68,000.00    | 68,000                      |                     |
| 528       |            | Tree removal and stump grinding  | 15             | ea        | 750.00       | 11,250                      |                     |
| 529       |            | Protect exist trees to remain  | 37             | ea        | 500.00       | 18,500                      |                     |
| 530       |            | Misc demo other than above   | 1              | ls        | 9,000.00     | 9,000                       |                     |
| 531       |            |  |                |           |              |                             |                     |
| 532       |            | <b>G1030 Site Earthwork</b>  |                |           |              |                             |                     |
| 533       |            | Strip topsoil  | 3,452          | cy        | 15.00        | 51,778                      |                     |
| 534       |            | Cuts and fills; site grades  | 2,174          | cy        | 15.00        | 32,604                      |                     |
| 535       |            | Cuts and fills of asphalt pavement and concrete pavement   | 2,157          | cy        | 20.00        | 43,141                      |                     |
| 536       |            | Rough and fine grade   | 56,345         | sf        | 1.75         | 98,604                      |                     |
| 537       |            |  |                |           |              |                             |                     |



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| OPTION 2A |            |   | BUILDING AREA (bgsf) |      |              | 93,113                      |                 |
|-----------|------------|---|----------------------|------|--------------|-----------------------------|-----------------|
|           |            | Description   | Quantity             | Unit | Unit Price   | Total \$                    | Subtotal Trades |
|           |            |   |                      |      | New Addition | Add to Exist 74 Pond street |                 |
| 538       | G1040      | Hazardous Waste Remediation   |                      |      |              |                             |                 |
| 539       |            | Hazardous soils conditions  |                      |      |              |                             | Assume none     |
| 540       |            |   |                      |      |              |                             |                 |
| 541       |            | <b>Sub Total : Site Preparation</b>   |                      |      |              | <b>566,708</b>              |                 |
| 542       |            |   |                      |      |              |                             |                 |
| 543       | <b>G20</b> | <b>Site Improvements</b>  |                      |      |              |                             |                 |
| 544       | G2010      | Parking Lots & Roadways   |                      |      |              |                             |                 |
| 545       |            | Existing asphalt paving to remain; repair a few cracks  | 1                    | ls   | 10,000.00    | 10,000                      |                 |
| 546       |            | Asphalt parking lot   | 25,018               | sf   | 3.75         | 93,818                      |                 |
| 547       |            | Permeable asphalt pavers  | 20,132               | sf   | 10.50        | 211,386                     |                 |
| 548       |            | Asphalt sidewalk  | 1,896                | sf   | 3.50         | 6,636                       |                 |
| 549       |            | Gravel base   | 1,917                | cy   | 45.00        | 86,251                      |                 |
| 550       |            | Parking stall painting  | 100                  | ea   | 85.00        | 8,500                       |                 |
| 551       |            | ADA   | 8                    | ea   | 350.00       | 2,800                       |                 |
| 552       |            | Misc markings, crosswalk  | 1                    | ls   | 7,500.00     | 7,500                       |                 |
| 553       | G2030      | Pedestrian Paving   |                      |      |              |                             |                 |
| 554       |            | Concrete sidewalks  | 10,043               | sf   | 10.00        | 100,430                     |                 |
| 555       |            | Concrete paver at plazas  | 1,152                | sf   | 45.00        | 51,840                      |                 |
| 556       |            | Gravel base   | 456                  | cy   | 45.00        | 20,524                      |                 |
| 557       |            | Granite curb  | 2,257                | lf   | 58.00        | 130,906                     |                 |
| 558       | G2040      | Site Development  |                      |      |              |                             |                 |
| 559       |            | Add new ramp at 90 Pond st  | 170                  | sf   | 150.00       | 25,500                      |                 |
| 560       |            | Add railings to existing ramps.   | 90                   | lf   | 275.00       | 24,750                      |                 |
| 561       |            | Cast-in-Place concrete retaining wall incl. cont. footing, gravel base and excavation/backfill; allow | 1                    | ls   | 150,000.00   | 150,000                     |                 |
| 562       |            | Waste and recycle bin; assumed qty  | 2                    | ea   | 2,400.00     | 4,800                       |                 |
| 563       |            | Backet benches  | 3                    | ea   | 3,000.00     | 9,000                       |                 |
| 564       |            | Bike racks  | 12                   | ea   | 1,250.00     | 15,000                      |                 |
| 565       |            | Movable table with 4 chairs; assumed qty  | 3                    | ea   | 2,500.00     | 7,500                       |                 |
| 566       |            | ADA parking signs   | 8                    | ea   | 500.00       | 4,000                       |                 |
| 567       |            | Replace chainlink fence   | 1,279                | lf   | 28.00        | 35,812                      |                 |
| 568       | G2050      | Landscaping   |                      |      |              |                             |                 |
| 569       |            | Planting bed  | 2                    | ea   | 1,500.00     | 3,000                       |                 |
| 570       |            | Topsoil import  | 1,674                | cy   | 32.00        | 53,559                      |                 |
| 571       |            | Mulch; allow  | 42                   | cy   | 54.00        | 2,244                       |                 |
| 572       |            | Lawn  | 87,593               | sf   | 1.50         | 131,390                     |                 |
| 573       |            | Trees;  | 54                   | ea   | 1,150.00     | 62,100                      |                 |
| 574       |            | Shrubs  | 20                   | ea   | 450.00       | 9,000                       |                 |
| 575       |            |   |                      |      |              |                             |                 |
| 576       |            | <b>Sub Total : Site Improvements</b>  |                      |      |              | <b>1,268,245</b>            |                 |
| 577       |            |   |                      |      |              |                             |                 |
| 578       | <b>G30</b> | <b>Site Mechanical Utilities</b>  |                      |      |              |                             |                 |
| 579       | G3000      | Site Utilities  |                      |      |              |                             |                 |
| 580       |            | Water Service   |                      |      |              |                             |                 |
| 581       |            | Connect to existing fire and water main   | 1                    | ls   | 18,000.00    | 18,000                      | assumption      |
| 582       |            | Sanitary Sewer  |                      |      |              |                             |                 |
| 583       |            | Connect to existing SMH at street   | 1                    | ls   | 15,000.00    | 15,000                      | assumption      |



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| OPTION 2A |            |  | BUILDING AREA (bgsf) |      |              | 93,113                      |                     |
|-----------|------------|--|----------------------|------|--------------|-----------------------------|---------------------|
|           |            | Description  | Quantity             | Unit | Unit Price   | Total \$                    | Subtotal Trades     |
|           |            |  |                      |      | New Addition | Add to Exist 74 Pond street |                     |
| 584       |            | Stormwater Drainage  |                      |      |              |                             |                     |
| 585       |            | Corrugated Plastic Pipe (CPP), 6' dia  | 995                  | lf   | 38.00        | 37,810                      |                     |
| 586       |            | Perforated CPP underdrain, 6' dia  | 1,897                | lf   | 35.00        | 66,395                      |                     |
| 587       |            | Catch basin  | 6                    | ea   | 4,500.00     | 27,000                      |                     |
| 588       |            | Drain manhole  | 5                    | ea   | 7,500.00     | 37,500                      |                     |
|           |            | Connect into existing drain infrastructure   | 1                    | ls   | 6,500.00     | 6,500                       |                     |
| 590       |            | Underground infiltration chamber system Stormtech MC-3500; chamber size 61.06' L x 113.92' L x 3.75' h, including excavation | 7,308                | sf   | 35.00        | 255,780                     |                     |
| 591       |            | 9" stone base, 12" stone cover, 12" side cover, non-woven filter fabric around stone   |                      |      |              | incl above                  |                     |
| 592       |            | Utility tunnel; adjust to follow new connector at basement   | 86                   | lf   | 3,500.00     | 301,000                     |                     |
| 593       |            |  |                      |      |              |                             |                     |
| 594       |            | <b>Sub Total : Site Mechanical Utilities</b>   |                      |      |              | <b>764,985</b>              |                     |
| 595       |            |  |                      |      |              |                             |                     |
| 596       | <b>G40</b> | <b>Site Electrical Utilities</b>   |                      |      |              |                             |                     |
| 597       | G4010      | Electrical Distribution  |                      |      |              |                             |                     |
| 598       |            | Primary power, secondary power; allow  | 1                    | ls   | 320,000.00   | 320,000                     |                     |
| 599       | G4020      | Site Lighting  |                      |      |              |                             |                     |
| 600       |            | Site lighting; allow   | 1                    | ls   | 30,000.00    | 30,000                      |                     |
| 601       |            |  |                      |      |              |                             |                     |
| 602       |            | <b>Sub Total : Site Electrical Utilities</b>   |                      |      |              | <b>350,000</b>              |                     |
| 603       |            |  |                      |      |              |                             |                     |
| 604       |            | <b><u>SUBTOTAL FOR SITEWORK</u></b>  |                      |      |              | <b>End of Trade</b>         | <b>\$ 2,949,939</b> |

| ###  |  | RESIDENTIAL BUILDING |                     | SITEWORK           |                    | TOTAL               |                 |
|--|--|----------------------|---------------------|--------------------|--------------------|---------------------|-----------------|
|  | BUILDING AREA (bgsf)   | 93,113               |                     |                    |                    | \$ 447.43 /unit     | 93,113 gsf      |
|  |  | Subtotal Trade       | Total               | Subtotal Trade     | Total              | Cost                | Cost/sf         |
| <b>A</b>   | <b>SUBSTRUCTURE</b>  |                      | <b>\$1,016,855</b>  |                    | <b>\$0</b>         | <b>\$1,016,855</b>  | <b>\$10.92</b>  |
|  | A10 Foundations  | \$903,602            |                     |                    |                    | \$903,602           |                 |
|  | A20 Basement Construction                                    | \$113,253            |                     |                    |                    | \$113,253           |                 |
| <b>B</b>   | <b>SHELL</b>   |                      | <b>\$8,784,992</b>  |                    | <b>\$0</b>         | <b>\$8,784,992</b>  | <b>\$94.35</b>  |
|  | B10 Superstructure   | \$1,463,609          |                     |                    |                    | \$1,463,609         |                 |
|  | B20 Exterior Enclosure                                       | \$6,146,409          |                     |                    |                    | \$6,146,409         |                 |
|  | B30 Roofing  | \$1,174,974          |                     |                    |                    | \$1,174,974         |                 |
| <b>C</b>   | <b>INTERIORS</b>   |                      | <b>\$6,741,245</b>  |                    | <b>\$0</b>         | <b>\$6,741,245</b>  | <b>\$72.40</b>  |
|  | C10 Interior Construction                                    | \$3,697,616          |                     |                    |                    | \$3,697,616         |                 |
|  | C20 Stairs   | \$354,000            |                     |                    |                    | \$354,000           |                 |
|  | C30 Interior Finishes  | \$2,689,629          |                     |                    |                    | \$2,689,629         |                 |
| <b>D</b>   | <b>SERVICES</b>  |                      | <b>\$13,568,670</b> |                    | <b>\$0</b>         | <b>\$13,568,670</b> | <b>\$145.72</b> |
|  | D10 Conveying  | \$930,000            |                     |                    |                    | \$930,000           |                 |
|  | D20 Plumbing   | \$2,786,894          |                     |                    |                    | \$2,786,894         |                 |
|  | D30 HVAC   | \$4,522,824          |                     |                    |                    | \$4,522,824         |                 |
|  | D40 Fire Protection  | \$923,157            |                     |                    |                    | \$923,157           |                 |
|  | D50 Electrical   | \$4,405,794          |                     |                    |                    | \$4,405,794         |                 |
| <b>E</b>   | <b>FITTINGS &amp; FIXED EQUIPMENT</b>                        |                      | <b>\$1,344,000</b>  |                    | <b>\$0</b>         | <b>\$1,344,000</b>  | <b>\$14.43</b>  |
|  | E10 Equipment  | \$371,000            |                     |                    |                    | \$371,000           |                 |
|  | E20 Fixed Furnishings / Millwork                             | \$973,000            |                     |                    |                    | \$973,000           |                 |
| <b>F</b>   | <b>SPECIAL CONSTRUCTION &amp; DEMOLITION</b>                 |                      | <b>\$1,002,076</b>  |                    | <b>\$0</b>         | <b>\$1,002,076</b>  | <b>\$10.76</b>  |
|  | F10 Special Construction                                     | \$0                  |                     |                    |                    | \$0                 |                 |
|  | F20 Selective Building Demolition                            | \$1,002,076          |                     |                    |                    | \$1,002,076         |                 |
| <b>G</b>   | <b>SITWORK</b>   |                      | <b>\$0</b>          |                    | <b>\$3,133,491</b> | <b>\$3,133,491</b>  | <b>\$33.65</b>  |
|  | G10 Site Preparation   |                      |                     | \$610,197          |                    | \$610,197           |                 |
|  | G20 Site Improvements  |                      |                     | \$1,408,309        |                    | \$1,408,309         |                 |
|  | G30 Site Mechanical Utilities                                |                      |                     | \$764,985          |                    | \$764,985           |                 |
|  | G40 Site Electrical Utilities                                |                      |                     | \$350,000          |                    | \$350,000           |                 |
| <b>SUBTOTAL DIRECT COST</b>                                |  | <b>\$32,457,837</b>  | <b>\$32,457,837</b> | <b>\$3,133,491</b> | <b>\$3,133,491</b> | <b>\$35,591,327</b> | <b>\$382</b>    |
|  | Adjustment for open shop labor rates                         | -15.00%              | (\$4,868,675)       |                    | (\$470,024)        | (\$5,338,699)       | (\$57)          |
| <b>TOTAL DIRECT COST</b>                                   |  | <b>\$296.30</b>      | <b>\$27,589,161</b> | <b>\$3,133,491</b> | <b>\$2,663,467</b> | <b>\$30,252,628</b> | <b>\$325</b>    |
|  | Design and Pricing Contingency                               | 15.00%               | \$4,138,374         |                    | \$399,520          | \$4,537,894         | \$48.74         |
| <b>Subtotal - Direct Construction Cost + Contingencies</b> |  | <b>\$340.74</b>      | <b>\$31,727,535</b> | <b>\$32.90</b>     | <b>\$3,062,987</b> | <b>\$34,790,522</b> | <b>\$373.64</b> |
|  | General Conditions, General Requirements, Insurances & Bonds | 12.75%               | \$4,045,261         |                    | \$390,531          | \$4,435,792         | \$47.64         |
|  | Building Permit  | 1.15%                | \$411,387           |                    | \$39,715           | \$451,103           | \$4.84          |
|  | OH & Profit  | 5.00%                | \$1,809,209         |                    | \$174,662          | \$1,983,871         | \$21.31         |
| <b>TOTAL ESTIMATED CONSTRUCTION COST</b>                   |  | <b>\$408.04</b>      | <b>\$37,993,392</b> | <b>\$39.39</b>     | <b>\$3,667,895</b> | <b>\$41,661,287</b> | <b>\$447.43</b> |



**Town of Braintree  
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| OPTION 2A |                    |   | BUILDING AREA (bgsf) |              |                             | 93,113          |                  |
|-----------|--------------------|---|----------------------|--------------|-----------------------------|-----------------|------------------|
|           | Description        | Quantity  | Unit                 | Unit Price   | Total \$                    | Subtotal Trades |                  |
|           |                    |   |                      | New Addition | Add to Exist 74 Pond street |                 |                  |
|           | Existing Buildings | 47,407  | gsf                  |              |                             |                 |                  |
|           | New Addition       | 45,706  | gsf                  | 39,267.00    | 6,439                       |                 | w/out Townhouses |
|           | <b>Total GSF</b>   | <b>93,113</b>   | <b>gsf</b>           |              |                             |                 |                  |
| 5         | <b>A</b>           | <b>SUBSTRUCTURE</b>   |                      |              |                             |                 |                  |
| 6         | <b>A10</b>         | <b>FOUNDATIONS</b>  |                      |              |                             |                 |                  |
| 7         | A1010              | Standard Foundations  |                      |              |                             |                 |                  |
| 8         |                    | Standard Foundations (new addition)   | 39,267               | gsf          | 12.50                       | 490,838         |                  |
| 9         |                    | Concrete spread footing / tie beam  |                      |              |                             | incl above      |                  |
| 10        |                    | Concrete interior spread footings   |                      |              |                             | incl above      |                  |
| 11        |                    | Foundation walls  |                      |              |                             | incl above      |                  |
| 12        |                    | Columns   |                      |              |                             | incl above      |                  |
| 13        |                    | Misc tie beams, etc   |                      |              |                             | incl above      |                  |
| 14        |                    | Perimeter drain   |                      |              |                             | incl above      |                  |
| 15        |                    | Gravel base, footings   |                      |              |                             | incl above      |                  |
| 16        |                    | Elevator pit  | 1                    | ea           | 27,500.00                   | 27,500          |                  |
| 17        |                    | Crystalline waterproof elevator pit   | 1                    | ea           | 8,500.00                    | 8,500           |                  |
| 18        |                    | Minor repair as needed to foundation walls at exist buildings                       | 1                    | ls           | 95,000.00                   | 95,000          |                  |
| 19        |                    |   |                      |              |                             |                 |                  |
| 20        |                    | Sub Total : Standard Foundations  |                      |              |                             | <b>621,838</b>  |                  |
| 21        |                    |   |                      |              |                             |                 |                  |
| 22        | A1020              | Special Foundations   |                      |              |                             |                 |                  |
| 23        |                    | no work shown   |                      |              |                             | -               |                  |
| 24        |                    |   |                      |              |                             |                 |                  |
| 25        |                    | Sub Total : Special Foundations   |                      |              |                             | -               |                  |
| 26        |                    |   |                      |              |                             |                 |                  |
| 27        | A1030              | Slab On Grade   |                      |              |                             |                 |                  |
| 28        |                    | Excavation for slab on grade  | 629                  | cy           | 28.00                       | 17,612          |                  |
| 29        |                    | Stockpile soil for reuse  |                      |              |                             | incl above      |                  |
| 30        |                    | Structural fill   |                      |              |                             | incl above      |                  |
| 31        |                    | Concrete  |                      |              |                             | -               |                  |
| 32        |                    | Slab on grade over vapor retarder, reinforced with 6x6-W2.9xW2.9 WWF, vapor barrier | 10,786               | sf           | 14.50                       | 156,397         |                  |
| 33        |                    | Water vapor reducing admixture  |                      |              |                             | incl above      |                  |
| 34        |                    | 8" min compacted gravel under slab  | 299                  | cy           | 45.00                       | 13,455          |                  |
| 35        |                    | Misc concrete   | 1                    | ls           | 35,000.00                   | 35,000          |                  |
| 36        |                    | Minor repair as needed to slabs at exist buildings                                  | 1                    | ls           | 59,300.00                   | 59,300          |                  |
| 37        |                    |   |                      |              |                             |                 |                  |
| 38        |                    | Sub Total : Slab On Grade   |                      |              |                             | <b>281,764</b>  |                  |
| 39        |                    |   |                      |              |                             |                 |                  |
| 40        | <b>A20</b>         | <b>BASEMENT CONSTRUCTION</b>  |                      |              |                             |                 |                  |
| 41        | A2010              | Basement Excavation   |                      |              |                             |                 |                  |
| 42        |                    | See Basement walls  |                      |              |                             | -               |                  |
| 43        |                    |   |                      |              |                             |                 |                  |
| 44        |                    | Sub Total : Basement Excavation   |                      |              |                             | -               |                  |
| 45        |                    |   |                      |              |                             |                 |                  |

**Town of Braintree  
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| OPTION 2A |            |  | BUILDING AREA (bgsf) |      |              | 93,113                      |   |
|-----------|------------|--|----------------------|------|--------------|-----------------------------|---|
|           |            | Description  | Quantity             | Unit | Unit Price   | Total \$                    | Subtotal Trades   |
|           |            |  |                      |      | New Addition | Add to Exist 74 Pond street |   |
| 46        | A2020      | Basement Walls   |                      |      |              |                             |   |
| 47        |            | Basement concrete foundation and walls incl excavation   | 10,786               | sf   | 10.50        | 113,253                     |   |
| 48        |            |  |                      |      |              |                             |   |
| 49        |            | Sub Total : Basement Walls   |                      |      |              | 113,253                     |   |
| 50        |            |  |                      |      |              |                             |   |
| 51        |            | <b>SUBTOTAL FOR SUBSTRUCTURE</b>   |                      |      |              | <b>End of Trade</b>         | <b>\$ 1,016,855</b>                                     |
| 52        |            |  |                      |      |              |                             |   |
| 53        |            |  |                      |      |              |                             |   |
| 54        | <b>B</b>   | <b>SHELL</b>   |                      |      |              |                             |   |
| 55        | <b>B10</b> | <b>SUPERSTRUCTURE</b>  |                      |      |              |                             |   |
| 56        | B1010      | Floor Construction   |                      |      |              |                             |   |
| 57        |            | Structural wood framing; Level 1   | 10,786               | sf   | 25.00        | 269,650                     |   |
| 58        |            | Misc struct steel associated with wood framing; assumed 2#/sf  | 11                   | ton  | 5,400.00     | 59,400                      |   |
| 59        |            | Upper levels   |                      |      |              |                             | Fire-retardant treated (FRT) wood framing 2-hour rating |
| 60        |            | Structural wood framing;   | 17,695               | sf   | 22.83        | 403,888                     |   |
| 61        |            | Misc struct steel associated with wood framing; assumed 2#/sf  | 18                   | ton  | 5,400.00     | 97,200                      |   |
| 62        |            |  |                      |      |              |                             |   |
| 63        |            | Structural wood framing; 3rd floor at 74 Pond Street   | 6,439                | sf   | 22.83        | 146,970                     |   |
| 64        |            | Misc struct steel associated with wood framing; assumed 2#/sf  | 6                    | ton  | 5,400.00     | 32,400                      |   |
| 65        |            |  |                      |      |              |                             |   |
| 66        |            | Sub Total : Floor Construction   |                      |      |              | 1,009,509                   |   |
| 67        |            |  |                      |      |              |                             |   |
| 68        | B1020      | Roof Construction  |                      |      |              |                             |   |
| 69        |            | Structural wood framing; roof at new addition  | 11,325               | sf   | 25.11        | 284,350                     |   |
| 70        |            | Structural wood framing; roof at 74 Pond st new 3rd floor addition   | 6,761                | sf   | 25.11        | 169,751                     |   |
| 71        |            |  |                      |      |              |                             |   |
| 72        |            | Sub Total : Roof Construction  |                      |      |              | 454,101                     |   |
| 73        |            |  |                      |      |              |                             |   |
| 74        |            |  |                      |      |              |                             |   |
| 75        | <b>B20</b> | <b>EXTERIOR CLOSURE</b>  |                      |      |              |                             |   |
| 76        | B2010      | Exterior Walls   |                      |      |              |                             |   |
| 77        |            | <i>Façades at new additions</i>  | 53,467               | sf   |              |                             |   |
| 78        |            | Exterior wall; 75% fiber cement clapboard siding & trim, 25% brick veneer  | 18,243               | sf   | 62.50        | 1,140,209                   | assumed 70% of exterior façade                          |
| 79        |            | Exterior wall assembly (2x6 wood studs, insulation, AVB, sheathing)  | 18,243               | sf   | 25.25        | 460,644                     |   |
| 80        |            | Exterior wall, (2) layer GWB type X at inside face of exterior wall  | 18,243               | sf   | 5.50         | 100,338                     |   |
| 81        |            | Misc metals for exterior brick wall assembly   |                      |      |              | incl above                  |   |
| 82        |            | Exterior façade, caulking and sealing  | 26,062               | sf   | 2.50         | 65,155                      |   |
| 83        |            | Staging, access and lifts for exterior façade work   | 26,062               | sf   | 4.95         | 129,006                     |   |
| 84        |            | Façades at both existing buildings; repoint brick masonry walls, assumed 25'   | 5,553                | sf   | 55.00        | 305,388                     |   |
| 85        |            | Repair damaged steel lintels at basement of 90 Pond Street   | 25                   | ea   | 2,150.00     | 53,750                      |   |
| 86        |            | (R-30) 4" closed cell spray foam insulation at exterior wall from inside, av barrier, sheathing, furring strips, GWB layer | 22,210               | sf   | 31.25        | 694,063                     |   |
|           |            | New awnings at parking lot entries into back of both buildings (2 loc/bldg)  | 1                    | ls   | 60,000.00    | 60,000                      |   |
| 88        |            |  |                      |      |              |                             |   |
| 89        |            | Sub Total : Exterior Walls   |                      |      |              | 3,008,553                   |   |
| 90        |            |  |                      |      |              |                             |   |



**Town of Braintree  
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| OPTION 2A |            |  | BUILDING AREA (bgsf) |      |              |                             | 93,113              |  |
|-----------|------------|--|----------------------|------|--------------|-----------------------------|---------------------|--|
|           |            | Description  | Quantity             | Unit | Unit Price   | Total \$                    | Subtotal Trades     |  |
|           |            |  |                      |      | New Addition | Add to Exist 74 Pond street |                     |  |
| 91        | B2020      | Exterior windows   |                      |      |              |                             |                     |  |
| 92        |            | Exterior aluminum cladd wood windows; triple-pane insulated low-e glass, aluminum and glass storefront system at commercial spaces and building entries  | 7,819                | sf   | 220.00       | 1,720,086                   |                     | windows and storefronts assumed 30% of exterior façade |
| 93        |            | Remove and replace exterior windows at both existing buildings; aluminum cladd wood windows; triple-pane insulated low-e glass, aluminum and glass storefront system at commercial spaces and building entries | 5,195                | sf   | 220.00       | 1,142,900                   |                     |  |
|           |            | Window sill  | 318                  | lf   | 75.00        | 23,850                      |                     |  |
| 95        |            | Rod and sealant, flashing at windows   | 3,801                | lf   | 20.00        | 76,020                      |                     |  |
| 96        |            |  |                      |      |              |                             |                     |  |
| 97        |            | Sub Total : Exterior windows   |                      |      |              | <b>2,962,856</b>            |                     |  |
| 98        |            |  |                      |      |              |                             |                     |  |
| 99        | B2030      | Exterior doors   |                      |      |              |                             |                     |  |
| 100       |            | Exterior doors including frames and hardware   | 1                    | ls   | 75,000.00    | 75,000                      |                     | assumed qty  |
| 101       |            | New entry doors & hardware to match existing at exist buildings, allow   | 1                    | ls   | 100,000.00   | 100,000                     |                     |  |
| 102       |            |  |                      |      |              |                             |                     |  |
| 103       |            | Sub Total : Exterior doors   |                      |      |              | <b>175,000</b>              |                     |  |
| 104       |            |  |                      |      |              |                             |                     |  |
| 105       |            |  |                      |      |              |                             |                     |  |
| 106       | <b>B30</b> | <b>ROOFING</b>   |                      |      |              |                             |                     |  |
| 107       | B3010      | Roof Coverings   |                      |      |              |                             |                     |  |
| 108       |            | New membrane roofing system, incl insulation, sheathing wood blocking, metal flashing and coping, roof accessories and specialties at new addition   | 11,325               | sf   | 45.00        | 509,639                     |                     |  |
| 109       |            | New membrane roofing system, incl insulation, sheathing wood blocking, metal flashing and coping, roof accessories and specialties at 74 Pond st addition  | 5,734                | sf   | 45.00        | 258,030                     |                     |  |
|           |            | Add dormers on 74 Pond St. attic level, slate roofing  | 1,027                | sf   | 105.00       | 107,830                     |                     |  |
| 111       |            | Roof repairs to existing slate roofing at 74 Pond St   | 1                    | ls   | 25,000.00    | 25,000                      |                     |  |
| 112       |            | New 50-year architecture asphalt shingles at 90 Pond St, repair gutter, downspout and flashing system on the roofs   | 8,577                | sf   | 32.00        | 274,476                     |                     |  |
| 113       |            |  |                      |      |              |                             |                     |  |
| 114       |            | Sub Total : Roof Coverings   |                      |      |              | <b>1,174,974</b>            |                     |  |
| 115       |            |  |                      |      |              |                             |                     |  |
| 116       |            | <b><u>SUBTOTAL FOR SHELL</u></b>   |                      |      |              | <b>End of Trade</b>         | <b>\$ 8,784,992</b> |  |
| 117       |            |  |                      |      |              |                             |                     |  |
| 118       |            |  |                      |      |              |                             |                     |  |
| 119       | <b>C</b>   | <b>INTERIORS</b>   |                      |      |              |                             |                     |  |
| 120       | <b>C10</b> | <b>INTERIOR CONSTRUCTION</b>   |                      |      |              |                             |                     |  |
| 121       | C1010      | Partitions, Rough Carpentry  |                      |      |              |                             |                     |  |
| 122       |            | Extend elevator CMU shaft to new 3rd floor at 74 Pond Street   | 480                  | sf   | 45.00        | 21,600                      |                     |  |
| 123       |            | New elevator shaft at new addition   | 1,344                | sf   | 40.00        | 53,760                      |                     |  |
| 124       |            | Interior partitions w/wood framing, 5/8" GWB and batt insulation   | 83,492               | gsf  | 30.00        | 2,504,760                   |                     |  |
| 125       |            | Interior storefront, glazing/ sidelight/ vision panels   |                      |      |              |                             |                     | incl above   |
| 126       |            | Misc blocking, misc metals, firestopping, caulking   |                      |      |              |                             |                     | incl above   |
| 127       |            |  |                      |      |              |                             |                     |  |
| 128       |            | Sub Total : Partitions, Rough Carpentry  |                      |      |              | <b>2,580,120</b>            |                     |  |
| 129       |            |  |                      |      |              |                             |                     |  |



**Town of Braintree  
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| OPTION 2A |            |  | BUILDING AREA (bgsf) |      |              |                             | 93,113          |              |
|-----------|------------|--|----------------------|------|--------------|-----------------------------|-----------------|--------------|
|           |            | Description  | Quantity             | Unit | Unit Price   | Total \$                    | Subtotal Trades |              |
|           |            |  |                      |      | New Addition | Add to Exist 74 Pond street |                 |              |
| 130       |            |  |                      |      |              |                             |                 |              |
| 131       | C1020      | Interior Doors   |                      |      |              |                             |                 |              |
| 132       |            | Interior doors at units; unit entry  | 70                   | ea   | 2,350.00     | 164,500                     |                 |              |
| 133       |            | bedroom, bathroom  | 118                  | ea   | 1,750.00     | 206,500                     |                 |              |
| 134       |            | closet   | 47                   | ea   | 1,450.00     | 68,150                      |                 |              |
| 135       |            | Interior doors at corridors, stairs, amenities area  | 83,492               | gsf  | 1.51         | 125,800                     |                 |              |
| 136       |            | Access door/panel, specialty doors and hardware, misc metals and blocking  | 83,492               | gsf  | 0.75         | 62,619                      |                 |              |
| 137       |            |  |                      |      |              |                             |                 |              |
| 138       |            | Sub Total : Interior Doors   |                      |      |              | <b>627,569</b>              |                 |              |
| 139       |            |  |                      |      |              |                             |                 |              |
| 140       |            |  |                      |      |              |                             |                 |              |
| 141       | C1030      | Fittings   |                      |      |              |                             |                 |              |
| 142       |            | Interior signage   | 83,492               | gsf  | 0.50         | 41,746                      |                 |              |
| 143       |            | Toilet accessories; medicine cabinet w/mirror, grab bars, toilet paper dispenser   | 71                   | rms  | 735.00       | 52,185                      |                 |              |
| 144       |            | Add shower curtain rod for full bathroom   | 70                   | rms  | 215.00       | 15,050                      |                 |              |
| 145       |            | Fire extinguisher and cabinets   | 22                   | ea   | 550.00       | 11,930                      |                 |              |
| 146       |            | Painted wood wall base, door & window wood trim at units   | 70                   | unit | 3,900.00     | 273,000                     |                 | average cost |
| 147       |            | Misc metals, rough carpentry, casework at common areas, caulking and sealant, corner guards, etc.  | 83,492               | gsf  | 1.15         | 96,016                      |                 |              |
| 148       |            |  |                      |      |              |                             |                 |              |
| 149       |            | Sub Total : Fittings   |                      |      |              | <b>489,927</b>              |                 |              |
| 150       |            |  |                      |      |              |                             |                 |              |
| 151       | <b>C20</b> | <b>STAIRCASES</b>  |                      |      |              |                             |                 |              |
| 152       | C2010      | Stair Construction   |                      |      |              |                             |                 |              |
| 153       |            | Wood stairs structure; exist to remain, code upgrade railing; (2)1st-2nd floor at 74 Pond St bldg and (2) basement to 3rd floor at 90 Pond St. | 8                    | flt  | 10,000.00    | 80,000                      |                 |              |
| 154       |            | Extend wood stairs up to new 3rd floor at 74 Pond St   | 1                    | flt  | 27,500.00    | 27,500                      |                 |              |
| 155       |            | New wood stairs structure and metal railing at addition; (2) from basement - 3rd Floor   | 6                    | flt  | 25,000.00    | 150,000                     |                 |              |
| 156       |            |  |                      |      |              |                             |                 |              |
| 157       |            | Sub Total : Stair Construction   |                      |      |              | <b>257,500</b>              |                 |              |
| 158       |            |  |                      |      |              |                             |                 |              |
| 159       | C2020      | Stair Finishes   |                      |      |              |                             |                 |              |
| 160       |            | Refinish stair treads and risers at existing stairs to remain  | 8                    | flt  | 5,500.00     | 44,000                      |                 |              |
| 161       |            | New stair finish, rubber landing, treads and risers  | 7                    | flt  | 7,500.00     | 52,500                      |                 |              |
| 162       |            |  |                      |      |              |                             |                 |              |
| 163       |            | Sub Total : Stair Finishes   |                      |      |              | <b>96,500</b>               |                 |              |
| 164       |            |  |                      |      |              |                             |                 |              |
| 165       | <b>C30</b> | <b>INTERIOR FINISHES</b>   |                      |      |              |                             |                 |              |
| 166       | C3010      | Wall Finishes  |                      |      |              |                             |                 |              |
| 167       |            | Paint walls  | 83,492               | gsf  | 2.50         | 208,730                     |                 |              |
| 168       |            | Ceramic tile, toilet rooms assumed 7' high changed to paint GWB walls  | 18,389               | sf   | 2.50         | 45,973                      |                 |              |
| 169       |            | GWB walls with vinyl wall covering 50%, paint 50% at corridors and vestibules  | 13,972               | sf   | 15.00        | 209,580                     |                 |              |
| 170       |            | Painted wood trim at base, door & window at residential  | 41,115               | sf   | 2.25         | 92,509                      |                 |              |
| 171       |            |  |                      |      |              |                             |                 |              |

**Town of Braintree  
Affordable Housing Study  
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| OPTION 2A |  |          | BUILDING AREA (bgsf) |              |                             | 93,113              |                                |
|-----------|--|----------|----------------------|--------------|-----------------------------|---------------------|--------------------------------|
|           | Description  | Quantity | Unit                 | Unit Price   | Total \$                    | Subtotal Trades     |                                |
|           |  |          |                      | New Addition | Add to Exist 74 Pond street |                     |                                |
| 172       | Sub Total : Wall Finishes                                      |          |                      |              | <b>556,791</b>              |                     |                                |
| 173       |  |          |                      |              |                             |                     |                                |
| 174       | C3020 Floor Finishes   |          |                      |              |                             |                     |                                |
| 175       | Floor prep for new flooring finishes                           | 88,457   | sf                   | 2.95         | 260,949                     |                     |                                |
| 176       | Tile at toilets  | 6,035    | sf                   | 28.00        | 168,980                     |                     | assumed qty based on 85sf/room |
| 177       | LVT flooring at residential units                              | 41,115   | sf                   | 7.50         | 308,363                     |                     |                                |
| 178       | LVT flooring at Amenity spaces, Office, Public Restrooms       | 26,887   | sf                   | 7.50         | 201,655                     |                     |                                |
| 179       | Refinish wood flooring in dining area from existing auditorium | 997      | sf                   | 20.00        | 19,940                      |                     |                                |
| 180       | Carpet tile, rubber base at corridors and vestibules           | 13,423   | sf                   | 6.00         | 80,538                      |                     |                                |
| 181       | Rubber base  | 83,492   | gsf                  | 0.95         | 79,317                      |                     |                                |
| 182       |  |          |                      |              |                             |                     |                                |
| 183       | Sub Total : Floor Finishes                                     |          |                      |              | <b>1,119,742</b>            |                     |                                |
| 184       |  |          |                      |              |                             |                     |                                |
| 185       |  |          |                      |              |                             |                     |                                |
| 186       | C3030 Ceiling Finishes   |          |                      |              |                             |                     |                                |
| 187       | Painted 'GWB ceiling at residential units                      | 47,150   | sf                   | 12.05        | 568,158                     |                     |                                |
| 188       | Painted 'GWB ceiling at corridors and vestibules               | 13,423   | sf                   | 12.50        | 167,788                     |                     |                                |
| 189       | Stairs; assumed GWB ceiling, paint                             | 4,083    | sf                   | 12.50        | 51,038                      |                     |                                |
| 190       | ACT ceiling at Amenity spaces/Dining, Office, Public Restrooms | 23,801   | sf                   | 9.50         | 226,113                     |                     |                                |
| 191       |  |          |                      |              |                             |                     |                                |
| 192       | Sub Total : Ceiling Finishes                                   |          |                      |              | <b>1,013,095</b>            |                     |                                |
| 193       |  |          |                      |              |                             |                     |                                |
| 194       | <b>SUBTOTAL FOR INTERIORS</b>                                  |          |                      |              | <b>End of Trade</b>         | <b>\$ 6,741,245</b> |                                |
| 195       |  |          |                      |              |                             |                     |                                |
| 196       | <b>D SERVICES</b>  |          |                      |              |                             |                     |                                |
| 197       | <b>D10 Elevators &amp; Lifts</b>                               |          |                      |              |                             |                     |                                |
| 198       | New 3-stop elevator at exist elevator shafts                   | 2        | ea                   | 285,000.00   | 570,000                     |                     |                                |
| 199       | 4-stop elevator at new addition                                | 1        | ea                   | 360,000.00   | 360,000                     |                     |                                |
| 200       |  |          |                      |              |                             |                     |                                |
| 201       | Sub Total : Elevators & Lifts                                  |          |                      |              | <b>930,000</b>              |                     |                                |
| 202       |  |          |                      |              |                             |                     |                                |
| 203       | <b>D20 Plumbing</b>  |          |                      |              |                             |                     |                                |
| 204       | <u>74 Pond Street</u>  |          |                      |              |                             |                     |                                |
| 205       | Selective demolition   | 25,107   | gsf                  | 0.80         | 20,086                      |                     |                                |
| 206       | Equipment  |          |                      |              |                             |                     |                                |
| 207       | Replace existing grease interceptor                            | 1        | ea                   | 20,000.00    | 20,000                      |                     |                                |
| 208       | Replace existing recirculation pump                            | 1        | ea                   | 6,400.00     | 6,400                       |                     |                                |
| 209       | Provide electric water heaters for each residential unit       | 19       | ea                   | 3,800.00     | 72,200                      |                     |                                |
| 210       | Piping system  |          |                      |              |                             |                     |                                |
| 211       | Modify existing piping system due room layout change           | 25,107   | gsf                  | 12.50        | 313,838                     |                     |                                |
| 212       | Plumbing fixtures  |          |                      |              |                             |                     |                                |
| 213       | Water closet @ New single-user accessible restroom             | 2        | ea                   | 2,100.00     | 4,200                       |                     |                                |
| 214       | Lavatory @ New single-user accessible restroom                 | 2        | ea                   | 1,880.00     | 3,760                       |                     |                                |
| 215       | Water closet @ New residential unit                            | 19       | ea                   | 2,100.00     | 39,900                      |                     |                                |
| 216       | Lavatory @ New residential unit                                | 19       | ea                   | 1,880.00     | 35,720                      |                     |                                |
| 217       | Bathtub shower combo @ New residential unit - assume           | 19       | ea                   | 4,200.00     | 79,800                      |                     |                                |
| 218       | Kitchen sink @ New residential unit - assume                   | 19       | ea                   | 1,820.00     | 34,580                      |                     |                                |

**Town of Braintree  
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| OPTION 2A |   | BUILDING AREA (bgsf) |      |              |                             | 93,113          |  |
|-----------|---|----------------------|------|--------------|-----------------------------|-----------------|--|
|           | Description   | Quantity             | Unit | Unit Price   | Total \$                    | Subtotal Trades |  |
|           |   |                      |      | New Addition | Add to Exist 74 Pond street |                 |  |
| 219       | Fixture rough-in  | 80                   | ea   | 690.00       | 55,200                      |                 |  |
| 220       | Other   | 25,107               | gsf  | 2.00         | 50,214                      |                 |  |
| 221       | Access door   | 1                    | ls   |              | included                    |                 |  |
| 222       | Penetrations and sleeves                                    | 1                    | ls   |              | included                    |                 |  |
| 223       | Core drill, cutting, patching, fire stopping                | 1                    | ls   |              | included                    |                 |  |
| 224       | Clean, flush and test                                       | 1                    | ls   |              | included                    |                 |  |
| 225       | Disinfection  | 1                    | ls   |              | included                    |                 |  |
| 226       | System validate / Certification                             | 1                    | ls   |              | included                    |                 |  |
| 227       | Equipment handling and material distribution                | 1                    | ls   |              | included                    |                 |  |
| 228       | System ID / Valve tags                                      | 1                    | ls   |              | included                    |                 |  |
| 229       | Shop co-ordination drawings                                 | 1                    | ls   |              | included                    |                 |  |
| 230       | Supports  | 1                    | ls   |              | included                    |                 |  |
| 231       | Coordination with other trades                              | 1                    | ls   |              | included                    |                 |  |
| 232       |   |                      |      |              |                             |                 |  |
| 233       | <u>90 Pond Street</u>                                       |                      |      |              |                             |                 |  |
| 234       | Selective demolition  | 22,300               | gsf  | 0.80         | 17,840                      |                 |  |
| 235       | Equipment   |                      |      |              |                             |                 |  |
| 236       | Replace existing electric hot water heater @ Amenity spaces | 1                    | ea   | 14,200.00    | 14,200                      |                 |  |
| 237       | Replace existing recirculation pump                         | 1                    | ea   | 6,400.00     | 6,400                       |                 |  |
| 238       | Provide electric water heaters for each residential unit    | 14                   | ea   | 3,800.00     | 53,200                      |                 |  |
| 239       | Piping system   |                      |      |              |                             |                 |  |
| 240       | Modify existing piping system due room layout change        | 22,300               | gsf  | 12.50        | 278,750                     |                 |  |
| 241       | New gas service requirements                                | 1                    | ls   | 10,000.00    | 10,000                      |                 |  |
| 242       | Plumbing fixtures   |                      |      |              |                             |                 |  |
| 243       | Water closet @ Renovate existing restrooms on the basement  | 3                    | ea   | 2,100.00     | 6,300                       |                 |  |
| 244       | Urinal @ Renovate existing restrooms on the basement        | 1                    | ea   | 2,000.00     | 2,000                       |                 |  |
| 245       | Lavatory @ Renovate existing restrooms on the basement      | 4                    | ea   | 1,880.00     | 7,520                       |                 |  |
| 246       | Water closet @ New residential unit                         | 14                   | ea   | 2,100.00     | 29,400                      |                 |  |
| 247       | Lavatory @ New residential unit                             | 14                   | ea   | 1,880.00     | 26,320                      |                 |  |
| 248       | Bathtub shower combo @ New residential unit - assume        | 14                   | ea   | 4,200.00     | 58,800                      |                 |  |
| 249       | Kitchen sink @ New residential unit - assume                | 14                   | ea   | 1,820.00     | 25,480                      |                 |  |
| 250       | Fixture rough-in  | 64                   | ea   | 690.00       | 44,160                      |                 |  |
| 251       | Other   | 22,300               | gsf  | 2.00         | 44,600                      |                 |  |
| 252       | Access door   | 1                    | ls   |              | included                    |                 |  |
| 253       | Penetrations and sleeves                                    | 1                    | ls   |              | included                    |                 |  |
| 254       | Core drill, cutting, patching, fire stopping                | 1                    | ls   |              | included                    |                 |  |
| 255       | Clean, flush and test                                       | 1                    | ls   |              | included                    |                 |  |
| 256       | Disinfection  | 1                    | ls   |              | included                    |                 |  |
| 257       | System validate / Certification                             | 1                    | ls   |              | included                    |                 |  |
| 258       | Equipment handling and material distribution                | 1                    | ls   |              | included                    |                 |  |
| 259       | System ID / Valve tags                                      | 1                    | ls   |              | included                    |                 |  |
| 260       | Shop co-ordination drawings                                 | 1                    | ls   |              | included                    |                 |  |
| 261       | Supports  | 1                    | ls   |              | included                    |                 |  |
| 262       | Coordination with other trades                              | 1                    | ls   |              | included                    |                 |  |
| 263       |   |                      |      |              |                             |                 |  |
| 264       | <u>New Addition</u>   |                      |      |              |                             |                 |  |

**Town of Braintree  
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| OPTION 2A |   |             | BUILDING AREA (bgsf) |              |                             | 93,113          |  |
|-----------|---|-------------|----------------------|--------------|-----------------------------|-----------------|--|
|           | Description   | Quantity    | Unit                 | Unit Price   | Total \$                    | Subtotal Trades |  |
|           |   |             |                      | New Addition | Add to Exist 74 Pond street |                 |  |
| 265       | Equipment (incl. electric water heater, recirculation pump, expansion tank, etc.)                   | 45,706      | gsf                  | 1.20         | 54,847                      |                 |  |
| 266       | Piping system   | 45,706      | gsf                  | 18.00        | 822,708                     |                 |  |
| 267       | Domestic water pipe with insulation   | 1           | ls                   |              | included                    |                 |  |
| 268       | Sanitary waste and vent pipe  | 1           | ls                   |              | included                    |                 |  |
| 269       | Storm water pipe with insulation  | 1           | ls                   |              | included                    |                 |  |
| 270       | Valves and specialties (incl. hook-up equipment)  | 1           | ls                   |              | included                    |                 |  |
| 271       | Plumbing fixtures (incl. rough-in)  | 45,706      | gsf                  | 9.50         | 434,207                     |                 |  |
| 272       | Other   | 45,706      | gsf                  | 2.50         | 114,265                     |                 |  |
| 273       | Access door   | 1           | ls                   |              | included                    |                 |  |
| 274       | Penetrations and sleeves  | 1           | ls                   |              | included                    |                 |  |
| 275       | Core drill, cutting, patching, fire stopping  | 1           | ls                   |              | included                    |                 |  |
| 276       | Clean, flush and test   | 1           | ls                   |              | included                    |                 |  |
| 277       | Disinfection  | 1           | ls                   |              | included                    |                 |  |
| 278       | System validate / Certification   | 1           | ls                   |              | included                    |                 |  |
| 279       | Equipment handling and material distribution  | 1           | ls                   |              | included                    |                 |  |
| 280       | System ID / Valve tags  | 1           | ls                   |              | included                    |                 |  |
| 281       | Shop co-ordination drawings   | 1           | ls                   |              | included                    |                 |  |
| 282       | Supports  | 1           | ls                   |              | included                    |                 |  |
| 283       | Coordination with other trades  | 1           | ls                   |              | included                    |                 |  |
| 284       |   |             |                      |              |                             |                 |  |
| 285       | <b>Sub Total : Plumbing</b>   |             |                      |              | <b>2,786,894</b>            |                 |  |
| 286       |   |             |                      |              |                             |                 |  |
| 287       | <b>D30</b>  | <b>HVAC</b> |                      |              |                             |                 |  |
| 288       | <u>74 Pond Street - Option-1: Reuse existing boilers and heat pumps</u>                             |             |                      |              |                             |                 |  |
| 289       | Selective demolition  | 25,107      | gsf                  | 1.50         | 37,661                      |                 |  |
| 290       | Equipment   |             |                      |              |                             |                 |  |
| 291       | Modify baseboard heaters for shared community spaces and new residential layout                     | 25,107      | gsf                  | 3.00         | 75,321                      |                 |  |
| 292       | Replace air handling unit to include ERV for ventilation  | 1           | unit                 | 340,000.00   | 340,000                     |                 |  |
| 293       | Replace kitchen exhaust fan   | 1           | ea                   | 5,800.00     | 5,800                       |                 |  |
| 294       | Piping system   | 25,107      | gsf                  | 2.00         | 50,214                      |                 |  |
| 295       | Modify existing heating hot water piping system   | 1           | ls                   |              | included                    |                 |  |
| 296       | Hook-up equipment   | 1           | ls                   |              | included                    |                 |  |
| 297       | Air side system   | 25,107      | gsf                  | 12.00        | 301,284                     |                 |  |
| 298       | Modify existing air side system due room layout change  | 1           | ls                   |              | included                    |                 |  |
| 299       | New ductwork @ Replaced air handling unit with ERV  | 1           | ls                   |              | included                    |                 |  |
| 300       | Replace kitchen grease hood   | 1           | ea                   | 24,000.00    | 24,000                      |                 |  |
| 301       | System controls (incl. new BMS system)  | 25,107      | gsf                  | 8.00         | 200,856                     |                 |  |
| 302       | Individual controls for residential spaces  | 1           | ls                   |              | included                    |                 |  |
| 303       | New temperature controls & BMS to integrate the baseboard heaters with the air conditioning systems | 1           | ls                   |              | included                    |                 |  |
| 304       | Other   | 25,107      | gsf                  | 3.50         | 87,875                      |                 |  |
| 305       | Access doors  | 1           | ls                   |              | included                    |                 |  |
| 306       | Vibration isolation / Seismic   | 1           | ls                   |              | included                    |                 |  |
| 307       | Penetrations and sleeves  | 1           | ls                   |              | included                    |                 |  |
| 308       | Core drill, cutting, patching, fire stopping  | 1           | ls                   |              | included                    |                 |  |
| 309       | Test and balance  | 1           | ls                   |              | included                    |                 |  |

**Town of Braintree  
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| OPTION 2A |   |          | BUILDING AREA (bgsf) |              |                             | 93,113          |  |
|-----------|---|----------|----------------------|--------------|-----------------------------|-----------------|--|
|           | Description   | Quantity | Unit                 | Unit Price   | Total \$                    | Subtotal Trades |  |
|           |   |          |                      | New Addition | Add to Exist 74 Pond street |                 |  |
| 310       | Clean, flush and test (piping system)   | 1        | ls                   |              | included                    |                 |  |
| 311       | System start-up / Commissioning   | 1        | ls                   |              | included                    |                 |  |
| 312       | Equipment handling and material distribution  | 1        | ls                   |              | included                    |                 |  |
| 313       | System ID / Valve tags  | 1        | ls                   |              | included                    |                 |  |
| 314       | Shop co-ordination drawings   | 1        | ls                   |              | included                    |                 |  |
| 315       | O&M manuals   | 1        | ls                   |              | included                    |                 |  |
| 316       | Supports  | 1        | ls                   |              | included                    |                 |  |
| 317       | Coordination with other trades  | 1        | ls                   |              | included                    |                 |  |
| 318       |   |          |                      |              |                             |                 |  |
| 319       | <u>90 Pond Street - Option-1: Reuse existing boilers and heat pumps</u>                             |          |                      |              |                             |                 |  |
| 320       | Selective demolition  | 22,300   | gsf                  | 1.50         | 33,450                      |                 |  |
| 321       | Equipment   |          |                      |              |                             |                 |  |
| 322       | Replace existing baseboard heating units  | 22,300   | gsf                  | 2.00         | 44,600                      |                 |  |
| 323       | New electric mini-split for heating and cooling in each space                                       | 22,300   | gsf                  | 3.20         | 71,360                      |                 |  |
| 324       | Replace air handling unit to include ERV for ventilation  | 1        | unit                 | 260,000.00   | 260,000                     |                 |  |
| 325       | Piping system   | 22,300   | gsf                  | 3.20         | 71,360                      |                 |  |
| 326       | Refrigerant pipe with insulation  | 1        | ls                   |              | included                    |                 |  |
| 327       | Condensate drain pipe with insulation   | 1        | ls                   |              | included                    |                 |  |
| 328       | Hook-up equipment   | 1        | ls                   |              | included                    |                 |  |
| 329       | Air side system   | 22,300   | gsf                  | 12.00        | 267,600                     |                 |  |
| 330       | Modify existing air side system due room layout change  | 1        | ls                   |              | included                    |                 |  |
| 331       | New ductwork @ Replaced air handling unit with ERV  | 1        | ls                   |              | included                    |                 |  |
| 332       | System controls (incl. new BMS system)  | 22,300   | gsf                  | 8.00         | 178,400                     |                 |  |
| 333       | Individual controls for residential spaces  | 1        | ls                   |              | included                    |                 |  |
| 334       | New temperature controls & BMS to integrate the baseboard heaters with the air conditioning systems | 1        | ls                   |              | included                    |                 |  |
| 335       | Other   | 22,300   | gsf                  | 3.50         | 78,050                      |                 |  |
| 336       | Access doors  | 1        | ls                   |              | included                    |                 |  |
| 337       | Vibration isolation / Seismic   | 1        | ls                   |              | included                    |                 |  |
| 338       | Penetrations and sleeves  | 1        | ls                   |              | included                    |                 |  |
| 339       | Core drill, cutting, patching, fire stopping  | 1        | ls                   |              | included                    |                 |  |
| 340       | Test and balance  | 1        | ls                   |              | included                    |                 |  |
| 341       | Clean, flush and test (piping system)   | 1        | ls                   |              | included                    |                 |  |
| 342       | System start-up / Commissioning   | 1        | ls                   |              | included                    |                 |  |
| 343       | Equipment handling and material distribution  | 1        | ls                   |              | included                    |                 |  |
| 344       | System ID / Valve tags  | 1        | ls                   |              | included                    |                 |  |
| 345       | Shop co-ordination drawings   | 1        | ls                   |              | included                    |                 |  |
| 346       | O&M manuals   | 1        | ls                   |              | included                    |                 |  |
| 347       | Supports  | 1        | ls                   |              | included                    |                 |  |
| 348       | Coordination with other trades  | 1        | ls                   |              | included                    |                 |  |
| 349       |   |          |                      |              |                             |                 |  |
| 350       | <u>New Addition</u>   |          |                      |              |                             |                 |  |
| 351       | Equipment   | 45,706   | gsf                  | 16.00        | 731,296                     |                 |  |
| 352       | Piping system (incl. refrigerant and condensate drain pipe with insulation, valves and specialties) | 45,706   | gsf                  | 5.40         | 246,812                     |                 |  |
| 353       | Air side system   | 45,706   | gsf                  | 18.00        | 822,708                     |                 |  |
| 354       | System controls   | 45,706   | gsf                  | 9.50         | 434,207                     |                 |  |

**Town of Braintree  
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| OPTION 2A |  |          | BUILDING AREA (bgsf) |              |                             | 93,113          |  |
|-----------|--|----------|----------------------|--------------|-----------------------------|-----------------|--|
|           | Description  | Quantity | Unit                 | Unit Price   | Total \$                    | Subtotal Trades |  |
|           |  |          |                      | New Addition | Add to Exist 74 Pond street |                 |  |
| 355       | Other  | 45,706   | gsf                  | 3.50         | 159,971                     |                 |  |
| 356       | Access doors   | 1        | ls                   |              | included                    |                 |  |
| 357       | Vibration isolation / Seismic  | 1        | ls                   |              | included                    |                 |  |
| 358       | Penetrations and sleeves   | 1        | ls                   |              | included                    |                 |  |
| 359       | Core drill, cutting, patching, fire stopping   | 1        | ls                   |              | included                    |                 |  |
| 360       | Test and balance   | 1        | ls                   |              | included                    |                 |  |
| 361       | Clean, flush and test (piping system)  | 1        | ls                   |              | included                    |                 |  |
| 362       | System start-up / Commissioning  | 1        | ls                   |              | included                    |                 |  |
| 363       | Equipment handling and material distribution   | 1        | ls                   |              | included                    |                 |  |
| 364       | System ID / Valve tags   | 1        | ls                   |              | included                    |                 |  |
| 365       | Shop co-ordination drawings  | 1        | ls                   |              | included                    |                 |  |
| 366       | O&M manuals  | 1        | ls                   |              | included                    |                 |  |
| 367       | Supports   | 1        | ls                   |              | included                    |                 |  |
| 368       | Coordination with other trades   | 1        | ls                   |              | included                    |                 |  |
| 369       |  |          |                      |              |                             |                 |  |
| 370       | <b>Sub Total : HVAC</b>  |          |                      |              | <b>4,522,824</b>            |                 |  |
| 371       |  |          |                      |              |                             |                 |  |
| 372       | <b>D40 Fire Protection</b>   |          |                      |              |                             |                 |  |
| 373       | <u>74 Pond Street</u>  |          |                      |              |                             |                 |  |
| 374       | Wet sprinkler system   |          |                      |              |                             |                 |  |
| 375       | Modify existing wet sprinkler system / Extend the sprinkler system to serve all levels of the building | 25,107   | gsf                  | 6.50         | 163,196                     |                 |  |
| 376       | Other  | 25,107   | gsf                  | 1.50         | 37,661                      |                 |  |
| 377       | System drain down and fill   | 1        | ls                   |              | included                    |                 |  |
| 378       | System ID, labels and color coding   | 1        | ls                   |              | included                    |                 |  |
| 379       | Painting piping  | 1        | ls                   |              | included                    |                 |  |
| 380       | Seismic restraints   | 1        | ls                   |              | included                    |                 |  |
| 381       | Design calculations  | 1        | ls                   |              | included                    |                 |  |
| 382       | Core drill, cutting, patching, fire stopping   | 1        | ls                   |              | included                    |                 |  |
| 383       | Clean, flush and test  | 1        | ls                   |              | included                    |                 |  |
| 384       | Commissioning  | 1        | ls                   |              | included                    |                 |  |
| 385       | Material distribution  | 1        | ls                   |              | included                    |                 |  |
| 386       | Shop co-ordination drawings  | 1        | ls                   |              | included                    |                 |  |
| 387       | Coordination with other trades   | 1        | ls                   |              | included                    |                 |  |
| 388       |  |          |                      |              |                             |                 |  |
| 389       | <u>90 Pond Street</u>  |          |                      |              |                             |                 |  |
| 390       | Wet sprinkler system   |          |                      |              |                             |                 |  |
| 391       | Modify existing wet sprinkler system / Extend the sprinkler system to serve all levels of the building | 22,300   | gsf                  | 6.50         | 144,950                     |                 |  |
| 392       | Other  | 22,300   | gsf                  | 1.50         | 33,450                      |                 |  |
| 393       | System drain down and fill   | 1        | ls                   |              | included                    |                 |  |
| 394       | System ID, labels and color coding   | 1        | ls                   |              | included                    |                 |  |
| 395       | Painting piping  | 1        | ls                   |              | included                    |                 |  |
| 396       | Seismic restraints   | 1        | ls                   |              | included                    |                 |  |
| 397       | Design calculations  | 1        | ls                   |              | included                    |                 |  |
| 398       | Core drill, cutting, patching, fire stopping   | 1        | ls                   |              | included                    |                 |  |
| 399       | Clean, flush and test  | 1        | ls                   |              | included                    |                 |  |

**Town of Braintree  
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Study Estimate**

| OPTION 2A |  |          | BUILDING AREA (bgsf) |              |                             | 93,113          |  |
|-----------|--|----------|----------------------|--------------|-----------------------------|-----------------|--|
|           | Description  | Quantity | Unit                 | Unit Price   | Total \$                    | Subtotal Trades |  |
|           |  |          |                      | New Addition | Add to Exist 74 Pond street |                 |  |
| 400       | Commissioning  | 1        | ls                   |              | included                    |                 |  |
| 401       | Material distribution  | 1        | ls                   |              | included                    |                 |  |
| 402       | Shop co-ordination drawings  | 1        | ls                   |              | included                    |                 |  |
| 403       | Coordination with other trades   | 1        | ls                   |              | included                    |                 |  |
| 404       |  |          |                      |              |                             |                 |  |
| 405       | <u>New Addition</u>  |          |                      |              |                             |                 |  |
| 406       | Wet sprinkler system   | 45,706   | gsf                  | 10.50        | 479,913                     |                 |  |
| 407       | Other  | 45,706   | gsf                  | 1.40         | 63,988                      |                 |  |
| 408       | System ID, labels and color coding   | 1        | ls                   |              | included                    |                 |  |
| 409       | Painting piping  | 1        | ls                   |              | included                    |                 |  |
| 410       | Seismic restraints   | 1        | ls                   |              | included                    |                 |  |
| 411       | Design calculations  | 1        | ls                   |              | included                    |                 |  |
| 412       | Core drill, cutting, patching, fire stopping   | 1        | ls                   |              | included                    |                 |  |
| 413       | Clean, flush and test  | 1        | ls                   |              | included                    |                 |  |
| 414       | Commissioning  | 1        | ls                   |              | included                    |                 |  |
| 415       | Material distribution  | 1        | ls                   |              | included                    |                 |  |
| 416       | Shop co-ordination drawings  | 1        | ls                   |              | included                    |                 |  |
| 417       | Coordination with other trades   | 1        | ls                   |              | included                    |                 |  |
| 418       |  |          |                      |              |                             |                 |  |
| 419       | <b>Sub Total : Fire Protection</b>   |          |                      |              | <b>923,157</b>              |                 |  |
| 420       |  |          |                      |              |                             |                 |  |
| 421       | <b>D50 Electrical</b>  |          |                      |              |                             |                 |  |
| 422       | Demolition at existing buildings, cut, cap and make safe   | 47,407   | gsf                  | 1.00         | 47,407                      |                 |  |
| 423       |  |          |                      |              |                             |                 |  |
| 424       | Service and Distribution (new addition)  | 45,706   | gsf                  | 6.50         | 297,089                     |                 |  |
| 425       |  |          |                      |              |                             |                 |  |
| 426       | Emergency power (new addition)   | 1        | ls                   | 45,000.00    | 45,000                      |                 |  |
| 427       |  |          |                      |              |                             |                 |  |
| 428       | Feeders (Normal and Emergency power)   | 45,706   | gsf                  | 6.50         | 297,089                     |                 |  |
| 429       |  |          |                      |              |                             |                 |  |
| 430       | Incoming service   |          |                      |              | w/Site Work                 |                 |  |
| 431       |  |          |                      |              |                             |                 |  |
| 432       | Lighting (new addition + two existing buildings)   | 83,492   | gsf                  | 10.00        | 834,920                     |                 |  |
| 433       |  |          |                      |              |                             |                 |  |
| 434       | Lighting Control (new addition + two existing buildings)   | 83,492   | gsf                  | 2.00         | 166,984                     |                 |  |
| 435       |  |          |                      |              |                             |                 |  |
| 436       | Branch Circuitry (new addition + two existing buildings)   | 83,492   | gsf                  | 5.55         | 463,381                     |                 |  |
| 437       |  |          |                      |              |                             |                 |  |
| 438       | Mechanical Requirements (new addition + two existing buildings)                                  | 83,492   | gsf                  | 5.00         | 417,460                     |                 |  |
| 439       |  |          |                      |              |                             |                 |  |
| 440       | Low Voltage Systems (Tel/data, Security) - empty conduit (new addition + two existing buildings) | 83,492   | gsf                  | 2.00         | 166,984                     |                 |  |
| 441       |  |          |                      |              |                             |                 |  |
| 442       | Grounding system (new addition)  | 45,706   | gsf                  | 1.50         | 68,559                      |                 |  |
| 443       |  |          |                      |              |                             |                 |  |
| 444       | Temporary power and light (two existing buildings)   | 47,407   | gsf                  | 1.40         | 66,370                      |                 |  |
| 445       | Short circuit study 'overcurrent protection/arc flash hazard calculation                         | 1        | ls                   | 10,000.00    | 10,000                      |                 |  |
| 446       | Lightning protection/grounding system  | 1        | ls                   | 15,000.00    | 15,000                      |                 |  |



**Town of Braintree  
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Study Estimate**

06/06/24

| OPTION 2A |  | BUILDING AREA (bgsf) |       |              | 93,113                      |                      |
|-----------|--|----------------------|-------|--------------|-----------------------------|----------------------|
|           | Description  | Quantity             | Unit  | Unit Price   | Total \$                    | Subtotal Trades      |
|           |  |                      |       | New Addition | Add to Exist 74 Pond street |                      |
| 447       | Testing/commissioning  | 1                    | ls    | 15,000.00    | 15,000                      |                      |
| 448       | Supervision/PM   | 1                    | ls    | 20,000.00    | 20,000                      |                      |
| 449       | Miscellaneous (sleeves/firestopping, vibration isolation/seismic bracing, ID)    | 83,492               | gsf   | 1.50         | 125,238                     |                      |
| 450       |  |                      |       |              |                             |                      |
| 451       | <b>Communications</b>  |                      |       |              |                             |                      |
| 452       | Tel/Data System (new addition + two existing buildings)                          | 93,113               | gsf   | 5.00         | 465,565                     |                      |
| 453       | Emergency Responder System   | 93,113               | gsf   | 1.00         | 93,113                      |                      |
| 454       | Two-way Communication System   | 93,113               | gsf   | 0.50         | 46,557                      |                      |
| 455       |  |                      |       |              |                             |                      |
| 456       | <b>Electronic Safety and Security</b>  |                      |       |              |                             |                      |
| 457       | Fire alarm system (new addition + two existing buildings)                        | 93,113               | gsf   | 5.25         | 488,843                     |                      |
| 458       |  |                      |       |              |                             |                      |
| 459       | <b>Solar System</b>  |                      |       |              |                             |                      |
| 460       | Solar panel system (only at new building)  | 39,267               | gsf   | 6.50         | 255,236                     |                      |
| 461       |  |                      |       |              |                             |                      |
| 462       | <b>Sub Total : Electrical</b>  |                      |       |              | <b>4,405,794</b>            |                      |
| 463       |  |                      |       |              |                             |                      |
| 464       | <b><u>SUBTOTAL FOR SERVICES</u></b>  |                      |       |              | <b>End of Trade</b>         | <b>\$ 13,568,670</b> |
| 465       |  |                      |       |              |                             |                      |
| 466       |  |                      |       |              |                             |                      |
| 467       | <b><u>EQUIPMENT &amp; FURNISHINGS</u></b>  |                      |       |              |                             |                      |
| 468       | <b>E10 Equipment</b>   |                      |       |              |                             |                      |
| 469       | E1010 Residential Appliances; refrigerator, cooktop, oven and hood, all electric | 70                   | units | 5,300.00     | 371,000                     |                      |
| 470       |  |                      |       |              |                             |                      |
| 471       | <b>Sub Total : Equipment</b>   |                      |       |              | <b>371,000</b>              |                      |
| 472       |  |                      |       |              |                             |                      |
| 473       |  |                      |       |              |                             |                      |
| 474       | <b>E20 Furnishings</b>   |                      |       |              |                             |                      |
| 475       | E2010 <b>Fixed Furnishings</b>   |                      |       |              |                             |                      |
| 476       | Wood veneer kitchen cabinetry, solid surface countertops                         | 70                   | units | 13,900.00    | 973,000                     |                      |
| 477       |  |                      |       |              |                             |                      |
| 478       | <b>Sub Total : Fixed Furnishings</b>   |                      |       |              | <b>973,000</b>              |                      |
| 479       |  |                      |       |              |                             |                      |
| 480       | <b><u>SUBTOTAL FOR EQUIPMENT &amp; FURNISHINGS</u></b>                           |                      |       |              | <b>End of Trade</b>         | <b>\$ 1,344,000</b>  |
| 481       |  |                      |       |              |                             |                      |
| 482       |  |                      |       |              |                             |                      |
| 483       | <b><u>F SPECIAL CONSTRUCTION &amp; DEMOLITION</u></b>                            |                      |       |              |                             |                      |
| 484       | <b>F10 Special Construction</b>  |                      |       |              |                             |                      |
| 485       | No work this section   |                      |       | -            | -                           |                      |
| 486       |  |                      |       |              |                             |                      |
| 487       | <b>Sub Total : Special Construction</b>  |                      |       |              | -                           |                      |
| 488       |  |                      |       |              |                             |                      |
| 489       |  |                      |       |              |                             |                      |



**Town of Braintree  
Affordable Housing Study  
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| OPTION 2A |       |  | BUILDING AREA (bgsf) |       |              | 93,113                      |                     |
|-----------|-------|--|----------------------|-------|--------------|-----------------------------|---------------------|
|           |       | Description  | Quantity             | Unit  | Unit Price   | Total \$                    | Subtotal Trades     |
|           |       |  |                      |       | New Addition | Add to Exist 74 Pond street |                     |
| 490       | F20   | <b>Selective Building Demolition</b>   |                      |       |              |                             |                     |
| 491       | F2010 | <b>Building Elements Demolition</b>  |                      |       |              |                             |                     |
| 492       |       | Selective demolition of interior finishes, partitions, doors, fittings and specialties at existing buildings | 47,407               | sf    | 16.50        | 782,216                     |                     |
| 493       |       | Remove interior of exterior wall for new insulation  | 22,210               | sf    | 7.00         | 155,470                     |                     |
| 494       |       | Demo roof for 3rd floor addition at 74 Pond Street   | 6,439                | sf    | 10.00        | 64,390                      |                     |
| 495       |       |  |                      |       |              | -                           |                     |
| 496       |       |  |                      |       |              |                             |                     |
| 497       |       | <b>Sub Total : Building Elements Demolition</b>  |                      |       |              | <b>1,002,076</b>            |                     |
| 498       |       |  |                      |       |              |                             |                     |
| 499       | F2020 | <b>Hazardous Components Abatement</b>  |                      |       |              |                             |                     |
| 500       |       | Hazardous Components Abatement   |                      |       |              |                             |                     |
| 501       |       | Abatement  |                      |       |              | NIC                         |                     |
| 502       |       |  |                      |       |              |                             |                     |
| 503       |       | <b>Sub Total : Hazardous Components Abatement</b>  |                      |       |              | -                           |                     |
| 504       |       |  |                      |       |              |                             |                     |
| 505       |       | <b>SUBTOTAL FOR SPECIAL CONSTRUCTION &amp; DEMOLITION</b>  |                      |       |              | <b>End of Trade</b>         | <b>\$ 1,002,076</b> |
| 506       |       |  |                      |       |              |                             |                     |
| 507       |       |  |                      |       |              |                             |                     |
| 508       | G     | <b>SITWORK</b>   |                      |       |              |                             |                     |
| 509       | G10   | <b>Site Preparation</b>  |                      |       |              |                             |                     |
| 510       | G1010 | Site Clearing  | 186,402              | sf    |              |                             |                     |
| 511       |       | Sawcut   | 1                    | ls    | 5,000.00     | 5,000                       |                     |
| 512       |       | Construction fence   | 2,021                | lf    | 14.00        | 28,294                      |                     |
| 513       |       | Gates  | 2                    | pr    | 7,500.00     | 15,000                      |                     |
| 514       |       | Stabilized construction entrance   | 2                    | ea    | 6,500.00     | 13,000                      |                     |
| 515       |       | Temporary construction signs   | 1                    | ls    | 6,500.00     | 6,500                       |                     |
| 516       |       | Erosion control barrier - silt fence   | 2,021                | lf    | 12.00        | 24,252                      |                     |
| 517       |       | Inlet protection   | 1                    | ls    | 5,000.00     | 5,000                       |                     |
| 518       |       | Protection of existing structures at site  | 1                    | ls    | 10,000.00    | 10,000                      |                     |
| 519       |       | Clear site   | 4.0                  | acres | 10,000.00    | 40,000                      |                     |
| 520       |       |  |                      |       |              |                             |                     |
| 521       | G1020 | Site Demolition & Relocations  |                      |       |              |                             |                     |
| 522       |       | <i>Site demolition for new work</i>  |                      |       |              |                             |                     |
| 523       |       | Remove asphalt paving and curbs, pedestrian asphalt paving, concrete paving, etc.                            | 59,523               | sf    | 1.50         | 89,285                      |                     |
| 524       |       | Partial demo of utility tunnel (approx. 65 lf)   | 1                    | ls    | 68,000.00    | 68,000                      |                     |
| 525       |       | Tree removal and stump grinding  | 15                   | ea    | 750.00       | 11,250                      |                     |
| 526       |       | Protect exist trees to remain  | 34                   | ea    | 500.00       | 17,000                      |                     |
| 527       |       | Misc demo other than above   | 1                    | ls    | 9,000.00     | 9,000                       |                     |
| 528       |       |  |                      |       |              |                             |                     |
| 529       |       |  |                      |       |              |                             |                     |
| 530       | G1030 | Site Earthwork   |                      |       |              |                             |                     |
| 531       |       | Strip and stockpile topsoil  | 3,452                | cy    | 15.00        | 51,778                      |                     |
| 532       |       | Cuts and fills; site grades  | 2,037                | cy    | 15.00        | 30,555                      |                     |
| 533       |       | Cuts and fills of asphalt pavement and concrete pavement   | 2,770                | cy    | 20.00        | 55,400                      |                     |
| 534       |       | Rough and fine grade   | 74,790               | sf    | 1.75         | 130,883                     |                     |
| 535       |       |  |                      |       |              |                             |                     |



**Town of Braintree  
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| OPTION 2A |            |   | BUILDING AREA (bgsf) |      |              | 93,113                      |                 |
|-----------|------------|---|----------------------|------|--------------|-----------------------------|-----------------|
|           |            | Description   | Quantity             | Unit | Unit Price   | Total \$                    | Subtotal Trades |
|           |            |   |                      |      | New Addition | Add to Exist 74 Pond street |                 |
| 536       | G1040      | Hazardous Waste Remediation   |                      |      |              |                             |                 |
| 537       |            | Hazardous soils conditions  |                      |      |              |                             | Assume none     |
| 538       |            |   |                      |      |              |                             |                 |
| 539       |            | <b>Sub Total : Site Preparation</b>   |                      |      |              | <b>610,197</b>              |                 |
| 540       |            |   |                      |      |              |                             |                 |
| 541       | <b>G20</b> | <b>Site Improvements</b>  |                      |      |              |                             |                 |
| 542       | G2010      | Parking Lots & Roadways   |                      |      |              |                             |                 |
| 543       |            | Existing asphalt paving to remain; repair a few cracks  | 1                    | ls   | 10,000.00    | 10,000                      |                 |
| 544       |            | Asphalt parking lot   | 23,998               | sf   | 3.75         | 89,993                      |                 |
| 545       |            | Permeable asphalt pavers  | 35,125               | sf   | 10.50        | 368,813                     |                 |
| 546       |            | Asphalt sidewalk  | 1,896                | sf   | 3.50         | 6,636                       |                 |
| 547       |            | Gravel base   | 2,373                | cy   | 45.00        | 106,783                     |                 |
| 548       |            | Parking stall painting  | 84                   | ea   | 85.00        | 7,140                       |                 |
| 549       |            | ADA   | 8                    | ea   | 350.00       | 2,800                       |                 |
| 550       |            | Misc markings, crosswalk  | 1                    | ls   | 7,500.00     | 7,500                       |                 |
| 551       | G2030      | Pedestrian Paving   |                      |      |              |                             |                 |
| 552       |            | Concrete sidewalks  | 12,619               | sf   | 10.00        | 126,190                     |                 |
| 553       |            | Concrete paver at plazas  | 1,152                | sf   | 45.00        | 51,840                      |                 |
| 554       |            | Gravel base   | 561                  | cy   | 45.00        | 25,247                      |                 |
| 555       |            | Granite curb  | 2,192                | lf   | 58.00        | 127,136                     |                 |
| 556       | G2040      | Site Development  |                      |      |              |                             |                 |
| 557       |            | Cast-in-Place concrete retaining wall incl. cont. footing, gravel base and excavation/backfill; allow | 1                    | ls   | 150,000.00   | 150,000                     |                 |
| 558       |            | Waste and recycle bin; assumed qty  | 2                    | ea   | 2,400.00     | 4,800                       |                 |
| 559       |            | Bucket benches  | 3                    | ea   | 3,000.00     | 9,000                       |                 |
| 560       |            | Bike racks; assumed qty   | 12                   | ea   | 1,250.00     | 15,000                      |                 |
| 561       |            | Movable table with 4 chairs; assumed qty  | 3                    | ea   | 2,500.00     | 7,500                       |                 |
| 562       |            | ADA parking signs   | 8                    | ea   | 500.00       | 4,000                       |                 |
| 563       |            | Replace chainlink fence   | 1,279                | lf   | 28.00        | 35,812                      |                 |
| 564       | G2050      | Landscaping   |                      |      |              |                             |                 |
| 565       |            | Planting bed  | 2                    | ea   | 1,500.00     | 3,000                       |                 |
| 566       |            | Topsoil import  | 1,573                | cy   | 32.00        | 50,342                      |                 |
| 567       |            | Mulch; allow  | 42                   | cy   | 54.00        | 2,244                       |                 |
| 568       |            | Lawn  | 82,089               | sf   | 1.50         | 123,134                     |                 |
| 569       |            | Trees; deciduous and evergreen  | 56                   | ea   | 1,150.00     | 64,400                      |                 |
| 570       |            | Shrubs  | 20                   | ea   | 450.00       | 9,000                       |                 |
| 571       |            |   |                      |      |              |                             |                 |
| 572       |            | <b>Sub Total : Site Improvements</b>  |                      |      |              | <b>1,408,309</b>            |                 |
| 573       |            |   |                      |      |              |                             |                 |
| 574       | <b>G30</b> | <b>Site Mechanical Utilities</b>  |                      |      |              |                             |                 |
| 575       | G3000      | Site Utilities  |                      |      |              |                             |                 |
| 576       |            | Water Service   |                      |      |              |                             |                 |
| 577       |            | Connect to existing fire and water main   | 1                    | ls   | 18,000.00    | 18,000                      | assumption      |
| 578       |            | Sanitary Sewer  |                      |      |              |                             |                 |
| 579       |            | Connect to existing SMH at street   | 1                    | ls   | 15,000.00    | 15,000                      | assumption      |
| 580       |            | Stormwater Drainage   |                      |      |              |                             |                 |
| 581       |            | Corrugated Plastic Pipe (CPP), 6' dia   | 995                  | lf   | 38.00        | 37,810                      |                 |
| 582       |            | Perforated CPP underdrain, 6' dia   | 1,897                | lf   | 35.00        | 66,395                      |                 |



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| OPTION 2A |            |  | BUILDING AREA (bgsf) |      |              | 93,113                      |                     |
|-----------|------------|--|----------------------|------|--------------|-----------------------------|---------------------|
|           |            | Description  | Quantity             | Unit | Unit Price   | Total \$                    | Subtotal Trades     |
|           |            |  |                      |      | New Addition | Add to Exist 74 Pond street |                     |
| 583       |            | Catch basin  | 6                    | ea   | 4,500.00     | 27,000                      |                     |
| 584       |            | Drain manhole  | 5                    | ea   | 7,500.00     | 37,500                      |                     |
|           |            | Connect into existing drain infrastructure   | 1                    | ls   | 6,500.00     | 6,500                       |                     |
| 586       |            | Underground infiltration chamber system Stormtech MC-3500; chamber size 61.06' L x 113.92' L x 3.75' h, including excavation | 7,308                | sf   | 35.00        | 255,780                     |                     |
| 587       |            | 9" stone base, 12" stone cover, 12" side cover, non-woven filter fabric around stone   |                      |      |              | incl above                  |                     |
| 588       |            | Utility tunnel; adjust to follow new connector at basement   | 86                   | lf   | 3,500.00     | 301,000                     |                     |
| 589       |            |  |                      |      |              |                             |                     |
| 590       |            | <b>Sub Total : Site Mechanical Utilities</b>   |                      |      |              | <b>764,985</b>              |                     |
| 591       |            |  |                      |      |              |                             |                     |
| 592       | <b>G40</b> | <b>Site Electrical Utilities</b>   |                      |      |              |                             |                     |
| 593       | G4010      | Electrical Distribution  |                      |      |              |                             |                     |
| 594       |            | Primary power, secondary power; allow  | 1                    | ls   | 320,000.00   | 320,000                     |                     |
| 595       | G4020      | Site Lighting  |                      |      |              |                             |                     |
| 596       |            | Site lighting; pole mounted walkway fixtures, allow  | 1                    | ls   | 30,000.00    | 30,000                      |                     |
| 597       |            |  |                      |      |              |                             |                     |
| 598       |            | <b>Sub Total : Site Electrical Utilities</b>   |                      |      |              | <b>350,000</b>              |                     |
| 599       |            |  |                      |      |              |                             |                     |
| 600       |            | <b><u>SUBTOTAL FOR SITEWORK</u></b>  |                      |      |              | <b>End of Trade</b>         | <b>\$ 3,133,491</b> |



**Town of Braintree  
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| TOWNHOUSES SUMMARY   |  | RESIDENTIAL BUILDING |                    | SITEWORK         |                  | TOTAL              |                 |
|--|--|----------------------|--------------------|------------------|------------------|--------------------|-----------------|
| BUILDING AREA (bgsf)                                       |  | 10,800               |                    |                  |                  | \$ 641.33 /unit    | 10,800 gsf      |
|  |  | Subtotal Trade       | Total              | Subtotal Trade   | Total            | Cost               | Cost/sf         |
| <b>A</b>   | <b>SUBSTRUCTURE</b>  |                      | <b>\$229,638</b>   |                  | <b>\$0</b>       | <b>\$229,638</b>   | <b>\$21.26</b>  |
|  | A10 Foundations  | \$229,638            |                    |                  |                  | \$229,638          |                 |
|  | A20 Basement Construction                                    | \$0                  |                    |                  |                  | \$0                |                 |
| <b>B</b>   | <b>SHELL</b>   |                      | <b>\$2,226,168</b> |                  | <b>\$0</b>       | <b>\$2,226,168</b> | <b>\$206.13</b> |
|  | B10 Superstructure   | \$435,240            |                    |                  |                  | \$435,240          |                 |
|  | B20 Exterior Enclosure                                       | \$1,666,571          |                    |                  |                  | \$1,666,571        |                 |
|  | B30 Roofing  | \$124,357            |                    |                  |                  | \$124,357          |                 |
| <b>C</b>   | <b>INTERIORS</b>   |                      | <b>\$1,168,961</b> |                  | <b>\$0</b>       | <b>\$1,168,961</b> | <b>\$108.24</b> |
|  | C10 Interior Construction                                    | \$568,103            |                    |                  |                  | \$568,103          |                 |
|  | C20 Stairs   | \$312,750            |                    |                  |                  | \$312,750          |                 |
|  | C30 Interior Finishes  | \$288,108            |                    |                  |                  | \$288,108          |                 |
| <b>D</b>   | <b>SERVICES</b>  |                      | <b>\$1,680,280</b> |                  | <b>\$0</b>       | <b>\$1,680,280</b> | <b>\$155.58</b> |
|  | D10 Conveying  | \$0                  |                    |                  |                  | \$0                |                 |
|  | D20 Plumbing   | \$370,800            |                    |                  |                  | \$370,800          |                 |
|  | D30 HVAC   | \$565,920            |                    |                  |                  | \$565,920          |                 |
|  | D40 Fire Protection  | \$128,520            |                    |                  |                  | \$128,520          |                 |
|  | D50 Electrical   | \$615,040            |                    |                  |                  | \$615,040          |                 |
| <b>E</b>   | <b>FITTINGS &amp; FIXED EQUIPMENT</b>                        |                      | <b>\$169,200</b>   |                  | <b>\$0</b>       | <b>\$169,200</b>   | <b>\$15.67</b>  |
|  | E10 Equipment  | \$47,700             |                    |                  |                  | \$47,700           |                 |
|  | E20 Fixed Furnishings / Millwork                             | \$121,500            |                    |                  |                  | \$121,500          |                 |
| <b>F</b>   | <b>SPECIAL CONSTRUCTION &amp; DEMOLITION</b>                 |                      | <b>\$0</b>         |                  | <b>\$0</b>       | <b>\$0</b>         | <b>\$0.00</b>   |
|  | F10 Special Construction                                     | \$0                  |                    |                  |                  | \$0                |                 |
|  | F20 Selective Building Demolition                            | \$0                  |                    |                  |                  | \$0                |                 |
| <b>G</b>   | <b>SITWORK</b>   |                      | <b>\$0</b>         |                  | <b>\$443,000</b> | <b>\$443,000</b>   | <b>\$41.02</b>  |
|  | G10 Site Preparation   |                      |                    | \$95,000         |                  | \$95,000           |                 |
|  | G20 Site Improvements  |                      |                    | \$150,000        |                  | \$150,000          |                 |
|  | G30 Site Mechanical Utilities                                |                      |                    | \$75,000         |                  | \$75,000           |                 |
|  | G40 Site Electrical Utilities                                |                      |                    | \$123,000        |                  | \$123,000          |                 |
| <b>SUBTOTAL DIRECT COST</b>                                |  | <b>\$5,474,246</b>   | <b>\$5,474,246</b> | <b>\$443,000</b> | <b>\$443,000</b> | <b>\$5,917,246</b> | <b>\$548</b>    |
|  | Adjustment for open shop labor rates                         | -15.00%              | (\$821,137)        |                  | (\$66,450)       | (\$887,587)        | (\$82)          |
| <b>TOTAL DIRECT COST</b>                                   |  | <b>\$430.84</b>      | <b>\$4,653,109</b> | <b>\$443,000</b> | <b>\$376,550</b> | <b>\$5,029,659</b> | <b>\$466</b>    |
|  | Design and Pricing Contingency                               | 15.00%               | \$697,966          |                  | \$56,483         | \$754,449          | \$69.86         |
| <b>Subtotal - Direct Construction Cost + Contingencies</b> |  | <b>\$495.47</b>      | <b>\$5,351,076</b> | <b>\$40.10</b>   | <b>\$433,033</b> | <b>\$5,784,108</b> | <b>\$535.57</b> |
|  | General Conditions, General Requirements, Insurances & Bonds | 12.75%               | \$682,262          |                  | \$55,212         | \$737,474          | \$68.28         |
|  | Building Permit  | 1.15%                | \$69,383           |                  | \$5,615          | \$74,998           | \$6.94          |
|  | OH & Profit  | 5.00%                | \$305,136          |                  | \$24,693         | \$329,829          | \$30.54         |
| <b>TOTAL ESTIMATED CONSTRUCTION COST</b>                   |  | <b>\$593.32</b>      | <b>\$6,407,857</b> | <b>\$48.01</b>   | <b>\$518,552</b> | <b>\$6,926,409</b> | <b>\$641.33</b> |



**Town of Braintree  
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| TOWNHOUSES |            |   | BUILDING AREA (bgsf) |      |            | 10,800              |                   |
|------------|------------|---|----------------------|------|------------|---------------------|-------------------|
|            |            | Description   | Quantity             | Unit | Unit Price | Total \$            | Subtotal Trades   |
| 1          | <b>A</b>   | <b><u>SUBSTRUCTURE</u></b>  |                      |      |            |                     |                   |
| 2          | <b>A10</b> | <b>FOUNDATIONS</b>  |                      |      |            |                     |                   |
| 3          | A1010      | Standard Foundations  |                      |      |            |                     |                   |
| 4          |            | Standard Foundations  | 10,800               | gsf  | 12.50      | 135,000             |                   |
| 5          |            | Concrete spread footing / tie beam  |                      |      |            | incl above          |                   |
| 6          |            | Concrete interior spread footings   |                      |      |            | incl above          |                   |
| 7          |            | Foundation walls  |                      |      |            | incl above          |                   |
| 8          |            | Columns   |                      |      |            | incl above          |                   |
| 9          |            | Misc tie beams, etc   |                      |      |            | incl above          |                   |
| 10         |            | Perimeter drain   |                      |      |            | incl above          |                   |
| 11         |            | Gravel base, footings   |                      |      |            | incl above          |                   |
| 12         |            |   |                      |      |            |                     |                   |
| 13         |            | Sub Total : Standard Foundations  |                      |      |            | <b>135,000</b>      |                   |
| 14         |            |   |                      |      |            |                     |                   |
| 15         | A1020      | Special Foundations   |                      |      |            |                     |                   |
| 16         |            | no work shown   |                      |      |            | -                   |                   |
| 17         |            |   |                      |      |            |                     |                   |
| 18         |            | Sub Total : Special Foundations   |                      |      |            | -                   |                   |
| 19         |            |   |                      |      |            |                     |                   |
| 20         | A1030      | Slab On Grade   |                      |      |            |                     |                   |
| 21         |            | Excavation for slab on grade  | 224                  | cy   | 75.00      | 16,800              |                   |
| 22         |            | Stockpile soil for reuse  |                      |      |            | incl above          |                   |
| 23         |            | Structural fill   |                      |      |            | incl above          |                   |
| 24         |            | Concrete  |                      |      |            | -                   |                   |
| 25         |            | Slab on grade over vapor retarder, reinforced with 6x6-W2.9xW2.9 WWF, vapor barrier | 3,832                | sf   | 14.50      | 55,568              |                   |
| 26         |            | Water vapor reducing admixture  |                      |      |            | incl above          |                   |
| 27         |            | 8" min compacted gravel under slab  | 106                  | cy   | 45.00      | 4,770               |                   |
| 28         |            | Misc concrete   | 1                    | ls   | 17,500.00  | 17,500              |                   |
| 29         |            |   |                      |      |            |                     |                   |
| 30         |            | Sub Total : Slab On Grade   |                      |      |            | <b>94,638</b>       |                   |
| 31         |            |   |                      |      |            |                     |                   |
| 32         | <b>A20</b> | <b>BASEMENT CONSTRUCTION</b>  |                      |      |            |                     |                   |
| 33         | A2010      | Basement Excavation   |                      |      |            |                     |                   |
| 34         |            | no work shown   |                      |      |            | -                   |                   |
| 35         |            |   |                      |      |            |                     |                   |
| 36         |            | Sub Total : Basement Excavation   |                      |      |            | -                   |                   |
| 37         |            |   |                      |      |            |                     |                   |
| 38         | A2020      | Basement Walls  |                      |      |            |                     |                   |
| 39         |            | no work shown   |                      |      |            | -                   |                   |
| 40         |            |   |                      |      |            |                     |                   |
| 41         |            | Sub Total : Basement Walls  |                      |      |            | -                   |                   |
| 42         |            |   |                      |      |            |                     |                   |
| 43         |            | <b><u>SUBTOTAL FOR SUBSTRUCTURE</u></b>   |                      |      |            | <b>End of Trade</b> | <b>\$ 229,638</b> |
| 44         |            |   |                      |      |            |                     |                   |



**Town of Braintree  
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| TOWNHOUSES |            |   | BUILDING AREA (bgsf) |      |            | 10,800         |  |
|------------|------------|---|----------------------|------|------------|----------------|--|
|            |            | Description   | Quantity             | Unit | Unit Price | Total \$       | Subtotal Trades  |
| 45         | <b>B</b>   | <b>SHELL</b>  |                      |      |            |                |  |
| 46         | <b>B10</b> | <b>SUPERSTRUCTURE</b>   |                      |      |            |                |  |
| 47         | B1010      | Floor Construction  |                      |      |            |                |  |
| 48         |            | Structural wood framing (2-story, attic for mechanical)                 | 10,800               | sf   | 25.00      | 270,000        |  |
| 49         |            | Misc struct steel associated with wood framing; assumed 2#/sf           | 11                   | ton  | 5,400.00   | 59,400         |  |
| 50         |            |   |                      |      |            |                |  |
| 51         |            | Sub Total : Floor Construction  |                      |      |            | <b>329,400</b> |  |
| 52         |            |   |                      |      |            |                |  |
| 53         | B1020      | Roof Construction   |                      |      |            |                |  |
| 54         |            | Structural wood framing; roof   | 4,215                | sf   | 25.11      | 105,840        |  |
| 55         |            |   |                      |      |            |                |  |
| 56         |            | Sub Total : Roof Construction   |                      |      |            | <b>105,840</b> |  |
| 57         |            |   |                      |      |            |                |  |
| 58         |            |   |                      |      |            |                |  |
| 59         | <b>B20</b> | <b>EXTERIOR CLOSURE</b>   |                      |      |            |                |  |
| 60         | B2010      | Exterior Walls  |                      |      |            |                |  |
| 61         |            | <i>Façades</i>  | 12,128               | sf   |            |                |  |
| 62         |            | Exterior wall; fiber cement clapboard siding                            | 8,490                | sf   | 55.00      | 466,928        | assumed 70% of exterior façade                         |
| 63         |            | Exterior wall assembly (2x6 wood studs, insulation, AVB, sheathing)     | 8,490                | sf   | 25.25      | 214,362        |  |
| 64         |            | Exterior wall, (2) layer GWB type X at inside face of exterior wall     | 8,490                | sf   | 5.50       | 46,693         |  |
| 65         |            | Exterior façade, caulking and sealing                                   | 8,490                | sf   | 2.50       | 21,224         |  |
| 66         |            | Staging, access and lifts for exterior façade work                      | 8,490                | sf   | 4.95       | 42,024         |  |
| 67         |            |   |                      |      |            |                |  |
| 68         |            | Sub Total : Exterior Walls  |                      |      |            | <b>791,231</b> |  |
| 69         |            |   |                      |      |            |                |  |
| 70         | B2020      | Exterior windows  |                      |      |            |                |  |
| 71         |            | Exterior aluminum cladd wood windows; triple-pane insulated low-e glass | 3,638                | sf   | 225.00     | 818,640        | windows and storefronts assumed 30% of exterior façade |
| 72         |            |   |                      |      |            |                |  |
| 73         |            | Sub Total : Exterior windows  |                      |      |            | <b>818,640</b> |  |
| 74         |            |   |                      |      |            |                |  |
| 75         | B2030      | Exterior doors  |                      |      |            |                |  |
| 76         |            | Exterior doors including frames and hardware                            | 18                   | ea   | 3,150.00   | 56,700         |  |
| 77         |            |   |                      |      |            |                |  |
| 78         |            | Sub Total : Exterior doors  |                      |      |            | <b>56,700</b>  |  |
| 79         |            |   |                      |      |            |                |  |
| 80         |            |   |                      |      |            |                |  |

**Town of Braintree  
Affordable Housing Study  
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| TOWNHOUSES |            |  | BUILDING AREA (bgsf) |       |            | 10,800              |                     |
|------------|------------|--|----------------------|-------|------------|---------------------|---------------------|
|            |            | Description  | Quantity             | Unit  | Unit Price | Total \$            | Subtotal Trades     |
| 81         | <b>B30</b> | <b>ROOFING</b>   |                      |       |            |                     |                     |
| 82         | B3010      | Roof Coverings   |                      |       |            |                     |                     |
| 83         |            | New 50-year architecture asphalt shingles, gutter, downspout and flashing system on the roofs        | 4,215                | sf    | 29.50      | 124,357             |                     |
| 84         |            |  |                      |       |            |                     |                     |
| 85         |            | Sub Total : Roof Coverings   |                      |       |            | <b>124,357</b>      |                     |
| 86         |            |  |                      |       |            |                     |                     |
| 87         |            | <b><u>SUBTOTAL FOR SHELL</u></b>   |                      |       |            | <b>End of Trade</b> | <b>\$ 2,226,168</b> |
| 88         |            |  |                      |       |            |                     |                     |
| 89         |            |  |                      |       |            |                     |                     |
| 90         | <b>C</b>   | <b>INTERIORS</b>   |                      |       |            |                     |                     |
| 91         | <b>C10</b> | <b>INTERIOR CONSTRUCTION</b>   |                      |       |            |                     |                     |
| 92         | C1010      | Partitions, Rough Carpentry  |                      |       |            |                     |                     |
| 93         |            | <i>Interior partitions w/wood framing, 5/8" GWB and batt insulation</i>                              |                      |       |            | -                   |                     |
| 94         |            | Units  | 34,053               | sf    | 11.75      | 400,118             |                     |
| 95         |            | Misc blocking, firestopping, caulking  | 10,800               | gsf   | 1.50       | 16,200              |                     |
| 96         |            |  |                      |       |            |                     |                     |
| 97         |            | Sub Total : Partitions, Rough Carpentry  |                      |       |            | <b>416,318</b>      |                     |
| 98         |            |  |                      |       |            |                     |                     |
| 99         |            |  |                      |       |            |                     |                     |
| 100        | C1020      | Interior Doors   |                      |       |            |                     |                     |
| 101        |            | Interior doors   | 9                    | units | 9,500.00   | 85,500              |                     |
| 102        |            | Access door/panel, specialty doors and hardware, misc metals and blocking                            | 10,800               | gsf   | 0.75       | 8,100               |                     |
| 103        |            |  |                      |       |            |                     |                     |
| 104        |            | Sub Total : Interior Doors   |                      |       |            | <b>93,600</b>       |                     |
| 105        |            |  |                      |       |            |                     |                     |
| 106        |            |  |                      |       |            |                     |                     |
| 107        | C1030      | Fittings   |                      |       |            |                     |                     |
| 108        |            | Exterior door signage  | 18                   | ea    | 215.00     | 3,870               |                     |
| 109        |            | Toilet accessories; medicine cabinet w/mirror, grab bars, toilet paper dispenser, shower curtain rod | 9                    | rms   | 950.00     | 8,550               | 1 bath/unit         |
| 110        |            | Residential fire extinguisher 1/unit   | 9                    | ea    | 285.00     | 2,565               |                     |
| 111        |            | Painted wood wall base, door & window wood trim at units   | 9                    | unit  | 3,900.00   | 35,100              | average cost        |
| 112        |            | Misc metals, rough carpentry, casework at common areas, caulking and sealant, corner guards, etc.    | 10,800               | gsf   | 0.75       | 8,100               |                     |
| 113        |            | Sub Total : Fittings   |                      |       |            | <b>58,185</b>       |                     |
| 114        |            |  |                      |       |            |                     |                     |

**Town of Braintree  
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| TOWNHOUSES |            |   | BUILDING AREA (bgsf) |      |            | 10,800              |                     |
|------------|------------|---|----------------------|------|------------|---------------------|---------------------|
|            |            | Description   | Quantity             | Unit | Unit Price | Total \$            | Subtotal Trades     |
| 115        | <b>C20</b> | <b>STAIRCASES</b>   |                      |      |            |                     |                     |
| 116        | C2010      | Stair Construction  |                      |      |            |                     |                     |
| 117        |            | Wood stairs structure and metal railing   | 9                    | ft   | 22,500.00  | 202,500             |                     |
| 118        |            | Attic ladder  | 9                    | ea   | 3,500.00   | 31,500              |                     |
| 119        |            |   |                      |      |            |                     |                     |
| 120        |            | Sub Total : Stair Construction  |                      |      |            | <b>234,000</b>      |                     |
| 121        |            |   |                      |      |            |                     |                     |
| 122        | C2020      | Stair Finishes  |                      |      |            |                     |                     |
| 123        |            | Stair finish; wood landing, treads and risers                                     | 9                    | ft   | 8,750.00   | 78,750              |                     |
| 124        |            |   |                      |      |            |                     |                     |
| 125        |            | Sub Total : Stair Finishes  |                      |      |            | <b>78,750</b>       |                     |
| 126        |            |   |                      |      |            |                     |                     |
| 127        | <b>C30</b> | <b>INTERIOR FINISHES</b>  |                      |      |            |                     |                     |
| 128        | C3010      | Wall Finishes   |                      |      |            |                     |                     |
| 129        |            | Paint walls   | 10,800               | gsf  | 3.50       | 37,800              |                     |
| 130        |            | Ceramic tile, toilet rooms assumed 7' high changed to paint GWB walls             | 2,331                | sf   | 2.50       | 5,828               |                     |
| 131        |            |   |                      |      |            |                     |                     |
| 132        |            | Sub Total : Wall Finishes   |                      |      |            | <b>43,628</b>       |                     |
| 133        |            |   |                      |      |            |                     |                     |
| 134        | C3020      | Floor Finishes  |                      |      |            |                     |                     |
| 135        |            | LVT flooring at residential units   | 9,495                | sf   | 7.50       | 71,213              |                     |
| 136        |            | Tile at toilets   | 765                  | sf   | 28.00      | 21,420              |                     |
| 137        |            | Floor prep for new flooring finishes  | 10,260               | gsf  | 2.75       | 28,215              |                     |
| 138        |            |   |                      |      |            |                     |                     |
| 139        |            | Sub Total : Floor Finishes  |                      |      |            | <b>120,848</b>      |                     |
| 140        |            |   |                      |      |            |                     |                     |
| 141        |            |   |                      |      |            |                     |                     |
| 142        | C3030      | Ceiling Finishes  |                      |      |            |                     |                     |
| 143        |            | Painted 'GWB ceiling at residential units   | 10,260               | sf   | 12.05      | 123,633             |                     |
| 144        |            |   |                      |      |            |                     |                     |
| 145        |            | Sub Total : Ceiling Finishes  |                      |      |            | <b>123,633</b>      |                     |
| 146        |            |   |                      |      |            |                     |                     |
| 147        |            | <b><u>SUBTOTAL FOR INTERIORS</u></b>  |                      |      |            | <b>End of Trade</b> | <b>\$ 1,168,961</b> |
| 148        |            |   |                      |      |            |                     |                     |
| 149        | <b>D</b>   | <b><u>SERVICES</u></b>  |                      |      |            |                     |                     |
| 150        | <b>D10</b> | <b>Elevators &amp; Lifts</b>  |                      |      |            |                     |                     |
| 151        |            | no work shown   |                      |      |            | -                   |                     |
| 152        |            |   |                      |      |            |                     |                     |
| 153        |            | Sub Total : Elevators & Lifts   |                      |      |            | -                   |                     |
| 154        |            |   |                      |      |            |                     |                     |
| 155        | <b>D20</b> | <b>Plumbing</b>   |                      |      |            |                     |                     |
| 156        |            | Equipment (incl. electric water heater, recirculation pump, expansion tank, etc.) | 10,800               | gsf  | 3.20       | 34,560              |                     |
| 157        |            |   |                      |      |            |                     |                     |

**Town of Braintree  
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| TOWNHOUSES |   |          | BUILDING AREA (bgsf) |            |          | 10,800          |  |
|------------|---|----------|----------------------|------------|----------|-----------------|--|
|            | Description   | Quantity | Unit                 | Unit Price | Total \$ | Subtotal Trades |  |
| 158        | Piping system   | 10,800   | gsf                  | 18.00      | 194,400  |                 |  |
| 159        | Domestic water pipe with insulation   | 1        | ls                   |            | included |                 |  |
| 160        | Sanitary waste and vent pipe  | 1        | ls                   |            | included |                 |  |
| 161        | Storm water pipe with insulation  | 1        | ls                   |            | included |                 |  |
| 162        | Valves and specialties (incl. hook-up equipment)  | 1        | ls                   |            | included |                 |  |
| 163        |   |          |                      |            |          |                 |  |
| 164        | Plumbing fixtures (incl. rough-in)  |          |                      |            | -        |                 |  |
| 165        | Water closet  | 9        | ea                   | 2,100.00   | 18,900   |                 |  |
| 166        | Lavatory  | 9        | ea                   | 1,880.00   | 16,920   |                 |  |
| 167        | Bathtub shower combo  | 9        | ea                   | 4,200.00   | 37,800   |                 |  |
| 168        | Kitchen sink  | 9        | ea                   | 1,820.00   | 16,380   |                 |  |
| 169        | Fixture rough-in  | 36       | ea                   | 690.00     | 24,840   |                 |  |
| 170        |   |          |                      |            |          |                 |  |
| 171        | Other   | 10,800   | gsf                  | 2.50       | 27,000   |                 |  |
| 172        | Access door   | 1        | ls                   |            | included |                 |  |
| 173        | Penetrations and sleeves  | 1        | ls                   |            | included |                 |  |
| 174        | Core drill, cutting, patching, fire stopping  | 1        | ls                   |            | included |                 |  |
| 175        | Clean, flush and test   | 1        | ls                   |            | included |                 |  |
| 176        | Disinfection  | 1        | ls                   |            | included |                 |  |
| 177        | System validate / Certification   | 1        | ls                   |            | included |                 |  |
| 178        | Equipment handling and material distribution  | 1        | ls                   |            | included |                 |  |
| 179        | System ID / Valve tags  | 1        | ls                   |            | included |                 |  |
| 180        | Shop co-ordination drawings   | 1        | ls                   |            | included |                 |  |
| 181        | Supports  | 1        | ls                   |            | included |                 |  |
| 182        | Coordination with other trades  | 1        | ls                   |            | included |                 |  |
| 183        |   |          |                      |            |          |                 |  |
| 184        |   |          |                      |            |          |                 |  |
| 185        |   |          |                      |            |          |                 |  |
| 186        | <b>D30 HVAC</b>   |          |                      |            |          |                 |  |
| 187        | Equipment   | 10,800   | gsf                  | 16.00      | 172,800  |                 |  |
| 188        |   |          |                      |            |          |                 |  |
| 189        | Piping system (incl. refrigerant and condensate drain pipe with insulation, valves and specialties) | 10,800   | gsf                  | 5.40       | 58,320   |                 |  |
| 190        |   |          |                      |            |          |                 |  |
| 191        | Air side system   | 10,800   | gsf                  | 18.00      | 194,400  |                 |  |
| 192        |   |          |                      |            |          |                 |  |
| 193        | System controls   | 10,800   | gsf                  | 9.50       | 102,600  |                 |  |
| 194        |   |          |                      |            |          |                 |  |
| 195        | Other   | 10,800   | gsf                  | 3.50       | 37,800   |                 |  |
| 196        | Access doors  | 1        | ls                   |            | included |                 |  |
| 197        | Vibration isolation / Seismic   | 1        | ls                   |            | included |                 |  |
| 198        | Penetrations and sleeves  | 1        | ls                   |            | included |                 |  |
| 199        | Core drill, cutting, patching, fire stopping  | 1        | ls                   |            | included |                 |  |
| 200        | Test and balance  | 1        | ls                   |            | included |                 |  |
| 201        | Clean, flush and test (piping system)   | 1        | ls                   |            | included |                 |  |
| 202        | System start-up / Commissioning   | 1        | ls                   |            | included |                 |  |
| 203        | Equipment handling and material distribution  | 1        | ls                   |            | included |                 |  |

**Town of Braintree  
Affordable Housing Study  
Study Estimate**

| TOWNHOUSES |  |          | BUILDING AREA (bgsf) |            |                | 10,800          |  |
|------------|--|----------|----------------------|------------|----------------|-----------------|--|
|            | Description  | Quantity | Unit                 | Unit Price | Total \$       | Subtotal Trades |  |
| 204        | System ID / Valve tags                                   | 1        | ls                   |            | included       |                 |  |
| 205        | Shop co-ordination drawings                              | 1        | ls                   |            | included       |                 |  |
| 206        | O&M manuals  | 1        | ls                   |            | included       |                 |  |
| 207        | Supports   | 1        | ls                   |            | included       |                 |  |
| 208        | Coordination with other trades                           | 1        | ls                   |            | included       |                 |  |
| 209        |  |          |                      |            |                |                 |  |
| 210        | <b>Sub Total : HVAC</b>                                  |          |                      |            | <b>565,920</b> |                 |  |
| 211        |  |          |                      |            |                |                 |  |
| 212        | <b>D40 Fire Protection</b>                               |          |                      |            |                |                 |  |
| 213        | Wet sprinkler system                                     | 10,800   | gsf                  | 10.50      | 113,400        |                 |  |
| 214        |  |          |                      |            |                |                 |  |
| 215        | Other  | 10,800   | gsf                  | 1.40       | 15,120         |                 |  |
| 216        | System ID, labels and color coding                       | 1        | ls                   |            | included       |                 |  |
| 217        | Painting piping  | 1        | ls                   |            | included       |                 |  |
| 218        | Seismic restraints                                       | 1        | ls                   |            | included       |                 |  |
| 219        | Design calculations                                      | 1        | ls                   |            | included       |                 |  |
| 220        | Core drill, cutting, patching, fire stopping             | 1        | ls                   |            | included       |                 |  |
| 221        | Clean, flush and test                                    | 1        | ls                   |            | included       |                 |  |
| 222        | Commissioning  | 1        | ls                   |            | included       |                 |  |
| 223        | Material distribution                                    | 1        | ls                   |            | included       |                 |  |
| 224        | Shop co-ordination drawings                              | 1        | ls                   |            | included       |                 |  |
| 225        | Coordination with other trades                           | 1        | ls                   |            | included       |                 |  |
| 226        |  |          |                      |            |                |                 |  |
| 227        | <b>Sub Total : Fire Protection</b>                       |          |                      |            | <b>128,520</b> |                 |  |
| 228        |  |          |                      |            |                |                 |  |
| 229        | <b>D50 Electrical</b>                                    |          |                      |            |                |                 |  |
| 230        | Service and Distribution                                 | 10,800   | gsf                  | 6.50       | 70,200         |                 |  |
| 231        |  |          |                      |            |                |                 |  |
| 232        | Emergency power  | 1        | ls                   | 29,000.00  | 29,000         |                 |  |
| 233        |  |          |                      |            |                |                 |  |
| 234        | Feeders (Normal and Emergency power)                     | 10,800   | gsf                  | 6.50       | 70,200         |                 |  |
| 235        |  |          |                      |            |                |                 |  |
| 236        | Incoming service   |          |                      |            | w/Site Work    |                 |  |
| 237        |  |          |                      |            |                |                 |  |
| 238        | Lighting   | 10,800   | gsf                  | 10.00      | 108,000        |                 |  |
| 239        |  |          |                      |            |                |                 |  |
| 240        | Lighting Control   | 10,800   | gsf                  | 2.00       | 21,600         |                 |  |
| 241        |  |          |                      |            |                |                 |  |
| 242        | Branch Circuitry   | 10,800   | gsf                  | 5.55       | 59,940         |                 |  |
| 243        |  |          |                      |            |                |                 |  |
| 244        | Mechanical Requirements                                  | 10,800   | gsf                  | 5.00       | 54,000         |                 |  |
| 245        |  |          |                      |            |                |                 |  |
| 246        | Low Voltage Systems (Tel/data, Security) - empty conduit | 10,800   | gsf                  | 2.00       | 21,600         |                 |  |
| 247        |  |          |                      |            |                |                 |  |
| 248        | Grounding system   | 10,800   | gsf                  | 1.50       | 16,200         |                 |  |
| 249        |  |          |                      |            |                |                 |  |
| 250        | Lightning protection/grounding system                    | 1        | ls                   | 9,700.00   | 9,700          |                 |  |

**Town of Braintree  
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| TOWNHOUSES |            |   | BUILDING AREA (bgsf) |       |            | 10,800              |                     |
|------------|------------|---|----------------------|-------|------------|---------------------|---------------------|
|            |            | Description   | Quantity             | Unit  | Unit Price | Total \$            | Subtotal Trades     |
| 251        |            | Testing/commissioning   | 1                    | ls    | 5,000.00   | 5,000               |                     |
| 252        |            | Supervision/PM  | 1                    | ls    | 6,500.00   | 6,500               |                     |
| 253        |            | Miscellaneous (sleeves/firestopping, vibration isolation/seismic bracing, ID) | 10,800               | gsf   | 1.50       | 16,200              |                     |
| 254        |            |   |                      |       |            |                     |                     |
| 255        |            | <b>Communications</b>   |                      |       |            |                     |                     |
| 256        |            | Tel/Data System   | 10,800               | gsf   | 5.00       | 54,000              |                     |
| 257        |            | Emergency Responder System  | 10,800               | gsf   | 1.00       | 10,800              |                     |
| 258        |            | Two-way Communication System  | 10,800               | gsf   | 0.50       | 5,400               |                     |
| 259        |            |   |                      |       |            |                     |                     |
| 260        |            | <b>Electronic Safety and Security</b>   |                      |       |            |                     |                     |
| 261        |            | Fire alarm system   | 10,800               | gsf   | 5.25       | 56,700              |                     |
| 262        |            |   |                      |       |            |                     |                     |
| 263        |            | <b>Sub Total : Electrical</b>   |                      |       |            | <b>615,040</b>      |                     |
| 264        |            |   |                      |       |            |                     |                     |
| 265        |            | <b><u>SUBTOTAL FOR SERVICES</u></b>   |                      |       |            | <b>End of Trade</b> | <b>\$ 1,680,280</b> |
| 266        |            |   |                      |       |            |                     |                     |
| 267        |            |   |                      |       |            |                     |                     |
| 268        | <b>E</b>   | <b><u>EQUIPMENT &amp; FURNISHINGS</u></b>                                     |                      |       |            |                     |                     |
| 269        | <b>E10</b> | <b>Equipment</b>  |                      |       |            |                     |                     |
| 270        | E1010      | Residential Appliances; refrigerator, cooktop, oven and hood                  | 9                    | rooms | 5,300.00   | 47,700              |                     |
| 271        |            |   |                      |       |            |                     |                     |
| 272        |            | <b>Sub Total : Equipment</b>  |                      |       |            | <b>47,700</b>       |                     |
| 273        |            |   |                      |       |            |                     |                     |
| 274        |            |   |                      |       |            |                     |                     |
| 275        | <b>E20</b> | <b>Furnishings</b>  |                      |       |            |                     |                     |
| 276        | E2010      | <b>Fixed Furnishings</b>  |                      |       |            |                     |                     |
| 277        |            | Plam kitchen cabinetry, solid surface countertops                             | 9                    | units | 13,500.00  | 121,500             |                     |
| 278        |            |   |                      |       |            |                     |                     |
| 279        |            | <b>Sub Total : Fixed Furnishings</b>  |                      |       |            | <b>121,500</b>      |                     |
| 280        |            |   |                      |       |            |                     |                     |
| 281        |            | <b><u>SUBTOTAL FOR EQUIPMENT &amp; FURNISHINGS</u></b>                        |                      |       |            | <b>End of Trade</b> | <b>\$ 169,200</b>   |
| 282        |            |   |                      |       |            |                     |                     |
| 283        |            |   |                      |       |            |                     |                     |
| 284        | <b>F</b>   | <b><u>SPECIAL CONSTRUCTION &amp; DEMOLITION</u></b>                           |                      |       |            |                     |                     |
| 285        | <b>F10</b> | <b>Special Construction</b>   |                      |       |            |                     |                     |
| 286        |            | No work this section  |                      |       | -          | -                   |                     |
| 287        |            |   |                      |       |            |                     |                     |
| 288        |            | <b>Sub Total : Special Construction</b>                                       |                      |       |            | <b>-</b>            |                     |
| 289        |            |   |                      |       |            |                     |                     |
| 290        |            |   |                      |       |            |                     |                     |
| 291        | <b>F20</b> | <b>Selective Building Demolition</b>  |                      |       |            |                     |                     |
| 292        | F2010      | <b>Building Elements Demolition</b>   |                      |       |            |                     |                     |
| 293        |            | Building Demolition   |                      |       |            |                     |                     |
| 294        |            | No work this section  |                      |       |            | -                   |                     |
| 295        |            |   |                      |       |            |                     |                     |
| 296        |            | <b>Sub Total : Building Elements Demolition</b>                               |                      |       |            | <b>-</b>            |                     |



**Town of Braintree  
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Study Estimate**

06/06/24

| TOWNHOUSES |            |  | BUILDING AREA (bgsf) |      |            | 10,800         |                 |
|------------|------------|--|----------------------|------|------------|----------------|-----------------|
|            |            | Description  | Quantity             | Unit | Unit Price | Total \$       | Subtotal Trades |
| 297        |            |  |                      |      |            |                |                 |
| 298        | F2020      | <b>Hazardous Components Abatement</b>                            |                      |      |            |                |                 |
| 299        |            | Hazardous Components Abatement                                   |                      |      |            |                |                 |
| 300        |            | No work this section   |                      |      |            |                |                 |
| 301        |            |  |                      |      |            |                |                 |
| 302        |            | <b>Sub Total : Hazardous Components Abatement</b>                |                      |      |            | -              |                 |
| 303        |            |  |                      |      |            |                |                 |
| 304        |            | <b><u>SUBTOTAL FOR SPECIAL CONSTRUCTION &amp; DEMOLITION</u></b> |                      |      |            | End of Trade   | \$ -            |
| 305        |            |  |                      |      |            |                |                 |
| 306        |            |  |                      |      |            |                |                 |
| 307        | <b>G</b>   | <b><u>SITWORK</u></b>  |                      |      |            |                |                 |
| 308        | <b>G10</b> | <b>Site Preparation</b>  |                      |      |            |                |                 |
| 309        |            | Site Clearing  | 1                    | ls   | 95,000.00  | 95,000         |                 |
| 310        |            |  |                      |      |            |                |                 |
| 311        |            | <b>Sub Total : Site Preparation</b>                              |                      |      |            | <b>95,000</b>  |                 |
| 312        |            |  |                      |      |            |                |                 |
| 313        | <b>G20</b> | <b>Site Improvements</b>   |                      |      |            |                |                 |
| 314        |            | Paving, site improvements, landscaping                           | 1                    | ls   | 150,000.00 | 150,000        |                 |
| 315        |            |  |                      |      |            |                |                 |
| 316        |            | <b>Sub Total : Site Improvements</b>                             |                      |      |            | <b>150,000</b> |                 |
| 317        |            |  |                      |      |            |                |                 |
| 318        | <b>G30</b> | <b>Site Mechanical Utilities</b>                                 |                      |      |            |                |                 |
| 319        | G3000      | Site Utilities   |                      |      |            |                |                 |
| 320        |            | Connect to main  | 1                    | ls   | 75,000.00  | 75,000         |                 |
| 321        |            |  |                      |      |            |                |                 |
| 322        |            | <b>Sub Total : Site Mechanical Utilities</b>                     |                      |      |            | <b>75,000</b>  |                 |
| 323        |            |  |                      |      |            |                |                 |
| 324        | <b>G40</b> | <b>Site Electrical Utilities</b>                                 |                      |      |            |                |                 |
| 325        | G4010      | Electrical Distribution  |                      |      |            |                |                 |
| 326        |            | Primary power, secondary power; allow                            | 1                    | ls   | 108,000.00 | 108,000        |                 |
| 327        | G4020      | Site Lighting  |                      |      |            |                |                 |
| 328        |            | Site lighting; allow   | 1                    | ls   | 15,000.00  | 15,000         |                 |
| 329        |            |  |                      |      |            |                |                 |
| 330        |            | <b>Sub Total : Site Electrical Utilities</b>                     |                      |      |            | <b>123,000</b> |                 |
| 331        |            |  |                      |      |            |                |                 |
| 332        |            | <b><u>SUBTOTAL FOR SITWORK</u></b>                               |                      |      |            | End of Trade   | \$ 443,000      |

**Town of Braintree  
Affordable Housing Study  
Study Estimate**

| HVAC OPTION 2 |   | BUILDING AREA (bgsf) |      |            | 47,407   |                 |
|---------------|---|----------------------|------|------------|----------|-----------------|
|               | Description   | Quantity             | Unit | Unit Price | Total \$ | Subtotal Trades |
| 1             |   |                      |      |            |          |                 |
| 2             | <b>Add Option-2: New All-Electric Heating &amp; Cooling w/ ERV Ventilation</b>          |                      |      |            |          |                 |
| 3             | <u>74 Pond Street</u>   |                      |      |            |          |                 |
| 4             | Demolition  |                      |      |            |          |                 |
| 5             | Selective demolition (incl. remove existing boiler, baseboard heaters, HW piping, etc.) | 25,107               | gsf  | 2.00       | 50,214   |                 |
| 6             |   |                      |      |            |          |                 |
| 7             | Equipment   |                      |      |            |          |                 |
| 8             | Modify baseboard heaters for shared community spaces and new residential layout         | (25,107)             | gsf  | 3.00       | (75,321) |                 |
| 9             | Provide new electric heating & cooling equipment  | 25,107               | gsf  | 6.00       | 150,642  |                 |
| 10            |   |                      |      |            |          |                 |
| 11            | Piping system   |                      |      |            |          |                 |
| 12            | Modify existing heating hot water piping system   | (25,107)             | gsf  | 2.00       | (50,214) |                 |
| 13            | Refrigerant and condensate drain piping for new electrical cooling equipment            | 25,107               | gsf  | 3.80       | 95,407   |                 |
| 14            |   |                      |      |            |          |                 |
| 15            | System controls (new electric heating & cooling equipment)                              | 25,107               | gsf  | 4.00       | 100,428  |                 |
| 16            |   |                      |      |            |          |                 |
| 17            | Other   | 25,107               | gsf  | 0.50       | 12,554   |                 |
| 18            | Access doors  | 1                    | ls   |            | included |                 |
| 19            | Vibration isolation / Seismic   | 1                    | ls   |            | included |                 |
| 20            | Cutting, patching, fire stopping  | 1                    | ls   |            | included |                 |
| 21            | Test and balance  | 1                    | ls   |            | included |                 |
| 22            | System start-up / Commissioning   | 1                    | ls   |            | included |                 |
| 23            | Equipment handling and material distribution  | 1                    | ls   |            | included |                 |
| 24            | System ID   | 1                    | ls   |            | included |                 |
| 25            | Shop co-ordination drawings   | 1                    | ls   |            | included |                 |
| 26            | O&M manuals   | 1                    | ls   |            | included |                 |
| 27            | Supports  | 1                    | ls   |            | included |                 |
| 28            | Coordination with other trades  | 1                    | ls   |            | included |                 |
| 29            | <u>90 Pond Street</u>   |                      |      |            |          |                 |
| 30            | Selective demolition (incl. remove existing boiler, baseboard heaters, HW piping, etc.) | 20,231               | gsf  | 2.00       | 40,462   |                 |
| 31            |   |                      |      |            |          |                 |
| 32            | Equipment   |                      |      |            |          |                 |
| 33            | Replace existing baseboard heating units  | (20,231)             | gsf  | 2.00       | (40,462) |                 |
| 34            | Provide new electric heating & cooling equipment  | 20,231               | gsf  | 6.00       | 121,386  |                 |
| 35            |   |                      |      |            |          |                 |
| 36            | Piping system   | (20,231)             | gsf  | 2.00       | (40,462) |                 |
| 37            | Modify existing heating hot water piping system   | (1)                  | ls   |            | included |                 |
| 38            | Additional refrigerant and condensate drain piping for new electrical cooling equipment | 20,231               | gsf  | 1.40       | 28,323   |                 |
| 39            |   |                      |      |            |          |                 |
| 40            | System controls (new electric heating & cooling equipment)                              | 20,231               | gsf  | 4.00       | 80,924   |                 |
| 41            |   |                      |      |            |          |                 |
| 42            | Other   | 20,231               | gsf  | 0.50       | 10,116   |                 |
| 43            | Access doors  | 1                    | ls   |            | included |                 |
| 44            | Vibration isolation / Seismic   | 1                    | ls   |            | included |                 |



**Town of Braintree  
Affordable Housing Study  
Study Estimate**

01/09/23

| HVAC OPTION 2 |  |          | BUILDING AREA (bgsf) |            |                | 47,407          |  |
|---------------|--|----------|----------------------|------------|----------------|-----------------|--|
|               | Description  | Quantity | Unit                 | Unit Price | Total \$       | Subtotal Trades |  |
| 45            | Cutting, patching, fire stopping   | 1        | ls                   |            | included       |                 |  |
| 46            | Test and balance   | 1        | ls                   |            | included       |                 |  |
| 47            | System start-up / Commissioning  | 1        | ls                   |            | included       |                 |  |
| 48            | Equipment handling and material distribution   | 1        | ls                   |            | included       |                 |  |
| 49            | System ID  | 1        | ls                   |            | included       |                 |  |
| 50            | Shop co-ordination drawings  | 1        | ls                   |            | included       |                 |  |
| 51            | O&M manuals  | 1        | ls                   |            | included       |                 |  |
| 52            | Supports   | 1        | ls                   |            | included       |                 |  |
| 53            | Coordination with other trades   | 1        | ls                   |            | included       |                 |  |
| 54            |  |          |                      |            |                |                 |  |
| 55            | Subtotal   |          |                      |            | 483,996        |                 |  |
| 56            | Markups  | 32.86%   |                      |            | 159,026        |                 |  |
| 57            | <b>Total : Add Option-2: New All-Electric Heating &amp; Cooling w/ ERV Ventilation</b> |          |                      |            | <b>643,022</b> |                 |  |



**APPENDIX D:  
ONLINE POLLS & STAKEHOLDER  
FEEDBACK**

# Question 1

15 Responses

01:30 Average time to complete

Active Status

1. Which of the following populations do you feel the Town should consider the highest priority for housing?

|  |   |
|--|---|
| <span style="color: blue;">●</span> Veterans.    | 1 |
| <span style="color: orange;">●</span> Seniors.   | 6 |
| <span style="color: green;">●</span> Both equal. | 8 |



2. If interested, comment on your response above.

3  
Responses

Latest Responses

3. If interested, feel free to share your name.

5  
Responses

Latest Responses  
"Richard Wentzel"

# Question 2

12 Responses

01:43 Average time to complete

Active Status

1. What level of affordable housing should the Town prioritize?

- Maximize affordable housing fo... 4
- Provide affordable housing opti... 4
- Develop affordable housing alo... 3



2. If interested, comment on your response above.

1  
Responses

Latest Responses

3. If interested, feel free to share your name.

3  
Responses

Latest Responses  
"Richard Wentzel"

# Question 3

15 Responses

01:17 Average time to complete

Active Status

1. For Veteran & Senior Housing, do you feel there is a necessity for a bus stop closer to the project site?

- Yes, add a public bus stop. 10
- No, current bus access is sufficie... 5



2. If interested, comment on your response above.

2 Responses

Latest Responses

3. If interested, feel free to share your name.

4 Responses

Latest Responses

"Richard Wentzel"

# Question 4

13 Responses

01:33 Average time to complete

Active Status

1. Do you and your family use the play area or sports court behind the two buildings? Would you use it if it were upgraded?

- I use it all the time and would c... 3
- No, I don't use it but I would co... 2
- No, I don't use it and I likely wo... 5



2. If interested, comment on your response above.

4 Responses

Latest Responses  
"N/A"

3. If interested, feel free to share your name.

3 Responses

Latest Responses  
"Richard Wentzel"

# Question 5

13 Responses

01:27 Average time to complete

Active Status

1. Would you like to have access to the Veteran/Senior Housing's Public Amenities as a community member? Examples include social service offices, community meeting rooms, and dining areas.

- Yes, that would be beneficial. 11
- No, the amenities should be foc... 2



2. If interested, comment on your response above.

2  
Responses

Latest Responses

3. If interested, feel free to share your name.

3  
Responses

Latest Responses  
"Richard Wentzel"

# Question 6

14 Responses

01:19 Average time to complete

Active Status

1. How important is maintaining the original historic appearance of these two buildings?

|                      |   |
|----------------------|---|
| Extremely important. | 8 |
| Somewhat important.  | 5 |
| Less important.      | 0 |
| Not important.       | 1 |



2. If interested, comment on your response above.

0 Responses

Latest Responses

3. If interested, feel free to share your name.

4 Responses

Latest Responses  
"Richard Wentzel"

# Question 7

14 Responses

01:24 Average time to complete

Active Status

1. What is your preference of unit types on the site?

- I prefer the townhouse units. 6
- I do not prefer the townhouse u... 7



2. If interested, comment on your response above.

4 Responses

Latest Responses  
*"It should be both."*

3. If interested, feel free to share your name.

4 Responses

Latest Responses  
*"Richard Wentzel"*

# Question 8

13 Responses

01:41 Average time to complete

Active Status

1. We want to know more about you. Which of these categories do you identify with? Select all that apply.

- I am a Senior (55+). 8
- I am a Veteran. 2
- I currently live nearby - within w... 6
- None of the above. 3



2. If interested, comment on your response above.

3 Responses

Latest Responses

3. If interested, feel free to share your name.

4 Responses

Latest Responses

"Richard Wentzel"

| ID | Start time      | Completion time | Which of the following populations do you feel the Town should consider the highest priority for housing? | If interested, comment on your response above.  | If interested, feel free to share your name. |
|----|-----------------|-----------------|---|---|--|
| 1  | 5/9/24 18:39:04 | 5/9/24 18:39:22 | Both equal.   |   |  |
| 2  | 5/9/24 18:38:47 | 5/9/24 18:39:32 | Seniors.  |   |  |
| 3  | 5/9/24 18:39:05 | 5/9/24 18:39:35 | Both equal.   |   | Edward and Joanna Buscema                    |
| 4  | 5/9/24 18:40:34 | 5/9/24 18:40:56 | Seniors.  |   |  |
| 5  | 5/9/24 18:41:00 | 5/9/24 18:41:04 | Seniors.  |   |  |
| 6  | 5/9/24 18:41:14 | 5/9/24 18:41:22 | Both equal.   |   | Mohammed Ahmed                               |
| 7  | 5/9/24 18:42:32 | 5/9/24 18:43:34 | Both equal.   | Also people with disabilities<br>I agree with Drew there is a need for housing for young adults with special needs. | Bethany Doherty                              |
| 8  | 5/9/24 18:49:12 | 5/9/24 18:50:05 | Seniors.  |   |  |
| 9  | 5/9/24 19:05:03 | 5/9/24 19:05:29 | Seniors.  |   |  |
| 10 | 6/18/24 9:16:06 | 6/18/24 9:21:53 | Both equal.   |   | Virginia                                     |
| 11 | 6/18/24 9:22:03 | 6/18/24 9:23:30 | Both equal.   |   |  |
| 12 | 6/18/24 9:23:36 | 6/18/24 9:28:10 | Both equal.   | We need more houses for seniors & Lower income residents  |  |
| 13 | 6/18/24 9:28:27 | 6/18/24 9:28:54 | Veterans.   |   |  |
| 14 | 6/18/24 9:29:56 | 6/18/24 9:32:30 | Both equal.   |   | Richard Wentzel                              |
| 15 | 6/18/24 9:33:36 | 6/18/24 9:36:53 | Seniors.  |   |  |

| ID | Start time      | Completion time | What level of affordable housing should the Town prioritize?          | If interested, comment on your response above. | If interested, feel free to share your name. |
|----|-----------------|-----------------|---|--|--|
| 1  | 5/9/24 18:40:58 | 5/9/24 18:41:16 |   |  |  |
| 2  | 5/9/24 18:41:12 | 5/9/24 18:41:28 | Maximize affordable housing for those most in need.                   |  |  |
| 3  | 5/9/24 18:41:06 | 5/9/24 18:41:36 | Develop affordable housing alongside market rate development.         |  |  |
| 4  | 5/9/24 18:41:09 | 5/9/24 18:41:38 | Provide affordable housing options for a wide range of income levels. |  |  |
| 5  | 5/9/24 18:41:27 | 5/9/24 18:41:46 | Develop affordable housing alongside market rate development.         |  | Mohammed Ahmed                               |
| 6  | 5/9/24 18:43:53 | 5/9/24 18:44:55 | Maximize affordable housing for those most in need.                   |  |  |
| 7  | 6/18/24 9:16:25 | 6/18/24 9:21:48 | Develop affordable housing alongside market rate development.         |  | Virginia                                     |
| 8  | 6/18/24 9:22:04 | 6/18/24 9:23:27 | Provide affordable housing options for a wide range of income levels. |  |  |
| 9  | 6/18/24 9:23:37 | 6/18/24 9:28:07 | Provide affordable housing options for a wide range of income levels. | No commercial use                              |  |
| 10 | 6/18/24 9:28:28 | 6/18/24 9:29:05 | Provide affordable housing options for a wide range of income levels. |  |  |
| 11 | 6/18/24 9:29:57 | 6/18/24 9:32:37 | Maximize affordable housing for those most in need.                   |  | Richard Wentzel                              |
| 12 | 6/18/24 9:33:36 | 6/18/24 9:36:51 | Maximize affordable housing for those most in need.                   |  |  |

| ID | Start time      | Completion time | For Veteran & Senior Housing, do you feel there is a necessity for a bus stop closer to the project site? | If interested, comment on your response above.                                      | If interested, feel free to share your name. |
|----|-----------------|-----------------|---|---|--|
| 1  | 5/9/24 18:43:19 | 5/9/24 18:43:23 | Yes, add a public bus stop.   |   |  |
| 2  | 5/9/24 18:43:16 | 5/9/24 18:43:24 | No, current bus access is sufficient.   |   |  |
| 3  | 5/9/24 18:43:22 | 5/9/24 18:43:26 | Yes, add a public bus stop.   |   |  |
| 4  | 5/9/24 18:43:12 | 5/9/24 18:43:26 | Yes, add a public bus stop.   |   |  |
| 5  | 5/9/24 18:43:30 | 5/9/24 18:43:49 | No, current bus access is sufficient.   |   | Mohammed Ahmed                               |
| 6  | 5/9/24 18:44:08 | 5/9/24 18:44:22 | No, current bus access is sufficient.   |   |  |
| 7  | 5/9/24 18:45:29 | 5/9/24 18:45:39 | No, current bus access is sufficient.   |   |  |
| 8  | 5/9/24 18:46:30 | 5/9/24 18:46:44 | Yes, add a public bus stop.   |   | Bethany Doherty                              |
| 9  | 5/9/24 19:04:07 | 5/9/24 19:04:20 | Yes, add a public bus stop.   |   |  |
| 10 | 6/18/24 9:16:26 | 6/18/24 9:21:41 | No, current bus access is sufficient.   | My opinion is, most residents would have vehicle or other access to transportation. | Virginia                                     |
| 11 | 6/18/24 9:22:04 | 6/18/24 9:23:24 | Yes, add a public bus stop.   |   |  |
| 12 | 6/18/24 9:23:38 | 6/18/24 9:28:04 | Yes, add a public bus stop.   | Public sidewalk improvement   |  |
| 13 | 6/18/24 9:28:28 | 6/18/24 9:29:15 | Yes, add a public bus stop.   |   |  |
| 14 | 6/18/24 9:29:57 | 6/18/24 9:32:45 | Yes, add a public bus stop.   |   | Richard Wentzel                              |
| 15 | 6/18/24 9:33:37 | 6/18/24 9:36:48 | Yes, add a public bus stop.   |   |  |

| ID | Start time      | Completion time | Do you and your family use the play area or sports court behind the two buildings? Would you use it if it were upgraded? | If interested, comment on your response above.                        | If interested, feel free to share your name. |
|----|-----------------|-----------------|--|---|--|
| 1  | 5/9/24 18:43:53 | 5/9/24 18:44:04 | No, I don't use it and I likely would not use it.  |   |  |
| 2  | 5/9/24 18:43:49 | 5/9/24 18:44:04 | I use it all the time and would continue to use it.  |   |  |
| 3  | 5/9/24 18:44:01 | 5/9/24 18:44:06 | No, I don't use it and I likely would not use it.  |   |  |
| 4  | 5/9/24 18:44:02 | 5/9/24 18:44:11 | I use it all the time and would continue to use it.  |   | Mohammed Ahmed                               |
| 5  | 5/9/24 18:45:43 | 5/9/24 18:45:53 | I use it all the time and would continue to use it.  |   |  |
| 6  | 5/9/24 18:47:15 | 5/9/24 18:48:11 | No, I don't use it but I would consider using it   |   |  |
| 7  | 5/9/24 18:50:59 | 5/9/24 18:51:57 |  | The Launch Program located at Pond St uses the basketball for fitness |  |
| 8  | 6/18/24 9:16:28 | 6/18/24 9:21:24 |  | N/A, Recreation area should be reconfigured for the senior population | Virginia                                     |
| 9  | 6/18/24 9:22:05 | 6/18/24 9:23:21 | No, I don't use it and I likely would not use it.  |   |  |
| 10 | 6/18/24 9:23:38 | 6/18/24 9:27:59 | No, I don't use it but I would consider using it   | did not know about walking trails                                     |  |
| 11 | 6/18/24 9:28:29 | 6/18/24 9:29:21 | No, I don't use it and I likely would not use it.  |   |  |
| 12 | 6/18/24 9:29:58 | 6/18/24 9:32:52 | No, I don't use it and I likely would not use it.  |   | Richard Wentzel                              |
| 13 | 6/18/24 9:33:38 | 6/18/24 9:36:46 |  | N/A   |  |

| ID | Start time      | Completion time | Would you like to have access to the Veteran/Senior Housing's Public Amenities as a community member? Examples include social service offices, community meeting rooms, and dining areas. | If interested, comment on your response above. | If interested, feel free to share your name. |
|----|-----------------|-----------------|---|--|--|
| 1  | 5/9/24 18:45:06 | 5/9/24 18:45:18 | Yes, that would be beneficial.  |  |  |
| 2  | 5/9/24 18:45:11 | 5/9/24 18:45:32 | Yes, that would be beneficial.  |  | Mohammed Ahmed                               |
| 3  | 5/9/24 18:45:19 | 5/9/24 18:45:47 | Yes, that would be beneficial.  | Only if safety of the residents was paramount. |  |
| 4  | 5/9/24 18:46:11 | 5/9/24 18:46:16 | Yes, that would be beneficial.  |  |  |
| 5  | 5/9/24 18:46:32 | 5/9/24 18:46:38 | Yes, that would be beneficial.  |  |  |
| 6  | 5/9/24 18:46:46 | 5/9/24 18:47:01 | No, the amenities should be focused for the residents only.   |  |  |
| 7  | 5/9/24 18:48:27 | 5/9/24 18:48:37 | Yes, that would be beneficial.  |  |  |
| 8  | 6/18/24 9:16:28 | 6/18/24 9:21:17 | Yes, that would be beneficial.  |  | Virginia                                     |
| 9  | 6/18/24 9:22:06 | 6/18/24 9:23:19 | No, the amenities should be focused for the residents only.   |  |  |
| 10 | 6/18/24 9:23:39 | 6/18/24 9:27:55 | Yes, that would be beneficial.  | Veterans Office lunches for the seniors        |  |
| 11 | 6/18/24 9:28:30 | 6/18/24 9:29:28 | Yes, that would be beneficial.  |  |  |
| 12 | 6/18/24 9:29:59 | 6/18/24 9:33:00 | Yes, that would be beneficial.  |  | Richard Wentzel                              |
| 13 | 6/18/24 9:33:38 | 6/18/24 9:36:43 | Yes, that would be beneficial.  |  |  |

| ID | Start time      | Completion time | How important is maintaining the original historic appearance of these two buildings? | If interested, comment on your response above. | If interested, feel free to share your name. |
|----|-----------------|-----------------|---|--|--|
| 1  | 5/9/24 18:45:56 | 5/9/24 18:46:04 | Extremely important.  |  | Mohammed Ahmed                               |
| 2  | 5/9/24 18:46:04 | 5/9/24 18:46:10 | Extremely important.  |  |  |
| 3  | 5/9/24 18:46:01 | 5/9/24 18:46:12 | Somewhat important.   |  |  |
| 4  | 5/9/24 18:45:57 | 5/9/24 18:46:12 | Somewhat important.   |  |  |
| 5  | 5/9/24 18:46:22 | 5/9/24 18:46:32 | Extremely important.  |  | Mohammed Ahmed                               |
| 6  | 5/9/24 18:46:28 | 5/9/24 18:46:33 | Extremely important.  |  |  |
| 7  | 5/9/24 18:46:41 | 5/9/24 18:46:49 | Extremely important.  |  |  |
| 8  | 5/9/24 18:48:54 | 5/9/24 18:49:06 | Extremely important.  |  |  |
| 9  | 6/18/24 9:16:28 | 6/18/24 9:21:10 | Extremely important.  |  | Virginia                                     |
| 10 | 6/18/24 9:22:06 | 6/18/24 9:23:17 | Not important.  |  |  |
| 11 | 6/18/24 9:23:40 | 6/18/24 9:27:48 | Somewhat important.   |  |  |
| 12 | 6/18/24 9:28:30 | 6/18/24 9:29:34 | Extremely important.  |  |  |
| 13 | 6/18/24 9:30:00 | 6/18/24 9:33:07 | Somewhat important.   |  | Richard Wentzel                              |
| 14 | 6/18/24 9:33:39 | 6/18/24 9:36:41 | Somewhat important.   |  |  |

| ID | Start time      | Completion time | What is your preference of unit types on the site?                                      | If interested, comment on your response above.   | If interested, feel free to share your name. |
|----|-----------------|-----------------|---|--|--|
| 1  | 5/9/24 18:46:40 | 5/9/24 18:46:51 | I do not prefer the townhouse units, keep the units concentrated at the main structure. |  |  |
| 2  | 5/9/24 18:46:45 | 5/9/24 18:46:54 | I do not prefer the townhouse units, keep the units concentrated at the main structure. |  |  |
| 3  | 5/9/24 18:46:38 | 5/9/24 18:46:55 | I do not prefer the townhouse units, keep the units concentrated at the main structure. |  | Mohammed Ahmed                               |
| 4  | 5/9/24 18:46:59 | 5/9/24 18:47:03 | I prefer the townhouse units.   |  |  |
| 5  | 5/9/24 18:47:12 | 5/9/24 18:47:19 | I do not prefer the townhouse units, keep the units concentrated at the main structure. |  |  |
| 6  | 5/9/24 18:47:49 | 5/9/24 18:47:57 | I prefer the townhouse units.   |  |  |
| 7  | 5/9/24 18:46:51 | 5/9/24 18:48:06 | I do not prefer the townhouse units, keep the units concentrated at the main structure. | Absolutely NO to townhouses, there are already issues with parking on Fairview never mind the firetrucks trying to get down the street |  |
| 8  | 5/9/24 18:49:35 | 5/9/24 18:49:51 | I prefer the townhouse units.   |  | Bethany Doherty                              |
| 9  | 6/18/24 9:16:29 | 6/18/24 9:21:06 | I do not prefer the townhouse units, keep the units concentrated at the main structure. | I think townhouses for senior & veterans is stupid   | Virginia                                     |
| 10 | 6/18/24 9:22:07 | 6/18/24 9:23:14 | I prefer the townhouse units.   |  |  |
| 11 | 6/18/24 9:23:41 | 6/18/24 9:27:45 | I prefer the townhouse units.   | With Third building, not connector   |  |
| 12 | 6/18/24 9:28:31 | 6/18/24 9:29:42 | I do not prefer the townhouse units, keep the units concentrated at the main structure. |  |  |
| 13 | 6/18/24 9:30:00 | 6/18/24 9:33:14 | I prefer the townhouse units.   |  | Richard Wentzel                              |
| 14 | 6/18/24 9:33:40 | 6/18/24 9:36:39 |   | It should be both.   |  |

| ID | Start time      | Completion time | We want to know more about you. Which of these categories do you identify with? Select all that apply. | If interested, comment on your response above.  | If interested, feel free to share your name. |
|----|-----------------|-----------------|--|---|--|
| 1  | 5/9/24 18:47:19 | 5/9/24 18:47:27 | I am a Senior (55+);   |   |  |
| 2  | 5/9/24 18:47:20 | 5/9/24 18:47:30 | I currently live nearby - within walking distance.;  |   |  |
| 3  | 5/9/24 18:47:23 | 5/9/24 18:47:33 | I am a Senior (55+);I am a Veteran.;I currently live nearby - within walking distance.;                |   |  |
| 4  | 5/9/24 18:47:27 | 5/9/24 18:47:34 | I currently live nearby - within walking distance.;  |   |  |
| 5  | 5/9/24 18:47:27 | 5/9/24 18:48:06 | None of the above.;  | I live in Braintree and visit this place often  | Mohammed Ahmed                               |
| 6  | 5/9/24 18:47:45 | 5/9/24 18:48:54 | None of the above.;  | I am an employee at the Launch Program and I am concerned where we will go.   |  |
| 7  | 5/9/24 18:50:28 | 5/9/24 18:52:58 | I am a Senior (55+);   | I'm a home owner in Braintree, I am primarily looking for housing for my son with a disability that is affordable and convenient but would give him independence. | Bethany Doherty                              |
| 8  | 6/18/24 9:16:30 | 6/18/24 9:20:56 | I am a Senior (55+);I currently live nearby - within walking distance.;                                |   | Virginia                                     |
| 9  | 6/18/24 9:22:08 | 6/18/24 9:23:12 | I am a Senior (55+);   |   |  |
| 10 | 6/18/24 9:23:41 | 6/18/24 9:27:43 | I am a Senior (55+);I currently live nearby - within walking distance.;                                |   |  |
| 11 | 6/18/24 9:28:32 | 6/18/24 9:29:47 | I am a Senior (55+);   |   |  |
| 12 | 6/18/24 9:30:01 | 6/18/24 9:33:25 | I am a Senior (55+);I am a Veteran.;I currently live nearby - within walking distance.;                |   | Richard Wentzel                              |
| 13 | 6/18/24 9:33:41 | 6/18/24 9:36:36 | None of the above.;  |   |  |



**APPENDIX E:  
FINANCIAL ANALYSIS - TECHNICAL  
MEMO**

# Project Summary Information

NOTE: Do not fill out this section. It is automatically filled in by program.

|  |                     |   |                          |
|--|---------------------|---|--------------------------|
| Project Name                             | 74 & 90 Pond Street |   |                          |
| Developer                                | N/A                 |   |                          |
| Community                                | Braintree           |   |                          |
| Number of Units                          | 70                  |   |                          |
| SRO                                      | 0                   | Low-Income, Rental Assisted               | 22                       |
| 0 bedroom                                | 34                  | Low-Income, Below 50%                     | 0                        |
| 1 bedroom                                | 26                  | Low-Income, Below 60%                     | 48                       |
| 2 bedrooms                               | 9                   | Other Income 100%                         | 0                        |
| 3 bedrooms                               | 1                   | Market Rate                               | 0                        |
| 4 bedrooms                               | 0                   |   |                          |
| This is an application for:              |                     | DHCD Tax Credit Allocation .....          | No                       |
|  |                     | HOME Funding through DHCD .....           | No                       |
|  |                     | MHFA Official Action Status.....          | No                       |
|  |                     | MHFA Construction Financing.....          | No                       |
|  |                     | MHFA Permanent Financing .....            | No                       |
|  |                     | MHP Fund Financing .....                  | No                       |
|  |                     | MHIC Construction Loan.....               | No                       |
|  |                     | MHIC Tax Credit Equity .....              | No                       |
|  |                     | Boston: DND.....                          | No                       |
|  |                     | Other.....                                | 0                        |
|  |                     | Other.....                                | N/A                      |
|  |                     | Other.....                                | N/A                      |
|  |                     | Financing from Massdevelopment.....       | No                       |
| <b>Sources of Funds:</b>                 |                     | <b>Uses of Funds:</b>                     |                          |
| Developer's Equity .....                 | \$3,500,000         | Acquisition .....                         | \$100                    |
| Tax Credit Equity .....                  | \$16,170,000        | Construction .....                        | \$40,965,236             |
| Public Equity .....                      | \$3,500,000         | General Development .....                 | \$448,421                |
| Subordinate Debt .....                   | \$8,016,657         | Developer Overhead .....                  | \$1,500,000              |
| Permanent Debt .....                     | \$13,600,000        | Developer Fee .....                       | \$1,500,000              |
| <b>Total All Sources .....</b>           | <b>\$44,786,657</b> | Capitalized Reserves.....                 | \$372,900                |
|  |                     | <b>Total All Uses .....</b>               | <b>\$44,786,657</b>      |
| Uses Exceed Sources by .....             | \$0                 |   |                          |
| <b>Rent Levels:</b>                      |                     | <i>BR (aver.)</i>                         | <i>SF (aver.)</i>        |
| Low-Income, Rental Assisted .....        | \$2,403             | 0.7                                       | 666                      |
| Low-Income, Below 50% .....              | N/A                 | N/A                                       | N/A                      |
| Low-Income, Below 60% .....              | \$1,823             | 0.6                                       | 641                      |
| Other Income 100%.....                   | N/A                 | N/A                                       | N/A                      |
| Market Rate .....                        | N/A                 | N/A                                       | N/A                      |
| <i>Average, All Units .....</i>          | <i>\$2,005</i>      | <i>0.7</i>                                | <i>649</i>               |
| <b>Annual Operating Income (year 1):</b> |                     | <b>Annual Operating Expense (year 1):</b> |                          |
| Gross rental income (residential)        | \$1,684,452         | Management Fee                            | \$84,223                 |
| Vacancy (resid.) 3.00%                   | \$50,534            | Administrative                            | \$132,000                |
| Other Income (net of vacancies)          | \$15,000            | Maintenance                               | \$165,000                |
| Subtotal                                 | \$1,648,918         | Res. Service, Security                    | \$26,500                 |
| Operating Subsidies                      | \$0                 | Utilities                                 | \$75,000                 |
| Draw on Operating Reserves               | \$0                 | Repl. Reserve                             | \$21,450                 |
| <b>Total Annual Income</b>               | <b>\$1,648,918</b>  | Oper. Reserve                             | \$0                      |
|  |                     | Taxes, Insurance                          | \$240,000                |
| Net Operating Income                     | \$904,746           | <b>Total</b>                              | <b>\$744,173</b>         |
| Debt Service                             | \$786,945           |   |                          |
| Debt Service Coverage                    | 1.15                | <b>Total per Unit</b>                     | <b>\$10,631</b>          |
| 74 & 90 Pond Street                      |                     | Application Date: 06/22/2024              | Revised Date: 06/22/2024 |



# 21-Year Operating Proforma (Years 1-5)

NOTE: Do not fill out this section. It is automatically filled in by program.

|   |   | Year 1      | Year 2      | Year 3                       | Year 4                   | Year 5      |
|---|---|-------------|-------------|------------------------------|--------------------------|-------------|
| Calendar Year:                            |   | 2027        | 2028        | 2029                         | 2030                     | 2031        |
| <b>INCOME:</b>                            |   |             |             |                              |                          |             |
| Low-Income, Rental Assisted               |   | \$634,440   | \$647,129   | \$660,071                    | \$673,273                | \$686,738   |
| Low-Income, Below 50%                     |   | 0           | 0           | 0                            | 0                        | 0           |
| Low-Income, Below 60%                     |   | 1,050,012   | 1,071,012   | 1,092,432                    | 1,114,281                | 1,136,567   |
| Other Income 100%                         |   | 0           | 0           | 0                            | 0                        | 0           |
| Market Rate                               |   | 0           | 0           | 0                            | 0                        | 0           |
| <i>Gross Potential Income</i>             |   | 1,684,452   | 1,718,141   | 1,752,504                    | 1,787,554                | 1,823,305   |
| Less vacancy                              |   | 50,534      | 51,544      | 52,575                       | 53,627                   | 54,699      |
| <i>Effective Gross Residential Income</i> |   | 1,633,918   | 1,666,597   | 1,699,929                    | 1,733,927                | 1,768,606   |
| Commercial (includes parking)             |   | 0           | 0           | 0                            | 0                        | 0           |
| Less vacancy                              |   | 0           | 0           | 0                            | 0                        | 0           |
| Net Commercial Income                     |   | 0           | 0           | 0                            | 0                        | 0           |
| <i>Effective Rental Income</i>            |   | 1,633,918   | 1,666,597   | 1,699,929                    | 1,733,927                | 1,768,606   |
| Other Income: Laundry                     |   | 10,000      | 10,200      | 10,404                       | 10,612                   | 10,824      |
| Other Income: MSC Fee Income              |   | 5,000       | 5,100       | 5,202                        | 5,306                    | 5,412       |
| Other Income:                             | 0 | 0           | 0           | 0                            | 0                        | 0           |
| Other Income:                             | 0 | 0           | 0           | 0                            | 0                        | 0           |
| Other Income:                             | 0 | 0           | 0           | 0                            | 0                        | 0           |
| Other Income:                             | 0 | 0           | 0           | 0                            | 0                        | 0           |
| Other Income:                             | 0 | 0           | 0           | 0                            | 0                        | 0           |
| <i>Total Gross Income</i>                 |   | 1,648,918   | 1,681,897   | 1,715,535                    | 1,749,845                | 1,784,842   |
| Operating Subsidies                       |   | 0           | 0           | 0                            | 0                        | 0           |
| Draw on Operating Reserves                |   | 0           | 0           | 0                            | 0                        | 0           |
| <i>Total Effective Income</i>             |   | \$1,648,918 | \$1,681,897 | \$1,715,535                  | \$1,749,845              | \$1,784,842 |
| <b>EXPENSES:</b>                          |   |             |             |                              |                          |             |
| Management Fee                            |   | 84,223      | 85,907      | 87,625                       | 89,378                   | 91,165      |
| Administrative                            |   | 132,000     | 135,960     | 140,039                      | 144,240                  | 148,567     |
| Maintenance                               |   | 165,000     | 169,950     | 175,049                      | 180,300                  | 185,709     |
| Resident Services                         |   | 25,000      | 25,750      | 26,523                       | 27,318                   | 28,138      |
| Security                                  |   | 1,500       | 1,545       | 1,591                        | 1,639                    | 1,688       |
| Electrical                                |   | 50,000      | 51,500      | 53,045                       | 54,636                   | 56,275      |
| Natural Gas                               |   | 0           | 0           | 0                            | 0                        | 0           |
| Oil (heat)                                |   | 0           | 0           | 0                            | 0                        | 0           |
| Water & Sewer                             |   | 25,000      | 25,750      | 26,523                       | 27,318                   | 28,138      |
| Replacement Reserve                       |   | 21,450      | 22,094      | 22,756                       | 23,439                   | 24,142      |
| Operating Reserve                         |   | 0           | 0           | 0                            | 0                        | 0           |
| Real Estate Taxes                         |   | 165,000     | 169,125     | 173,353                      | 177,687                  | 182,129     |
| Other Taxes                               |   | 0           | 0           | 0                            | 0                        | 0           |
| Insurance                                 |   | 75,000      | 77,250      | 79,568                       | 81,955                   | 84,413      |
| MIP                                       |   | 0           | 0           | 0                            | 0                        | 0           |
| Other:                                    |   | 0           | 0           | 0                            | 0                        | 0           |
| <i>Total Operating Expenses</i>           |   | \$744,173   | \$764,831   | \$786,071                    | \$807,910                | \$830,365   |
| <b>NET OPERATING INCOME</b>               |   | \$904,746   | \$917,066   | \$929,464                    | \$941,936                | \$954,477   |
| Debt Service                              |   | \$786,945   | \$786,945   | \$786,945                    | \$786,945                | \$786,945   |
| <i>Debt Service Coverage</i>              |   | 1.15        | 1.17        | 1.18                         | 1.20                     | 1.21        |
| Project Cash Flow                         |   | \$117,801   | \$130,121   | \$142,519                    | \$154,991                | \$167,533   |
| Required Debt Coverage                    |   | \$904,987   | \$904,987   | \$904,987                    | \$904,987                | \$904,987   |
| (Gap)/Surplus for Cov.                    |   | (\$241)     | \$12,080    | \$24,477                     | \$36,949                 | \$49,491    |
| 74 & 90 Pond Street                       |   |             |             | Application Date: 06/22/2024 | Revised Date: 06/22/2024 |             |

# 21-Year Operating Proforma (Years 6-10)

NOTE: Do not fill out this section. It is automatically filled in by program.

|   |  | Year 6      | Year 7      | Year 8                       | Year 9      | Year 10                  |  |
|---|--|-------------|-------------|------------------------------|-------------|--------------------------|--|
|   |  | 2032        | 2033        | 2034                         | 2035        | 2036                     |  |
| Calendar Year:                            |  | 2032        | 2033        | 2034                         | 2035        | 2036                     |  |
| <b>INCOME:</b>                            |  |             |             |                              |             |                          |  |
| Low-Income, Rental Assisted               |  | \$700,473   | \$714,482   | \$728,772                    | \$743,348   | \$758,215                |  |
| Low-Income, Below 50%                     |  | 0           | 0           | 0                            | 0           | 0                        |  |
| Low-Income, Below 60%                     |  | 1,159,298   | 1,182,484   | 1,206,134                    | 1,230,256   | 1,254,862                |  |
| Other Income 100%                         |  | 0           | 0           | 0                            | 0           | 0                        |  |
| Market Rate                               |  | 0           | 0           | 0                            | 0           | 0                        |  |
| <i>Gross Potential Income</i>             |  | 1,859,771   | 1,896,967   | 1,934,906                    | 1,973,604   | 2,013,076                |  |
| Less vacancy                              |  | 55,793      | 56,909      | 58,047                       | 59,208      | 60,392                   |  |
| <i>Effective Gross Residential Income</i> |  | 1,803,978   | 1,840,058   | 1,876,859                    | 1,914,396   | 1,952,684                |  |
| Commercial Income                         |  | 0           | 0           | 0                            | 0           | 0                        |  |
| Less vacancy                              |  | 0           | 0           | 0                            | 0           | 0                        |  |
| Net Commercial Income                     |  | 0           | 0           | 0                            | 0           | 0                        |  |
| <i>Effective Rental Income</i>            |  | 1,803,978   | 1,840,058   | 1,876,859                    | 1,914,396   | 1,952,684                |  |
| Laundry Income                            |  | 11,041      | 11,262      | 11,487                       | 11,717      | 11,951                   |  |
| Other Income: MSC Fee Income              |  | 5,520       | 5,631       | 5,743                        | 5,858       | 5,975                    |  |
| Other Income: -                           |  | 0           | 0           | 0                            | 0           | 0                        |  |
| Other Income: -                           |  | 0           | 0           | 0                            | 0           | 0                        |  |
| Other Income: -                           |  | 0           | 0           | 0                            | 0           | 0                        |  |
| Other Income: -                           |  | 0           | 0           | 0                            | 0           | 0                        |  |
| Other Income: -                           |  | 0           | 0           | 0                            | 0           | 0                        |  |
| <i>Total Gross Income</i>                 |  | 1,820,539   | 1,856,950   | 1,894,089                    | 1,931,971   | 1,970,610                |  |
| Operating Subsidies                       |  | 0           | 0           | 0                            | 0           | 0                        |  |
| Draw on Operating Reserves                |  | 0           | 0           | 0                            | 0           | 0                        |  |
| <i>Total Effective Income</i>             |  | \$1,820,539 | \$1,856,950 | \$1,894,089                  | \$1,931,971 | \$1,970,610              |  |
| <b>EXPENSES:</b>                          |  |             |             |                              |             |                          |  |
| Management Fee                            |  | 92,989      | 94,848      | 96,745                       | 98,680      | 100,654                  |  |
| Administrative                            |  | 153,024     | 157,615     | 162,343                      | 167,214     | 172,230                  |  |
| Maintenance                               |  | 191,280     | 197,019     | 202,929                      | 209,017     | 215,288                  |  |
| Resident Services                         |  | 28,982      | 29,851      | 30,747                       | 31,669      | 32,619                   |  |
| Security                                  |  | 1,739       | 1,791       | 1,845                        | 1,900       | 1,957                    |  |
| Electrical                                |  | 57,964      | 59,703      | 61,494                       | 63,339      | 65,239                   |  |
| Natural Gas                               |  | 0           | 0           | 0                            | 0           | 0                        |  |
| Oil (heat)                                |  | 0           | 0           | 0                            | 0           | 0                        |  |
| Water & Sewer                             |  | 28,982      | 29,851      | 30,747                       | 31,669      | 32,619                   |  |
| Replacement Reserve                       |  | 24,866      | 25,612      | 26,381                       | 27,172      | 27,987                   |  |
| Operating Reserve                         |  | 0           | 0           | 0                            | 0           | 0                        |  |
| Real Estate Taxes                         |  | 186,682     | 191,349     | 196,133                      | 201,036     | 206,062                  |  |
| Other Taxes                               |  | 0           | 0           | 0                            | 0           | 0                        |  |
| Insurance                                 |  | 86,946      | 89,554      | 92,241                       | 95,008      | 97,858                   |  |
| MIP                                       |  | 0           | 0           | 0                            | 0           | 0                        |  |
| Other:                                    |  | 0           | 0           | 0                            | 0           | 0                        |  |
| <i>Total Operating Expenses</i>           |  | \$853,454   | \$877,194   | \$901,605                    | \$926,705   | \$952,514                |  |
| <b>NET OPERATING INCOME</b>               |  | \$967,086   | \$979,756   | \$992,484                    | \$1,005,266 | \$1,018,096              |  |
| Debt Service                              |  | \$786,945   | \$786,945   | \$786,945                    | \$786,945   | \$786,945                |  |
| <i>Debt Service Coverage</i>              |  | 1.23        | 1.25        | 1.26                         | 1.28        | 1.29                     |  |
| Project Cash Flow                         |  | \$180,141   | \$192,811   | \$205,540                    | \$218,321   | \$231,152                |  |
| Required Debt Coverage                    |  | \$904,987   | \$904,987   | \$904,987                    | \$904,987   | \$904,987                |  |
| (Gap)/Surplus for Cov.                    |  | \$62,099    | \$74,769    | \$87,498                     | \$100,280   | \$113,110                |  |
| 74 & 90 Pond Street                       |  |             |             | Application Date: 06/22/2024 |             | Revised Date: 06/22/2024 |  |

# 21-Year Operating Proforma (Years 11-15)

NOTE: Do not fill out this section. It is automatically filled in by program.

|   |                | Year 11     | Year 12     | Year 13                      | Year 14     | Year 15                  |
|---|----------------|-------------|-------------|------------------------------|-------------|--------------------------|
|   | Calendar Year: | 2037        | 2038        | 2039                         | 2040        | 2041                     |
| <b>INCOME:</b>                            |                |             |             |                              |             |                          |
| Low-Income, Rental Assisted               |                | \$773,379   | \$788,846   | \$804,623                    | \$820,716   | \$837,130                |
| Low-Income, Below 50%                     |                | 0           | 0           | 0                            | 0           | 0                        |
| Low-Income, Below 60%                     |                | 1,279,959   | 1,305,558   | 1,331,669                    | 1,358,302   | 1,385,469                |
| Other Income 100%                         |                | 0           | 0           | 0                            | 0           | 0                        |
| Market Rate                               |                | 0           | 0           | 0                            | 0           | 0                        |
| <i>Gross Potential Income</i>             |                | 2,053,338   | 2,094,404   | 2,136,292                    | 2,179,018   | 2,222,599                |
| Less vacancy                              |                | 61,600      | 62,832      | 64,089                       | 65,371      | 66,678                   |
| <i>Effective Gross Residential Income</i> |                | 1,991,737   | 2,031,572   | 2,072,204                    | 2,113,648   | 2,155,921                |
| Commercial (includes parking)             |                | 0           | 0           | 0                            | 0           | 0                        |
| Less vacancy                              |                | 0           | 0           | 0                            | 0           | 0                        |
| Net Commercial Income                     |                | 0           | 0           | 0                            | 0           | 0                        |
| <i>Effective Rental Income</i>            |                | 1,991,737   | 2,031,572   | 2,072,204                    | 2,113,648   | 2,155,921                |
| Other Income: Laundry                     |                | 12,190      | 12,434      | 12,682                       | 12,936      | 13,195                   |
| Other Income: MSC Fee Income              |                | 6,095       | 6,217       | 6,341                        | 6,468       | 6,597                    |
| Other Income:                             | 0              | 0           | 0           | 0                            | 0           | 0                        |
| Other Income:                             | 0              | 0           | 0           | 0                            | 0           | 0                        |
| Other Income:                             | 0              | 0           | 0           | 0                            | 0           | 0                        |
| Other Income:                             | 0              | 0           | 0           | 0                            | 0           | 0                        |
| Other Income:                             | 0              | 0           | 0           | 0                            | 0           | 0                        |
| <i>Total Gross Income</i>                 |                | 2,010,022   | 2,050,223   | 2,091,227                    | 2,133,052   | 2,175,713                |
| Operating Subsidies                       |                | 0           | 0           | 0                            | 0           | 0                        |
| Draw on Operating Reserves                |                | 0           | 0           | 0                            | 0           | 0                        |
| <i>Total Effective Income</i>             |                | \$2,010,022 | \$2,050,223 | \$2,091,227                  | \$2,133,052 | \$2,175,713              |
| <b>EXPENSES:</b>                          |                |             |             |                              |             |                          |
| Management Fee                            |                | 102,667     | 104,720     | 106,815                      | 108,951     | 111,130                  |
| Administrative                            |                | 177,397     | 182,719     | 188,200                      | 193,846     | 199,662                  |
| Maintenance                               |                | 221,746     | 228,399     | 235,251                      | 242,308     | 249,577                  |
| Resident Services                         |                | 33,598      | 34,606      | 35,644                       | 36,713      | 37,815                   |
| Security                                  |                | 2,016       | 2,076       | 2,139                        | 2,203       | 2,269                    |
| Electrical                                |                | 67,196      | 69,212      | 71,288                       | 73,427      | 75,629                   |
| Natural Gas                               |                | 0           | 0           | 0                            | 0           | 0                        |
| Oil (heat)                                |                | 0           | 0           | 0                            | 0           | 0                        |
| Water & Sewer                             |                | 33,598      | 34,606      | 35,644                       | 36,713      | 37,815                   |
| Replacement Reserve                       |                | 28,827      | 29,692      | 30,583                       | 31,500      | 32,445                   |
| Operating Reserve                         |                | 0           | 0           | 0                            | 0           | 0                        |
| Real Estate Taxes                         |                | 211,214     | 216,494     | 221,907                      | 227,454     | 233,141                  |
| Other Taxes                               |                | 0           | 0           | 0                            | 0           | 0                        |
| Insurance                                 |                | 100,794     | 103,818     | 106,932                      | 110,140     | 113,444                  |
| MIP                                       |                | 0           | 0           | 0                            | 0           | 0                        |
| Other:                                    |                | 0           | 0           | 0                            | 0           | 0                        |
| <i>Total Operating Expenses</i>           |                | \$979,052   | \$1,006,341 | \$1,034,402                  | \$1,063,256 | \$1,092,927              |
| <b>NET OPERATING INCOME</b>               |                | \$1,030,970 | \$1,043,882 | \$1,056,826                  | \$1,069,796 | \$1,082,786              |
| Debt Service                              |                | \$786,945   | \$786,945   | \$786,945                    | \$786,945   | \$786,945                |
| <i>Debt Service Coverage</i>              |                | 1.31        | 1.33        | 1.34                         | 1.36        | 1.38                     |
| Project Cash Flow                         |                | \$244,025   | \$256,937   | \$269,881                    | \$282,851   | \$295,841                |
| Required Debt Coverage                    |                | \$904,987   | \$904,987   | \$904,987                    | \$904,987   | \$904,987                |
| (Gap)/Surplus for Cov.                    |                | \$125,984   | \$138,895   | \$151,839                    | \$164,809   | \$177,799                |
|   |                |             |             |                              |             |                          |
|   |                |             |             |                              |             |                          |
|   |                |             |             |                              |             |                          |
|   |                |             |             |                              |             |                          |
| 74 & 90 Pond Street                       |                |             |             | Application Date: 06/22/2024 |             | Revised Date: 06/22/2024 |

# 21-Year Operating Proforma (Years 16-21)

NOTE: Do not fill out this section. It is automatically filled in by program.

|                                 | Year 16     | Year 17     | Year 18     | Year 19                      | Year 20     | Year 21                  |
|---------------------------------|-------------|-------------|-------------|------------------------------|-------------|--------------------------|
| Calendar Year:                  | 2042        | 2043        | 2044        | 2045                         | 2046        | 2047                     |
| <b>INCOME:</b>                  |             |             |             |                              |             |                          |
| Low-Income, Rent. Asthd.        | \$853,873   | \$870,950   | \$888,369   | \$906,137                    | \$924,259   | \$942,744                |
| Low-Income, Below 50%           | 0           | 0           | 0           | 0                            | 0           | 0                        |
| Low-Income, Below 60%           | 1,413,178   | 1,441,441   | 1,470,270   | 1,499,676                    | 1,529,669   | 1,560,263                |
| Other Income 100%               | 0           | 0           | 0           | 0                            | 0           | 0                        |
| Market Rate                     | 0           | 0           | 0           | 0                            | 0           | 0                        |
| <i>Gross Potential Income</i>   | 2,267,051   | 2,312,392   | 2,358,639   | 2,405,812                    | 2,453,928   | 2,503,007                |
| Less vacancy                    | 68,012      | 69,372      | 70,759      | 72,174                       | 73,618      | 75,090                   |
| <i>Eff. Gross Res. Income</i>   | 2,199,039   | 2,243,020   | 2,287,880   | 2,333,638                    | 2,380,311   | 2,427,917                |
| Commercial Income               | 0           | 0           | 0           | 0                            | 0           | 0                        |
| Less vacancy                    | 0           | 0           | 0           | 0                            | 0           | 0                        |
| Net Commercial Income           | 0           | 0           | 0           | 0                            | 0           | 0                        |
| <i>Effective Rental Income</i>  | 2,199,039   | 2,243,020   | 2,287,880   | 2,333,638                    | 2,380,311   | 2,427,917                |
| Other Income: Laundry           | 13,459      | 13,728      | 14,002      | 14,282                       | 14,568      | 14,859                   |
| Other MSC Fee Income            | 6,729       | 6,864       | 7,001       | 7,141                        | 7,284       | 7,430                    |
| Other                           | 0           | 0           | 0           | 0                            | 0           | 0                        |
| Other                           | 0           | 0           | 0           | 0                            | 0           | 0                        |
| Other                           | 0           | 0           | 0           | 0                            | 0           | 0                        |
| Other                           | 0           | 0           | 0           | 0                            | 0           | 0                        |
| Other                           | 0           | 0           | 0           | 0                            | 0           | 0                        |
| <i>Total Gross Income</i>       | 2,219,227   | 2,263,612   | 2,308,884   | 2,355,062                    | 2,402,163   | 2,450,206                |
| Operating Subsidies             | 0           | 0           | 0           | 0                            | 0           | 0                        |
| Draw on Operating Res.          | 0           | 0           | 0           | 0                            | 0           | 0                        |
| <i>Total Effective Income</i>   | \$2,219,227 | \$2,263,612 | \$2,308,884 | \$2,355,062                  | \$2,402,163 | \$2,450,206              |
| <b>EXPENSES:</b>                |             |             |             |                              |             |                          |
| Management Fee                  | 113,353     | 115,620     | 117,932     | 120,291                      | 122,696     | 125,150                  |
| Administrative                  | 205,652     | 211,821     | 218,176     | 224,721                      | 231,463     | 238,407                  |
| Maintenance                     | 257,065     | 264,777     | 272,720     | 280,901                      | 289,328     | 298,008                  |
| Resident Services               | 38,949      | 40,118      | 41,321      | 42,561                       | 43,838      | 45,153                   |
| Security                        | 2,337       | 2,407       | 2,479       | 2,554                        | 2,630       | 2,709                    |
| Electrical                      | 77,898      | 80,235      | 82,642      | 85,122                       | 87,675      | 90,306                   |
| Natural Gas                     | 0           | 0           | 0           | 0                            | 0           | 0                        |
| Oil (heat)                      | 0           | 0           | 0           | 0                            | 0           | 0                        |
| Water & Sewer                   | 38,949      | 40,118      | 41,321      | 42,561                       | 43,838      | 45,153                   |
| Replacement Reserve             | 33,418      | 34,421      | 35,454      | 36,517                       | 37,613      | 38,741                   |
| Operating Reserve               | 0           | 0           | 0           | 0                            | 0           | 0                        |
| Real Estate Taxes               | 238,969     | 244,943     | 251,067     | 257,344                      | 263,777     | 270,372                  |
| Other Taxes                     | 0           | 0           | 0           | 0                            | 0           | 0                        |
| Insurance                       | 116,848     | 120,353     | 123,964     | 127,682                      | 131,513     | 135,458                  |
| MIP                             | 0           | 0           | 0           | 0                            | 0           | 0                        |
| Other:                          | 0           | 0           | 0           | 0                            | 0           | 0                        |
| <i>Total Operating Expenses</i> | \$1,123,438 | \$1,154,812 | \$1,187,076 | \$1,220,254                  | \$1,254,372 | \$1,289,457              |
| <b>NET OPER. INC.</b>           | \$1,095,789 | \$1,108,799 | \$1,121,808 | \$1,134,808                  | \$1,147,791 | \$1,160,749              |
| Debt Service                    | \$786,945   | \$786,945   | \$786,945   | \$786,945                    | \$786,945   | \$786,945                |
| <i>Debt Service Coverage</i>    | 1.39        | 1.41        | 1.43        | 1.44                         | 1.46        | 1.48                     |
| Project Cash Flow               | \$308,845   | \$321,854   | \$334,863   | \$347,863                    | \$360,846   | \$373,804                |
| Required Debt Coverage          | \$904,987   | \$904,987   | \$904,987   | \$904,987                    | \$904,987   | \$904,987                |
| (Gap)/Surplus for Cov.          | \$190,803   | \$203,813   | \$216,821   | \$229,821                    | \$242,805   | \$255,763                |
| 74 & 90 Pond Street             |             |             |             |                              |             |                          |
|                                 |             |             |             | Application Date: 06/22/2024 |             | Revised Date: 06/22/2024 |

# Operating Expense Analysis

NOTE: Do not fill out this section. It is automatically filled in by program.

|                                   |  | <i>Residential<br/>Total</i> | <i>Residential<br/>Per Unit</i> | <i>Residential<br/>Per S. F.</i> | <i>Commercial<br/>Total</i> | <i>Commercial<br/>Per S. F.</i> |
|-----------------------------------|--|------------------------------|---------------------------------|----------------------------------|-----------------------------|---------------------------------|
| Management Fee                    |  | \$84,223                     | \$1,203.18                      | \$0.90                           | \$0                         | N/A                             |
| Payroll, Administrative           |  | \$132,000                    | \$1,885.71                      | \$1.42                           | \$0                         | N/A                             |
| Payroll Taxes & Benefits, Admin.  |  | \$0                          | \$0.00                          | \$0.00                           | \$0                         | N/A                             |
| Legal                             |  | \$0                          | \$0.00                          | \$0.00                           | \$0                         | N/A                             |
| Audit                             |  | \$0                          | \$0.00                          | \$0.00                           | \$0                         | N/A                             |
| Marketing                         |  | \$0                          | \$0.00                          | \$0.00                           | \$0                         | N/A                             |
| Telephone                         |  | \$0                          | \$0.00                          | \$0.00                           | \$0                         | N/A                             |
| Office Supplies                   |  | \$0                          | \$0.00                          | \$0.00                           | \$0                         | N/A                             |
| Accounting & Data Processing      |  | \$0                          | \$0.00                          | \$0.00                           | \$0                         | N/A                             |
| Investor Servicing                |  | \$0                          | \$0.00                          | \$0.00                           | \$0                         | N/A                             |
| DHCD Monitoring Fee               |  | \$0                          | \$0.00                          | \$0.00                           | \$0                         | N/A                             |
| Other:                            |  | \$0                          | \$0.00                          | \$0.00                           | \$0                         | N/A                             |
| Other:                            |  | \$0                          | \$0.00                          | \$0.00                           | \$0                         | N/A                             |
| <b>Subtotal: Administrative</b>   |  | <b>\$132,000</b>             | <b>\$1,885.71</b>               | <b>\$1.42</b>                    | <b>\$0</b>                  | <b>N/A</b>                      |
| Payroll, Maintenance              |  | \$165,000                    | \$2,357.14                      | \$1.77                           | \$0                         | N/A                             |
| Payroll Taxes & Benefits, Admin.  |  | \$0                          | \$0.00                          | \$0.00                           | \$0                         | N/A                             |
| Janitorial Materials              |  | \$0                          | \$0.00                          | \$0.00                           | \$0                         | N/A                             |
| Landscaping                       |  | \$0                          | \$0.00                          | \$0.00                           | \$0                         | N/A                             |
| Decorating (inter. only)          |  | \$0                          | \$0.00                          | \$0.00                           | \$0                         | N/A                             |
| Repairs (inter. & ext.)           |  | \$0                          | \$0.00                          | \$0.00                           | \$0                         | N/A                             |
| Elevator Maintenance              |  | \$0                          | \$0.00                          | \$0.00                           | \$0                         | N/A                             |
| Trash Removal                     |  | \$0                          | \$0.00                          | \$0.00                           | \$0                         | N/A                             |
| Snow Removal                      |  | \$0                          | \$0.00                          | \$0.00                           | \$0                         | N/A                             |
| Extermination                     |  | \$0                          | \$0.00                          | \$0.00                           | \$0                         | N/A                             |
| Recreation                        |  | \$0                          | \$0.00                          | \$0.00                           | \$0                         | N/A                             |
| Other:                            |  | \$0                          | \$0.00                          | \$0.00                           | \$0                         | N/A                             |
| <b>Subtotal: Maintenance</b>      |  | <b>\$165,000</b>             | <b>\$2,357.14</b>               | <b>\$1.77</b>                    | <b>\$0</b>                  | <b>N/A</b>                      |
| <b>Resident Services</b>          |  | <b>\$25,000</b>              | <b>\$357.14</b>                 | <b>\$0.27</b>                    | <b>\$0</b>                  | <b>N/A</b>                      |
| <b>Security</b>                   |  | <b>\$1,500</b>               | <b>\$21.43</b>                  | <b>\$0.02</b>                    | <b>\$0</b>                  | <b>N/A</b>                      |
| Electricity                       |  | \$50,000                     | \$714.29                        | \$0.54                           | \$0                         | N/A                             |
| Natural Gas                       |  | \$0                          | \$0.00                          | \$0.00                           | \$0                         | N/A                             |
| Oil                               |  | \$0                          | \$0.00                          | \$0.00                           | \$0                         | N/A                             |
| Water & Sewer                     |  | \$25,000                     | \$357.14                        | \$0.27                           | \$0                         | N/A                             |
| <b>Subtotal: Utilities</b>        |  | <b>\$75,000</b>              | <b>\$1,071.43</b>               | <b>\$0.81</b>                    | <b>\$0</b>                  | <b>N/A</b>                      |
| <b>Replacement Reserve</b>        |  | <b>\$21,450</b>              | <b>\$306.43</b>                 | <b>\$0.23</b>                    | <b>\$0</b>                  | <b>N/A</b>                      |
| <b>Operating Reserve</b>          |  | <b>\$0</b>                   | <b>\$0.00</b>                   | <b>\$0.00</b>                    | <b>\$0</b>                  | <b>N/A</b>                      |
| Real Estate Taxes                 |  | \$165,000                    | \$2,357.14                      | \$1.77                           | \$0                         | N/A                             |
| Other Taxes                       |  | \$0                          | \$0.00                          | \$0.00                           | \$0                         | N/A                             |
| Insurance                         |  | \$75,000                     | \$1,071.43                      | \$0.81                           | \$0                         | N/A                             |
| MIP                               |  | \$0                          | \$0.00                          | \$0.00                           | \$0                         | N/A                             |
| Other:                            |  | \$0                          | \$0.00                          | \$0.00                           | \$0                         | N/A                             |
| <b>Subtotal: Taxes, Insurance</b> |  | <b>\$240,000</b>             | <b>\$3,428.57</b>               | <b>\$2.58</b>                    | <b>\$0</b>                  | <b>N/A</b>                      |
| <b>TOTAL EXPENSES</b>             |  | <b>\$744,173</b>             | <b>\$10,631.04</b>              | <b>\$7.99</b>                    | <b>\$0</b>                  | <b>N/A</b>                      |
| 74 & 90 Pond Street               |  |                              |                                 | Application Date: 06/22/2024     |                             | Revised Date: 06/22/2024        |

# Development Cost Analysis

NOTE: Do not fill out this section. It is automatically filled in by program.

|   |  | <i>Residential<br/>Total</i> | <i>Residential<br/>Per Unit</i> | <i>Residential<br/>Per S. F.</i> | <i>Commercial<br/>Total</i> | <i>Commercial<br/>Per S. F.</i> |
|---|--|------------------------------|---------------------------------|----------------------------------|-----------------------------|---------------------------------|
| Acquisition: Land   |  | \$100                        | \$1                             | \$0.00                           | \$0                         | N/A                             |
| Acquisition: Building   |  | \$0                          | \$0                             | \$0.00                           | \$0                         | N/A                             |
| <b>Acquisition Subtotal</b>   |  | \$100                        | \$1                             | \$0.00                           | \$0                         | N/A                             |
| Direct Construction Budget  |  | \$36,454,315                 | \$520,776                       | \$391.51                         | \$0                         | N/A                             |
| Construction Contingency  |  | \$4,510,921                  | \$64,442                        | \$48.45                          | \$0                         | N/A                             |
| <b>Subtotal: Construction</b>   |  | \$40,965,236                 | \$585,218                       | \$439.95                         | \$0                         | N/A                             |
| <b>General Development Costs:</b>   |  |                              |                                 |                                  |                             |                                 |
| Architecture & Engineering  |  | \$0                          | \$0                             | \$0.00                           | \$0                         | N/A                             |
| Survey and Permits  |  | \$0                          | \$0                             | \$0.00                           | \$0                         | N/A                             |
| Clerk of the Works  |  | \$0                          | \$0                             | \$0.00                           | \$0                         | N/A                             |
| Environmental Engineer  |  | \$0                          | \$0                             | \$0.00                           | \$0                         | N/A                             |
| Bond Premium  |  | \$0                          | \$0                             | \$0.00                           | \$0                         | N/A                             |
| Legal   |  | \$0                          | \$0                             | \$0.00                           | \$0                         | N/A                             |
| Title and Recording   |  | \$0                          | \$0                             | \$0.00                           | \$0                         | N/A                             |
| Accounting & Cost Certificat.   |  | \$0                          | \$0                             | \$0.00                           | \$0                         | N/A                             |
| Marketing and Rent Up   |  | \$0                          | \$0                             | \$0.00                           | \$0                         | N/A                             |
| Real Estate Taxes   |  | \$0                          | \$0                             | \$0.00                           | \$0                         | N/A                             |
| Insurance   |  | \$0                          | \$0                             | \$0.00                           | \$0                         | N/A                             |
| Relocation  |  | \$0                          | \$0                             | \$0.00                           | \$0                         | N/A                             |
| Appraisal   |  | \$0                          | \$0                             | \$0.00                           | \$0                         | N/A                             |
| Security  |  | \$0                          | \$0                             | \$0.00                           | \$0                         | N/A                             |
| Construction Loan Interest  |  | \$0                          | \$0                             | \$0.00                           | \$0                         | N/A                             |
| Inspecting Engineer   |  | \$0                          | \$0                             | \$0.00                           | \$0                         | N/A                             |
| Fees to: Application Fees   |  | \$0                          | \$0                             | \$0.00                           | \$0                         | N/A                             |
| Fees to: LIHTC  |  | \$0                          | \$0                             | \$0.00                           | \$0                         | N/A                             |
| MIP   |  | \$0                          | \$0                             | \$0.00                           | \$0                         | N/A                             |
| Credit Enhancement Fees   |  | \$0                          | \$0                             | \$0.00                           | \$0                         | N/A                             |
| Letter of Credit Fees   |  | \$0                          | \$0                             | \$0.00                           | \$0                         | N/A                             |
| Other Financing Fees  |  | \$0                          | \$0                             | \$0.00                           | \$0                         | N/A                             |
| Development Consultant  |  | \$0                          | \$0                             | \$0.00                           | \$0                         | N/A                             |
| Other:  |  | \$448,421                    | \$6,406                         | \$4.82                           | \$0                         | N/A                             |
| Other:  |  | \$0                          | \$0                             | \$0.00                           | \$0                         | N/A                             |
| Soft Cost Contingency   |  | \$0                          | \$0                             | \$0.00                           | \$0                         | N/A                             |
| <b>Subtotal: Gen. Dev.</b>  |  | \$448,421                    | \$6,406                         | \$4.82                           | \$0                         | N/A                             |
| <b>Subtotal: Acquis., Const.,<br/>and Gen. Dev.</b>   |  | \$41,413,757                 | \$591,625                       | \$444.77                         | \$0                         | N/A                             |
| Capitalized Reserves  |  | \$372,900                    | \$5,327                         | \$4.00                           | \$0                         | N/A                             |
| Developer Overhead  |  | \$1,500,000                  | \$21,429                        | \$16.11                          | \$0                         | N/A                             |
| Developer Fee   |  | \$1,500,000                  | \$21,429                        | \$16.11                          | \$0                         | N/A                             |
| <b>Total Development Cost</b>   |  | \$44,786,657                 | \$639,809                       | \$480.99                         | \$0                         | N/A                             |
| <b>Total Net* Development Cost</b>  |  | \$42,913,757                 | \$613,054                       | \$460.88                         | \$0                         | N/A                             |
| (*Does not include any capitalized reserves nor any developer's fees or overhead which are contributed or loaned to the project.) |  |                              |                                 |                                  |                             |                                 |