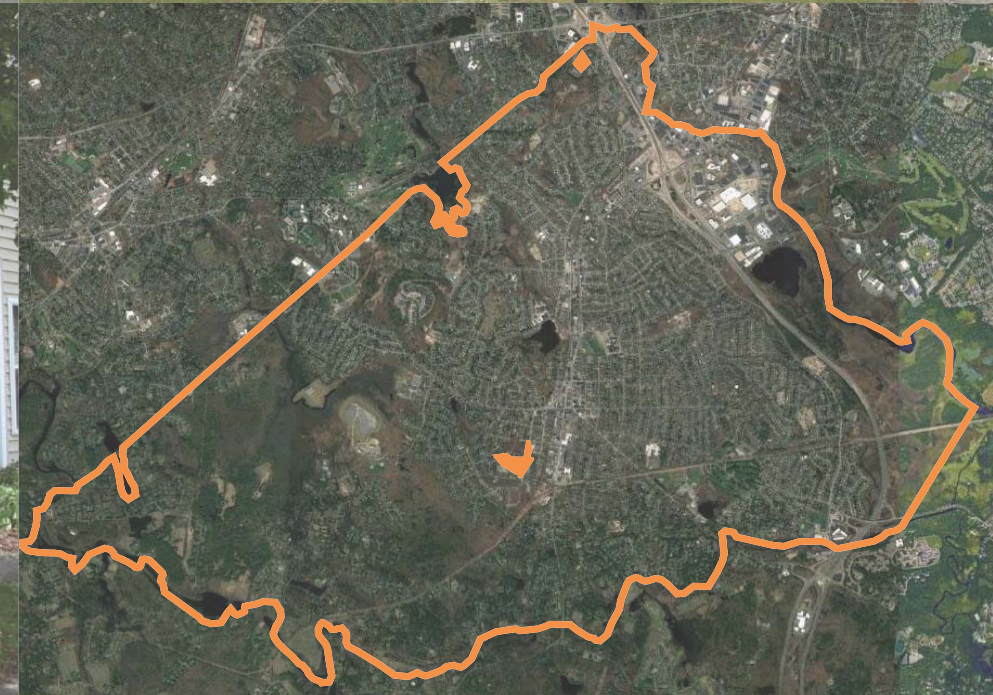


NEEDHAM HOUSING

FACILITIES MASTER PLAN

February 21, 2019



Prepared for the Needham Housing Authority

NEEDHAM HOUSING AUTHORITY

NHA Board of Commissioners:

Scott Brightman, Chair
Karen Hughey, Vice Chair
Reginald Foster, Treasurer
Peter Pingitore, Commissioner
Penelope Kirk, Commissioner

NHA Management

Bernie Kirstein, Interim Executive Director
Gary Kuphal, Facilities and Maintenance Director

PROJECT TEAM:

Prime Consultant

Abacus Architects + Planners
David Eisen, FAIA, Project Manager/Principal in Charge
119 Braintree Street, #318
Allston, MA 02134
(617) 562-4446

Development Consultant

Michael Jacobs
MHJ Associates
41 Coolidge Street
Brookline, MA 02446
617-232-7445

Our thanks to NHA staff, residents of all NHA developments
and to the Linden Chambers Resident Association

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EXECUTIVE SUMMARY AND GUIDE TO THIS FACILITIES MASTER PLAN

This Facilities Master Plan identifies the Needham Housing Authority's (NHA) current facility maintenance, improvement and modernization needs. It also explores options for the replacement of some of the NHA's older properties, and assesses new development opportunities on land already owned by the NHA.

The master planning process included a series of public meetings to insure that a diverse range of viewpoints are reflected in the information provided and the recommendations made. NHA staff, residents and external reviewers all contributed significantly to the preparation efforts. The NHA Board approved the final draft of this Facilities Master Plan on February 21, 2019.

WHY IS A MASTER PLAN NEEDED?

The NHA manages 160 units of state subsidized housing and 176 units of federally subsidized housing occupying over 42 acres of land in Needham. The 336 NHA housing units are distributed among 115 structures that range from single family residences to multi-unit apartment buildings, with two additional buildings used for community services and maintenance. The vast majority of the NHA buildings are quite old:

- 60 buildings are more than 70 years old
- 25 buildings are more than 57 years old
- 10 buildings are more than 37 years old
- 20 buildings are more than 11 years old

Few of the structures meet contemporary standards for accessibility, sustainability or resident amenities, and most need significant capital funds for improvements and modernization. The 6 Captain Robert Cook Drive buildings have major defects in their exterior wall construction requiring over \$1,100,000 in immediate repairs if the major water infiltration problems experienced at Seabeds Way – and now repaired – are to be avoided.

Additionally, since 2003 the Town of Needham has articulated a goal of redeveloping the Linden Street and Chambers Street properties, perhaps the most prominent of the NHA's dated facilities. The shortage of affordable housing in Needham for seniors has also received attention in the press and the community. All of these needs and conditions take place in a broader local and regional context where there is a severe shortage of affordable housing, especially for low income and very low income residents. This Facilities Master Plan is intended to provide a direction forward on addressing these very real challenges.

EXECUTIVE SUMMARY

Prior to this report the NHA has never had a comprehensive inventory of its buildings, nor an assessment of their needs for their repair, improvement and modernization, urgent or otherwise. It has not had a vision for how to create new development or replace existing buildings to meet the needs of the community. This Master Plan is intended to address these issues, paving the way for intelligent planning and decision-making in the months and years ahead.

There is tremendous competition for funding for low income affordable housing modernization and new construction. This Master Plan provides an inventory of possible funding sources that could be applied to its facility improvement and development needs, and identifies which sources could be used for which purposes. This information will help the NHA establish priorities and assess which funding sources are most achievable so that urgent facilities needs can be mapped to funding realities.

The Master Plan identifies several promising and feasible modernization projects in the pages that follow, using Department of Housing and Urban Development (HUD) Rental Assistance Demonstration Program (RAD) funds:

1. Exterior envelope replacement at the six Capt. Robert Cook buildings as recommended by envelope consultants Russo Barr Associates.
2. Major Modernization of Seabeds Way and Capt. Robert Cook Drive buildings and site incorporating recommendations outlined in Section 5 of this master plan.

The Master Plan identifies several promising and feasible projects with respect to new construction and replacement of existing building across the NHA's 42 acres of property:

1. A new 61 unit senior apartment building at the Seabeds/Captain Robert Cook site, as outlined in Section 6, is possible given the higher income residents anticipated, but will require significant efforts for planning and applications.
2. Continued replacement of High Rock single family homes with duplexes is also possible, again requiring significant planning and application efforts.

The Master Plan identifies two highly desirable projects with respect to the NHA's State properties: (Unfortunately, funding for these projects is not readily identifiable at this time.)

1. Major Modernization of the Linden Street and Chambers Street buildings and sites incorporating the recommendations in Section 5, or

2. The redevelopment of the Linden Street and Chambers Street sites as described in Section 6

Funding major modernization and redevelopment projects is very challenging. The availability of funding depends in part on whether the developments are State or Federal, and on the income levels of residents. Given the age and condition of its buildings and the growing need for affordable housing in Needham this report recommends that the NHA build the case for modernization as outlined in Section 5, or new construction/replacement as outlined in Section 6 of this master plan, in order to fulfill its mission as successfully as possible.

The Findings and Recommendations of this Master Plan (Section 9) lay out a number of key areas for the Board and executive staff to consider:

- Funding programs change; the NHA should monitor programs that may emerge and have priorities and plans in place to take advantage of them.
- Staffing and Governance changes will be required if the NHA pursues funding for major projects.
- Public and Regulatory Engagement is important if plans and applications are to be approved and funded.
- Preserving and Broadening the NHA's Knowledge Base will put the Authority in a position to plan more successfully, and secure the necessary funding.
- Planning Initiatives that include staff and consultants can clarify goals and opportunities that will form the basis for funding applications

GUIDE TO THIS REPORT

The following is an annotated guide to the remaining sections of this report outlining the key content elements.

Section 2: Background for This Report

To meet current the needs of current NHA residents and keep facilities in good repair, to significantly improve the character and quality of its housing, and to add affordable housing to its portfolio, it is helpful to understand the local and regional economic, social and physical context for the NHA's mission and the recommendations in this report. This

Section provides background information that will be helpful in evaluating the costs and benefits of options that the NHA can pursue.

Section 3: Description of Existing Developments

Any repairs beyond the most minimal benefit from existing conditions site plans and plans. More comprehensive improvements that require an architect or engineer’s input need scaled plans to begin the design effort. This Section includes a profile for each existing development. It also includes site plans and floor plans for the entire NHA portfolio prepared by Abacus based on original paper drawings. The accompanying text provides factual, photographic and subjective evaluations of the buildings and sites suggesting shortcomings that warrant consideration. This information provides a context for considering small repairs and larger changes that may be desired. Plans have also been provided to the NHA in digital form.

Section 4: Routine Repairs and Improvement Options

Buildings and sites require ongoing maintenance and repairs, and HUD and DHCD provide ongoing funding so that this work can take place. NHA personnel have provided a description of the work that has recently been done and urgent repairs which need to be done in the foreseeable future. This Section documents this information to broaden the understanding of required work, provides an institutional record if there are changes in personnel, and puts individual work items in the context of overall building and site plans. These listings provide a basis for setting priorities.

Section 5: Major Modernization Options

The work and money required to maintain buildings and sites often precludes looking at the broader kinds of improvements that would improve the character, durability and functionality of its development. This Section outlines more comprehensive scopes of work that can make substantive improvements in resident quality of life and the character of their communities. Recommendations grow out of existing conditions documentation in Section 3. Illustrations suggest the kind of improvements being recommended.

Section 6: New Development Options

The NHA owns underutilized land that could support the development of new housing and associated community and resident services facilities. Site plans, three dimensional views and the accompanying narratives suggest the kind of development that could be integrated into the surrounding community while meeting the growing need for affordable housing. The work being proposed is designed to minimize the impact on NHA residents

and abutters, and enable NHA properties to meet contemporary standards

Section 7: Funding Sources

Although the demand for affordable housing funding greatly outstrips resources available, there are opportunities for funding major modernizations and new development that will allow the NHA to expand the benefits it provides its residents, the Needham community, and the region. In this section, funding programs and resources are laid out with an outline of the challenges, risks and rewards associated with each of them, and makes suggestion on how funding sources can be combined to meet needs in a more ambitious way.

Section 8: Cost Estimates and Pro Formas

Section 8 applies the currently available funding sources identified in the previous Section to the modernization and redevelopment projects which could be undertaken by the NHA. This Section examines the costs and financial structure of proposed new developments to provide a very preliminary outline of the costs and benefits associated with the work recommended in Sections 4, 5, and 6.

Section 9: Findings and Recommendations

In this Section, the consultants recommend that the NHA incrementally move forward to pursue a series of possible projects with a variety of funding sources to avail themselves of a full range of opportunities to improve their portfolio. These projects are summarized in narrative form, and build off of the work laid out in previous sections.

This work will require the input of a number of professionals and a sustained outreach effort by the NHA board and staff, but offers very significant rewards. This section also outlines the government staffing and public engagement initiatives needed to move forward.

Section 9: Table of Acronyms

Names of affordable housing agencies and programs are often abbreviated with acronyms that are familiar to those in the industry. Those referenced in this Master Plan are noted.

Section 10: Table of Reference Documents

This Section contains a list of all the reference documents which were reviewed during the creation of this Facilities Master Plan. These documents are on file in the Needham Housing Authority Office.

BACKGROUND FOR THIS REPORT

INTRODUCTION

The NHA's Mission: The Needham Housing Authority (NHA) was formed during a special meeting of the Needham Board of Selectmen on May 7, 1948. It was organized under the provisions of Massachusetts General Laws, Chapter 121B, as amended by Chapter 574 of the Acts of 1946 and by Chapter 200 of the Acts of 1948. Chapter 121B enables a Local Housing Authority (LHA) to provide housing for low income families, elderly persons and disabled persons, and to engage in redevelopment projects. At the highest level, the Needham Housing Authority's Board and staff define their mission as 1) to be an excellent landlord, and 2) to advocate for and create more low-income affordable housing units in Needham. To achieve this mission, the NHA must pro-actively look for opportunities to repair and modernize our existing housing stock, as well as investigate possibilities to develop additional low income units.

NHA Request for Proposals: Faced with the competing demands that the NHA's five developments make on its limited resources, the Needham Housing Authority determined that a Facilities Master Plan should be developed. The NHA issued a Request for Proposals in late Summer, 2017. Titled "Plan to Achieve Modernization and/or Redevelopment & Obtain Required Funding" – it made a clear statement of the NHA's goals. The successful responder was the team of Abacus Architects + Planners and Michael Jacobs - MHJ Associates.

The Consultant Team: As architects, Abacus has over \$100,000,000 of new and renovated affordable housing completed or under construction, and as planners have done affordable housing master plans for cities and towns throughout the region. Abacus has worked with housing authorities throughout Massachusetts on new development, major modernizations, and repairs and renovations. Mike Jacobs has over 3 decades of experience working with housing authorities and affordable housing developers as a consultant, and is on the Board of the Brookline Housing Authority. Abacus and Jacobs worked together on the development of 61 affordable apartments and community spaces for Jewish Community Housing for the Elderly in Brighton now under construction. The team was retained to provide the broad range of expertise that modernization and redevelopment requires.

The Report: This report represents the Team's findings and recommendations with input from the Board of Commissioners of the Needham Housing Authority and NHA staff, including former Executive Director Paul Dumouchel, Interim Executive Director Bernie Kirstein, Karen Sunnarborg, Needham Community Housing Specialist, Needham Planning Director Lee Newman and other stake holders in the Needham Community. From October 2018 through January 2019 15 meetings and presentations were conducted with tenants, Town boards and officials, HUD and DHCD representatives, elected state representatives, neighbors and local non-profit development agencies.

The resulting document (this Facilities Master Plan) lays out a series of options for how the NHA's aspirations for facility modernization and redevelopment can be met: immediately; medium term; and long term. These options are presented as Repairs and Improvements, Major Modernization, and New Development to align with the time frames for funding and the urgency of required work. The report notes costs/benefits, pros/cons, and risks/rewards associated with different allocations of funding and NHA time and effort. Some options may require years of planning effort – while other options are more immediately achievable. The report is intended to address the complexity of how these options may or may not be related so that the Board and staff can make the best possible decisions for the future. By focusing on immediate needs, long term possibilities and the realities of the funding landscape, we anticipate that this report will remain a useful document for years to come. Throughout this report Illustrations bring opportunities to life, while documentation of existing conditions helps convey the experiences from a resident perspective. The goal is to facilitate the kinds of conversations between the NHA staff, board, and residents, Needham officials and citizens, and local and state funders that are critical to the success of the NHA's mission.

THE AFFORDABLE HOUSING CHALLENGE

Challenges and Opportunities:

The Needham Housing Authority, like many Authorities in the Commonwealth, is faced with tremendous challenges and opportunities. On the one hand, their aging portfolio of buildings and sites do not meet contemporary accessibility, apartment size and energy conservation standards, and require ongoing replacement of major assemblies and systems with very limited money for renovation. On the other hand, the Authority is a major land owner with underutilized properties in its asset base. Like many suburban communities Needham land values have been rising. Land available for development is rapidly disappearing, and development of affordable housing is particularly challenging.

Forming the background for these contrasting challenges and opportunities is the increasing need for affordable housing in Needham and throughout the region. A series of reports have suggested that the lack of affordable housing is holding back economic development in Eastern Massachusetts, with many young workers and professionals leaving the region to find housing that will meet their budgets. Many Needham families understand that the town that provides them with so many opportunities may not be affordable for their children, or for the teachers, police, retail workers and service personnel who have always been a fundamental part of the community.

A particular challenge for the Needham Housing Authority is that their mission is to provide housing for the most vulnerable and lowest income individuals and families. This is typical of housing authorities through the Commonwealth and the country. Between the 1940's and the 1960's public housing was constructed for returning veterans and retirees who often moved on to better options. Today most housing authorities provide "housing of last resort" - for those with the least resources and the most challenges.

Those earning 80% of area median income (AMI) are generally considered low income. Housing with rents targeted for those between 80% and 100% of AMI is often termed "workforce housing" and might include recent college graduates, teachers, and those in manufacturing or service industries who are competing with mid-career professionals for a limited supply of housing in desirable communities (like Needham). Housing targeted for those who earn 50% or less of AMI is considered very low income; 30% of AMI is extremely low income. The NHA's mission has been to provide housing for those whose income is 50% AMI and below, which means that rental income and associated State and Federal subsidy income is insufficient to fund major modernization or redevelopment of NHA's properties.

The Need for Affordable Housing:

From one perspective, Needham is doing well compared to other communities in the region. Of the 11,047 year round housing units in the town 1,387, or 12.56%, have been determined to be affordable by the Commonwealth of Massachusetts. This is significantly higher than many otherwise comparable municipalities. On the other hand, this housing does not come close to meeting the real need for affordable housing from both a local and regional perspective.

Many housing authorities focus all of their efforts on maintaining their existing portfolio of housing. Meeting resident, management and facility needs is very demanding. Very few smaller authorities (such as the NHA) have the resources and expertise found in the larger authorities, such as those in Boston, Cambridge, or Brookline, to develop new housing to replace existing housing, or add to their portfolio on parking lots or other underutilized parcels.

Community Development Corporations, of which there are over 300 in Massachusetts, have taken the initiative for developing affordable housing. Increasingly, they compete with private developers building market rate housing for open parcels of land. In towns with less than 10% affordable housing Massachusetts General Law Chapter 40B allows developers to override local zoning if they include a certain percentage of affordable units. Needham's 12.56% affordability means that Chapter 40B is not a mechanism that developers can utilize to increase density, and their profits, in return for providing affordable housing - reducing the incentive for private entities to meet a broader social need.

Chapter 40B can still be useful in facilitating affordable housing development in 10%+ towns. A Local Initiative Program (LIP) or "Friendly 40B" proposal allows an affordable housing developer to work with the municipality to override zoning through a Comprehensive Permit that from which a broad range of local constituencies benefit. If the NHA were to develop new housing they would likely use this mechanism.

Given this background, the Needham Housing Authority has chosen to take a proactive stance through the issuance of creation of this Facilities Master Plan and the findings and recommendations presented in this report. The NHA already plays a significant role in addressing the need for affordable housing, and may be in a position to increase that role.

Barriers to Affordable Housing Construction:

ZONING Another background reality for this report, and for the affordable housing crisis in the region, is that many or most municipalities have restrictive zoning that makes it difficult to develop the kind and density of housing that is needed to meet the need for affordable housing. Cities and towns want to protect the character of existing neighborhoods to prevent apartments or condominium buildings from being squeezed into communities in inappropriate ways. At the same time, zoning and community concerns can prevent the development of sensitively designed multi-family housing in appropriate locations.

COMMUNITY IMPACT: Although NHA owned properties offer potential developable land within its developments with minimal impact on neighbors and the broader community, many neighborhoods and neighbors have a tendency to resist multi-family development in proximity to where they live, and affordable housing is often resisted even more than market rate development. The work presented in this report is intended to illustrate the kind of planning and design that recognizes the character of existing neighborhoods and that can garner public support. As “design guidelines” for possible NHA development it can help structure productive planning efforts in the future.

HIGH COST OF LAND: Early design explorations looked at a variety of parcels in Needham that might be available for development. Because of the high cost and level of competition for buildable sites, as well as the availability of under-utilized NHA owned land, the report only considered development on NHA owned land.

FAMILY VS. SENIOR HOUSING: While additional affordable family housing is certainly needed in Needham, there is significant concern among town officials about the impact of additional children on the Needham Public Schools, which are currently operating at close to maximum capacity. On the other hand, new senior housing has the potential to allow “over housed” seniors to move out of two, three and four bedroom houses, apartments, and condos, making them available for families.

Setting a Direction for Repairs and Modernization:

The shortage of affordable housing in Needham makes the maintenance of existing housing all that much more important. Funding for maintenance is very limited. NHA has used that funding effectively so that its apartments are all in reasonable condition. Severe weather related conditions in 2015 at the Seabeds Way buildings that threatened livability were addressed with emergency funding (see the next section) but such funds are generally not available for routine upgrades – as important as they might be. This report lays out funding options for renovation, as well as more significant modernizations that will not only maintain the existing buildings, but allow them to approach contemporary standards for accessibility and livability. Keeping existing NHA

buildings and sites in good condition is absolutely essential to meeting Needham’s need for high quality senior and family housing.

Redevelopment Opportunities:

The five NHA developments are different not only in their funding streams (Captain Robert Cook, Seabeds and High Rock are Federally funded; Linden and Chambers are State funded,) but in their future viability. It is anticipated that Captain Robert Cook and Seabeds, with appropriate maintenance, will continue to serve the NHA and residents for 20 years or more. Major modernization is needed to extend the useful life to 50+ years. (This maintenance includes envelope improvements to Captain Robert Cook avoid the kinds of problems experienced at Seabeds in 2015.) Although the facilities do not meet all contemporary standards their unit sizes and overall design and construction are not out of line with what is being built today.

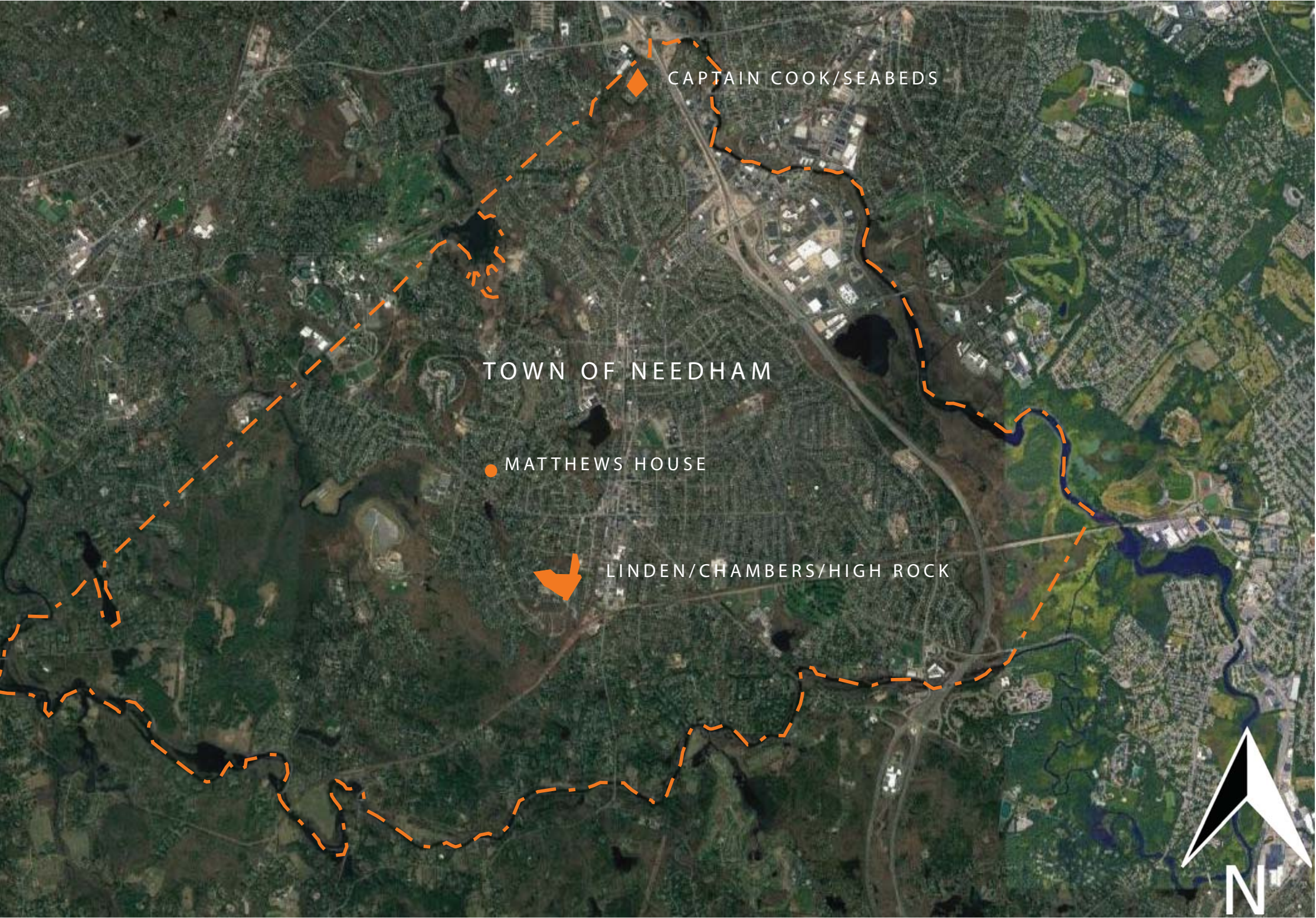
This Master Plan recommends that replacement of Captain Robert Cook and Seabeds by denser development should not be considered, especially since there is developable land that could accommodate new development between them increasing the amount of housing the site provides.

Linden and Chambers, because the apartments are extremely inadequate by contemporary standards, and perhaps because of their prominent sites with appearances that are often associated with public housing, are viewed negatively by many in the community. For more than two decades they have been noted in Needham’s housing plans for redevelopment. The studio apartments are relatively small and accessibility requirements cannot easily be met. Although Linden and Chambers may also have an approximately 20 year lifespan, and have been relatively well maintained, these perceptions, and the underutilized NHA owned land nearby, suggest that replacement is an option to be explored.

Because of the potential interest of developers in the prominent Linden and Chambers properties, and adjacent underutilized NHA land that could accommodate denser development, the replacement of these developments with higher quality and higher income housing should be considered if funding can be found.

20 of the original High Rock single family homes were recently replaced with duplex homes as an “as-of-right” redevelopment within existing zoning. For the 60 remaining single-family units (which are 70 years old), seeking funding for additional replacement is recommended in the report. High Rock lots can also be incorporated into a redevelopment of the adjacent Chambers Street site by combining these NHA owned properties.

NHA DEVELOPMENTS IN CONTEXT



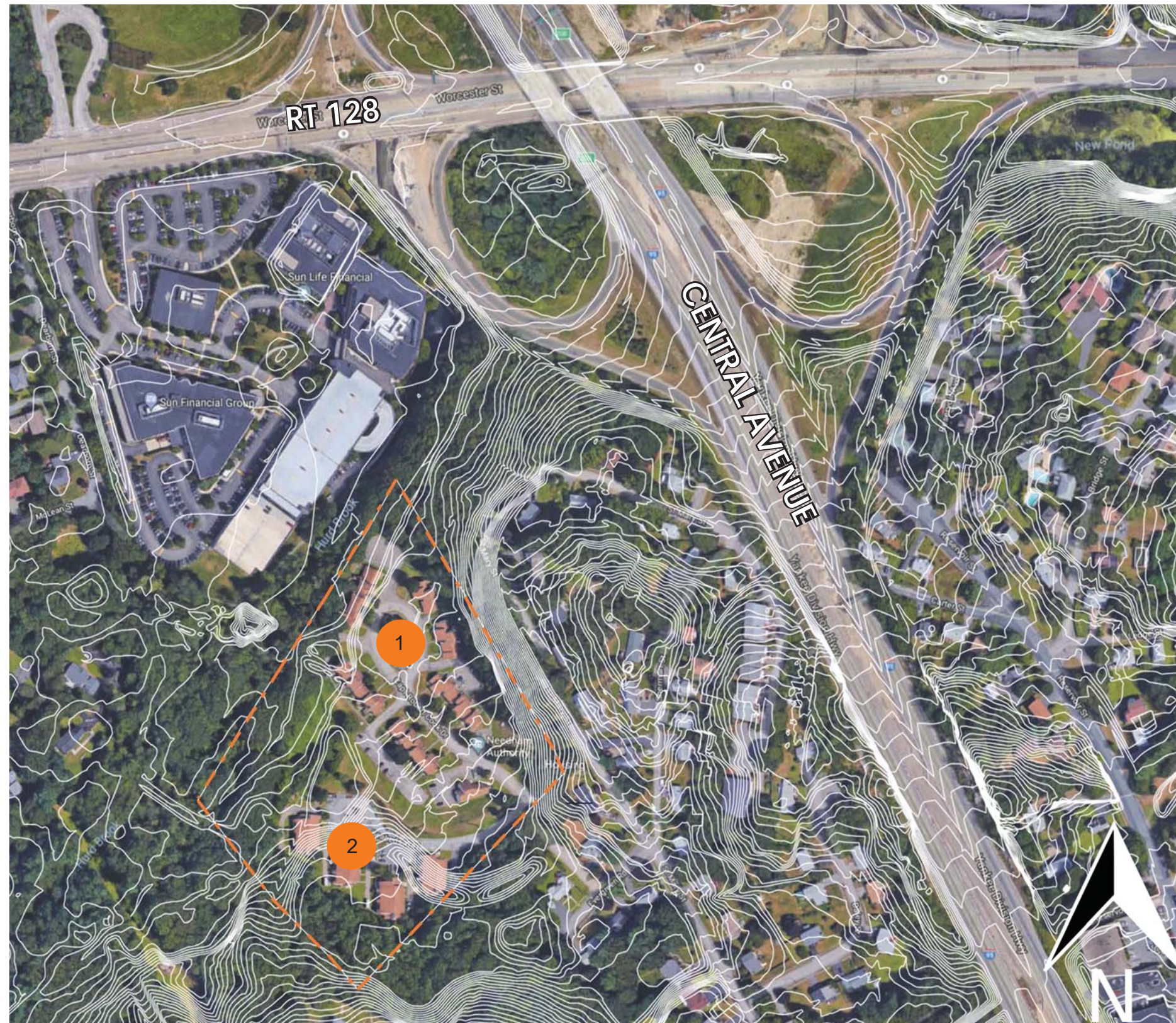
The five NHA developments are clustered into two areas; one at the very north end of the town, the other towards the south end. Like many Housing Authority developments throughout the Commonwealth some properties are cut off from the center of town by topography, highways or railroad tracks.

The Captain Robert Cook Drive and Seabeds Way developments, built in the early 1980's, are likely to remain relatively isolated because of surrounding wetlands and limited access to streets and highways. They are relatively far from retail and other community amenities in a secluded and relatively attractive enclave.

The Linden Street and Chambers Street developments, built in the late 1950s and early 1960s, are across from a new school and closer to retail and services, although railroad tracks prevent easy access to them. They have a relatively large frontage on well traveled Linden Street and back up to wetlands on the opposite side.

High Rock is adjacent to Linden and Chambers but is very different in character. The development is composed of familiar, if small, single family homes built in the late 1940s and early 1950s on relatively small 10,000 SF lots with significant ledge and sloping terrain. 20 of the single family homes were replaced with new duplexes a decade ago.

All of the NHA properties, with the exception of High Rock, are multi-unit buildings and have more units per acre than most of Needham. They are all one and two story –like most neighborhoods in town – in recognition of the neighborhood contexts.



CAPTAIN ROBERT COOK DRIVE / SEABEDS WAY DEVELOPMENT CLUSTER

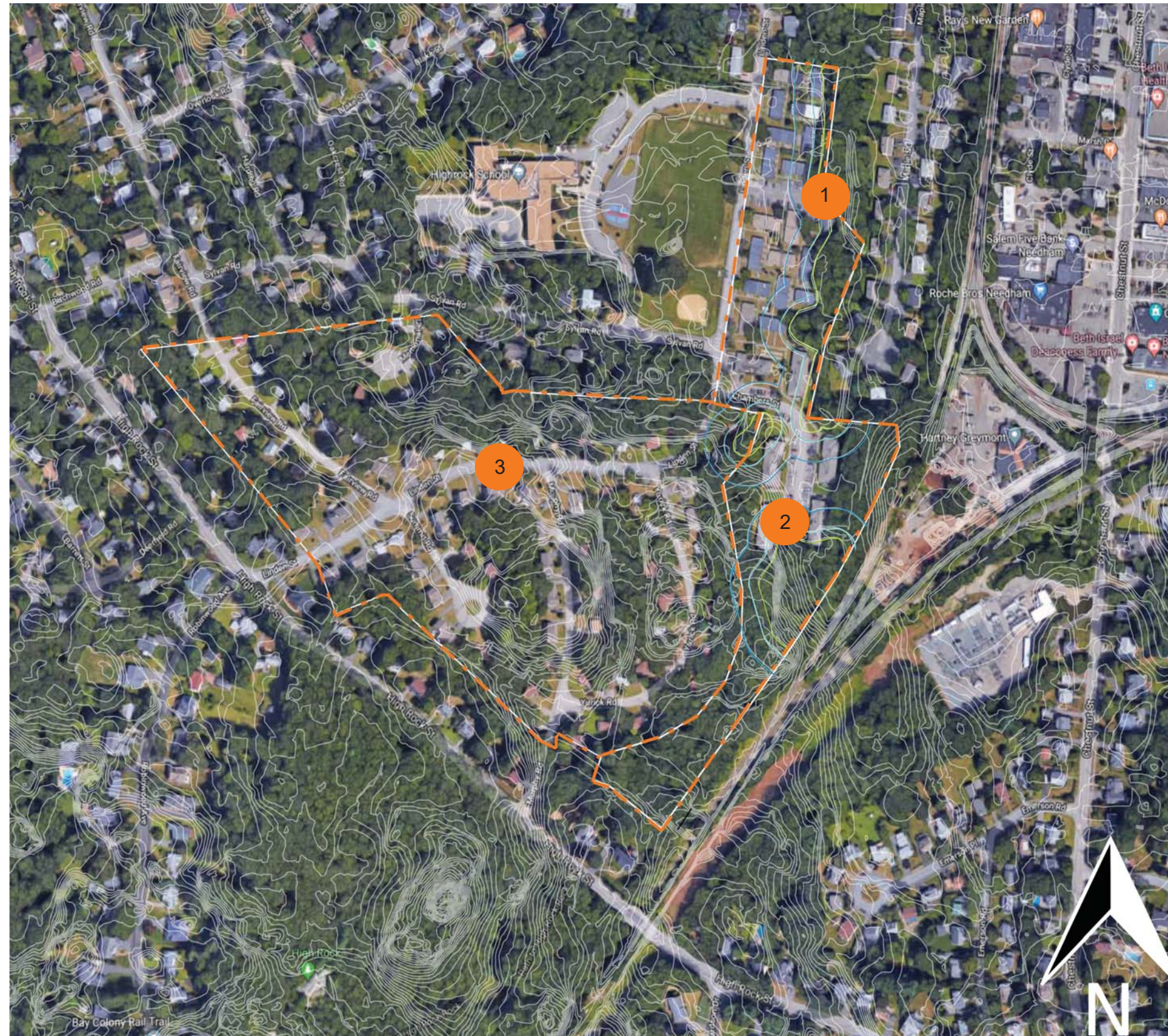
The Captain Robert Cook Drive and Seabeds Way developments occupy adjacent sites which appear to be on a single 10 acre property. They each have their own distinct architectural character, have separate entry drives, and serve different populations (Seabeds Way consists of one bedroom apartments for seniors, Captain Robert Cook consists of townhouses for families). They are separated by a significant change in grade and an earthen berm running between them.

Nevertheless, Cook and Seabeds are visually and spatially connected by the open space between them, and the dense tree coverage that surrounds them on all sides. The topography, tree coverage and limited access highways buffer this area from virtually everything else around it.

Improvements for the two developments have been on separate tracks - primarily because of the emergency envelope reconstruction at Seabeds in 2015 and Captain Robert Cook's remaining need for similar work. Other needs - updated mechanical systems and kitchen and bath replacements - are similar at the two developments.

Between the two developments where the berm currently rises there is the opportunity for major development on underutilized land. The steep topography in other areas limits where redevelopment could take place to this central area. The surrounding trees limit the impact on adjacent neighborhoods.

1-Captain Robert Cook Drive Development
2-Seabeds Way Development



LINDEN STREET / CHAMBERS STREET / HIGH ROCK DEVELOPMENT CLUSTER

Although Linden Street, Chambers Street and High Rock have very different characters, have very distinct access points, are spatially quite separate, and are generally perceived to be quite independent, they are on adjacent sites that together form a very significant 32.2 acre piece of property.

Improvements for each of the three developments could be funded independently in consideration of their individual needs. Linden Street and Chambers Street are composed entirely of quite small studio apartments for similar populations (elderly) and require similar improvement, but have very different building organizations. High Rock, with its primarily single family homes on individual lots, invites house by house improvements, continuation of the replacement of single family homes with duplexes, or aggregation of lots for denser development on the High Rock properties.

Given the proximity of the three developments it is also worth considering their futures together. Linden Street and Chambers Street are served by a community center between them and have interconnected pedestrian pathways. Wetlands and topography run by and through all three, limiting where redevelopment can effectively take place. Major redevelopment could take place in the underutilized areas between the developments to minimize the impact of construction on existing occupied housing and take advantage of the flattest and driest areas.

Portions of these sites are quite isolated from adjacent neighborhoods suggesting less community opposition to major redevelopment than on more prominent areas on these or other sites.

- 1-Linden Street Development
- 2-Chambers Street Development
- 3-High Rock Development

3

DESCRIPTIONS OF EXISTING DEVELOPMENTS

INTRODUCTION

In order to properly evaluate the opportunities to repair, modernize or redevelop the NHA properties presented in later sections, it is important to understand the existing conditions of all developments involved. This Section presents the existing conditions of the NHA's five properties.

- The plans that follow were prepared by Abacus Architects + Planners based on the sources noted below. Previous to the preparation of these plans, only the original construction drawings were available, on paper and in relatively poor condition. The CAD files for these plans have been given to the NHA and will be a valuable asset to the Authority and their consultants if significant planning and design work is contemplated. Only architectural plans have been redrawn in digital form. Relatively complete sets of drawings including engineering drawings, elevation and details are available on paper.

These plans have not been field verified to confirm that what is shown was built or incorporates changes made over the decades, but in general they appear to conform to what is seen on site. Original construction topographic site plan information was augmented with information from MassGIS on-line.

Captain Robert Cook Drive Family Housing: rental

- Turnkey Housing Developer: DiMeo Construction Company.
- Architect: Chisholm Washington Associates, Inc.
- Plan Date: September 15, 1981

Seabeds Way Senior One Bedroom Apartments - rental

- Turnkey Housing Developer: DiMeo Construction Company.
- Architect: Chisholm Washington Associates, Inc.
- Plan Date: September 15, 1981

Linden Street Studio Apartments - rental

- Developer: Massachusetts Department of Community Affairs
- Architect: William Hoskins Brown Associates, Inc.
- Plan Date: November 12, 1970 (Construction completed 1959-1962)

Chambers Street Studio Apartments- rental

- Developer: Massachusetts Department of Community Affairs
- Architect: William Hoskins Brown Associates, Inc.
- Plan Date: October 27, 1969 (Construction completed 1962)

High Rock Single Family Homes Original Construction - rental

- Developer: Unknown
- Architect: Unknown. No Plans available
- Date: Unknown Post WW II Veterans Housing

High Rock - Replacement of 20 single family homes with duplexes (20 rental and 20 ownership)

- Developer: Needham Housing Authority
- Architect: Blackstone Block Architects
- Date: 2007-2009

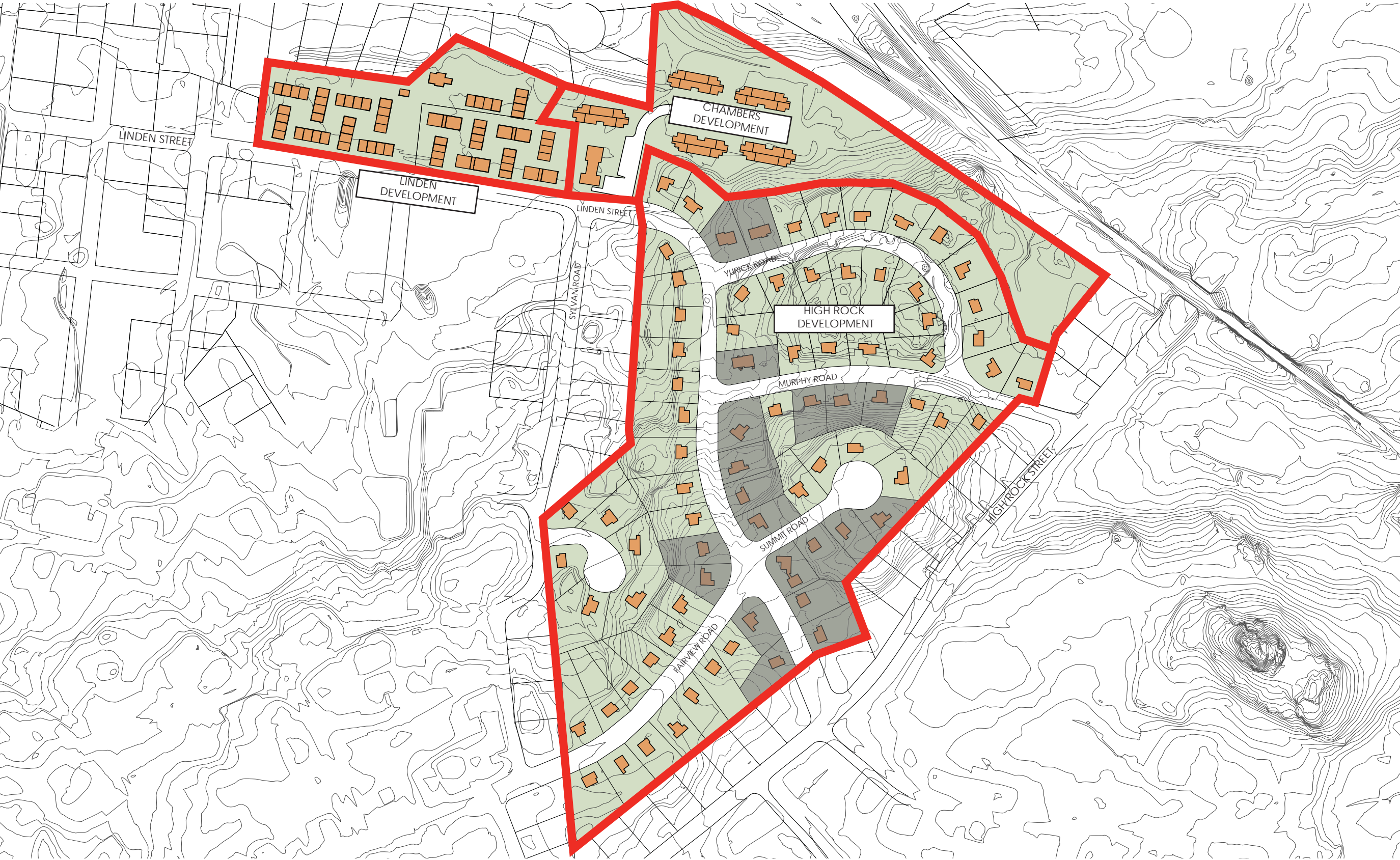
Matthews House

- No Plans available

TOPOGRAPHIC SITE PLAN - CAPT. ROBERT COOK AND SEABEDS



OVERALL TOPOGRAPHIC SITE PLAN - LINDEN, CHAMBERS AND HIGH ROCK



DEVELOPMENT NARRATIVE - CAPT. COOK DRIVE

Development Profile:

Financing:	Federal
Zoning:	Single Family Residence B; Chapter 40B permitting
Density:	5.7 Acres site: 5.3 units per acre
Site:	Adequate parking and open space, cul-de-sac, sloping topography
Residents:	Families
Buildings:	6 buildings; side by side one story and two story apartments
Construction:	Wood framed walls on slab on grade; fiber cement siding, batt insul.
Apartments:	30 apartments: 5 two-bedroom; 20 three-bedroom; 5 four-bedroom
Access:	Site mostly accessible - not all curb cuts compliant; 1st floors visitable
Common:	Playground area, NHA offices
Amenities:	Yards and rear terraces for each apartment
Parking:	In scattered lots around site more than adequate

Development History:

Built in 1982, apartments have been renovated on a one-off basis but most need substantial improvements. Roofs were replaced 20 years ago. Siding, windows, doors, gypsum sheathing, heating system and interior finishes are all original except for the few that have been renovated. Repairs of construction flaws similar to the flaws that led to ice damming and water infiltration at Seabeds are anticipated to cost \$1,100,000 in a report issued by Russo Barr Associates.

Site Layout:

Captain Robert Cook Drive is accessed from Evergreen Road, a short, dead end street off of St. Mary's Street, which is itself a fairly quiet street. The entire neighborhood is relatively cut off from the remainder of Needham and Wellesley by Interstate 95 to the east, Route 9 to the north and Hurd Brook to the west and south. Along with the NHA Seabeds development it is almost completely surrounded by forest. The Sun Life Financial Parking garage is about 200 feet to the north; but virtually invisible through the trees.

Two relatively small houses flank Captain Robert Cook Drive just outside the NHA property line but are behind a fairly dense stand of trees. A one story NHA office building is located just after the spur road to Seabeds. To the southwest a linear berm separates the Captain Robert Cook development from the Seabeds development – rising up about 18 feet, and then down 8 feet to the elevated level of Seabeds.

Six buildings line the Drive – four larger buildings and two smaller building. The Drive ends in a cul-de-sac with a playground in the middle. All 30 apartments are built side by side with a fire wall between them; some are one story and others two story. Buildings all have front and back yards. Front yards are continuous without fences defining ownership or providing privacy. Front doors are generally at grade. Back yards have projecting exterior storage areas and mechanical rooms that help define private terraces and are often close to the rising landscape adjacent to them.

The curving drive and trees provide a pleasant quality. Although there are benches scattered throughout the site and a playground, they have not been developed to provide gathering places that could help facilitate a sense of community for families. Curbs and sidewalks are provided along Captain Robert Cook Drive. Dumpsters are located in several locations throughout the development and are not screened from view. Mailboxes are at a single ganged pedestal just past the offices. Although the site layout is very different from most of Needham where most of the housing is single or two family, the development is not visible from public ways and is never seen in contrast with smaller scale housing.

Five parking lots, some larger, some smaller, are tucked in next to or behind buildings, partially screened from view by the buildings. Another small parking lot is associated with the NHA office building. Overall, there appears to be a lot of paving on site – perhaps more than necessary. Paving is in poor condition throughout the development as are some of the curbs and curb cuts.

Building Character and Layout:

Buildings alternate between one and two story and step forward and back, giving each unit a sense of individuality within each of the 6 buildings. Front doors to each townhouse, each with its own walk, reinforces the sense of ownership. Eaves and ridges run parallel the front walls of each building giving the buildings a 1982 version of contemporary – while recognizing a simple pitched roofed New England vernacular. Chimneys for the heating systems in each unit animate the massing at the rear, along with projecting exterior storage. Siding, roofing, soffits, doors and windows are in relatively poor condition and near the end of their useful lives. Given the construction flaws noted and the serious ice dam and water infiltration problems experienced by Seabeds in 2015, a complete envelope improvement project should be funded as soon as possible. This priority recommendation is noted in later Sections of this report.

Apartment Layouts:

There are 6 different apartment layouts:

Two bedrooms on one floor with one bathroom - 750 SF
Two bedrooms on two floors with one bathroom - 810 SF
Three bedrooms on one floor with one bathroom - 900 SF
Three bedrooms on two floors with 1.5 bathrooms - 960 SF
Four bedrooms on one floor with 1.5 bathrooms - 1,220 SF
Four bedrooms on two floors with 2 bathrooms - 1,280 SF

The differences in size and configuration animate the massing of the buildings and give each unit a sense of individuality. The buildings and apartments are clustered around the drive and playground to suggest a typical suburban neighborhood with individual entries, yards and terraces accessed off the street. The planning and design suggests a sense of individual “ownership” of each apartment - a reaction against the institutional character of public housing design and planning from the 1950’s and 1960’s.

Three and four bedroom flats have an oversized bathroom to address accessibility requirements. Apartment sizes are relatively small by contemporary standards:

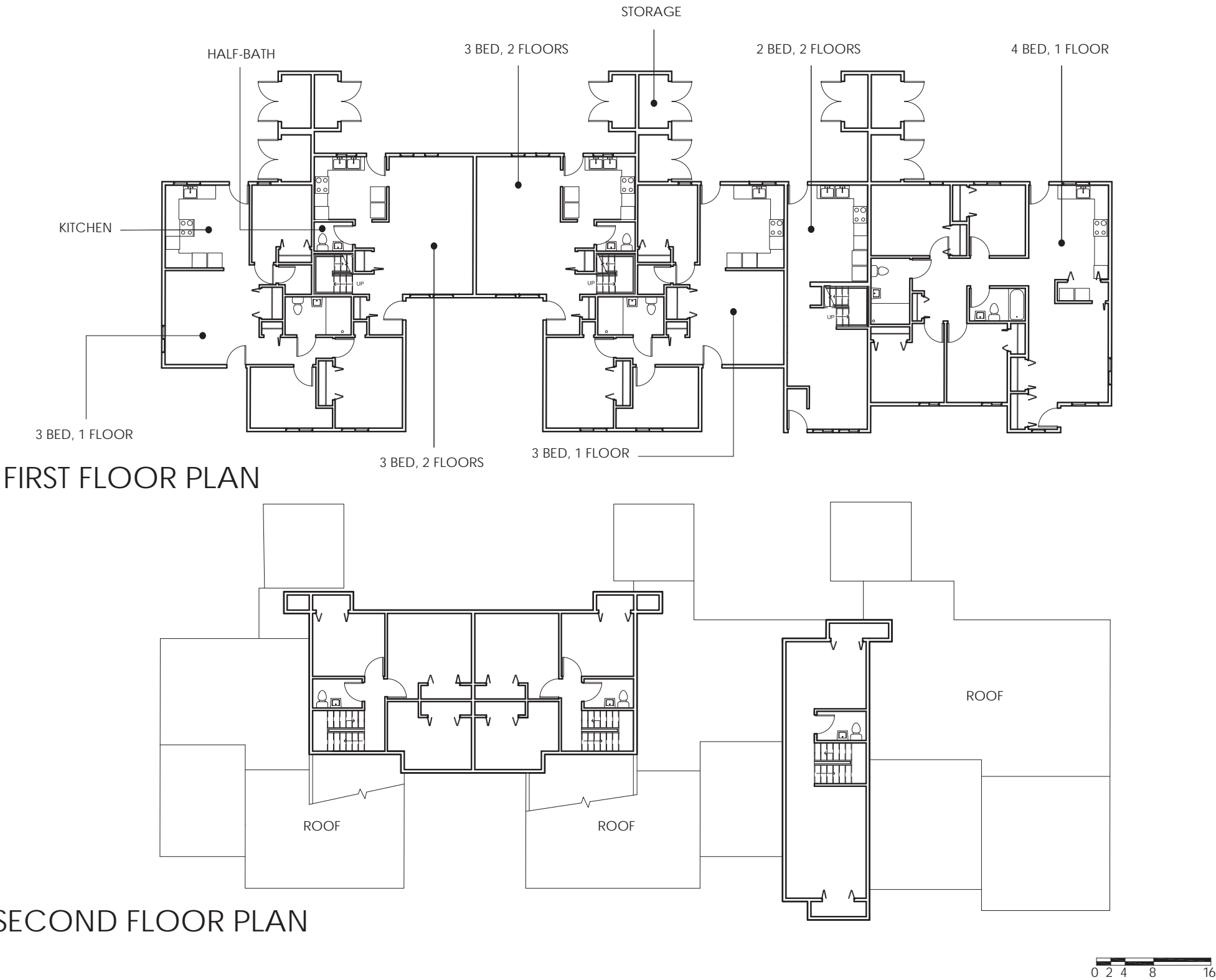
Kitchens and bedroom sizes are adequate but living/dining room spaces are relatively small in relation to the needs of family housing. All apartments have a front and back doors. The projecting outdoor storage rooms helps define rear terraces with storage and mechanical rooms between pairs of apartments.



TOPOGRAPHIC SITE PLAN - CAPT. ROBERT COOK DRIVE DEVELOPMENT

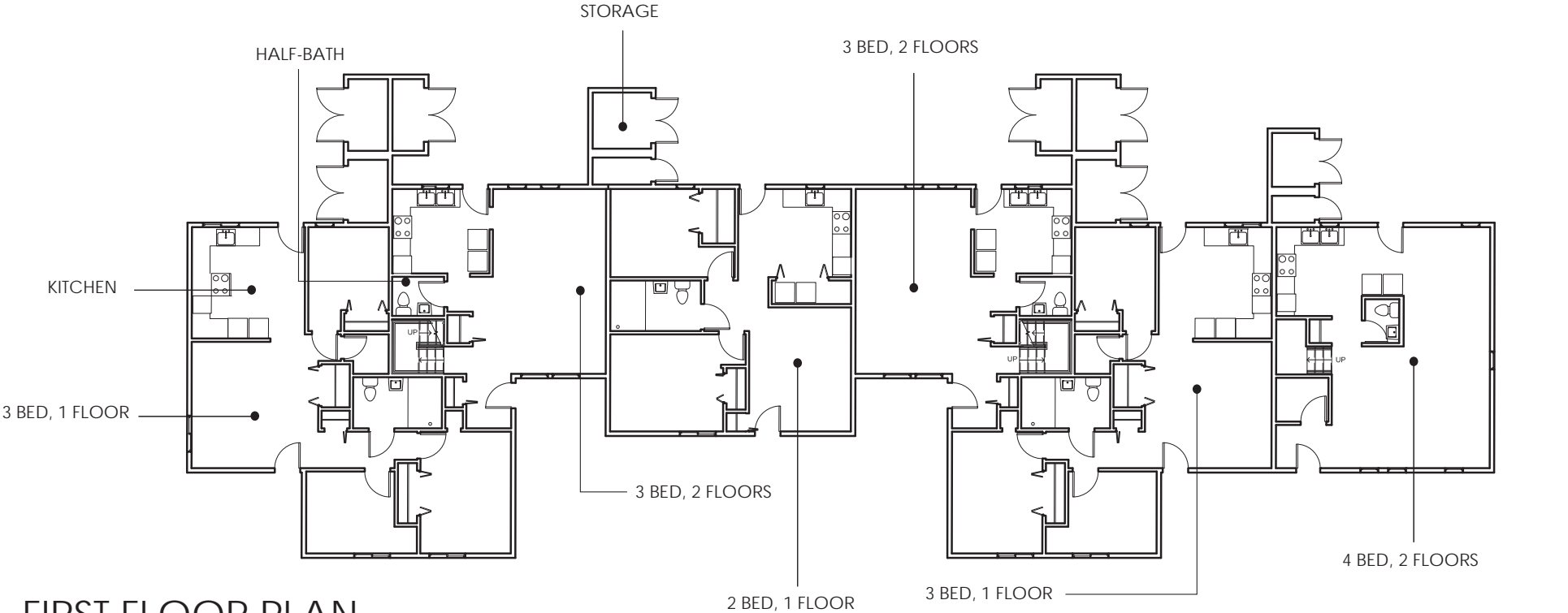


BUILDING PLANS - CAPT. ROBERT COOK DRIVE BUILDING TYPE A

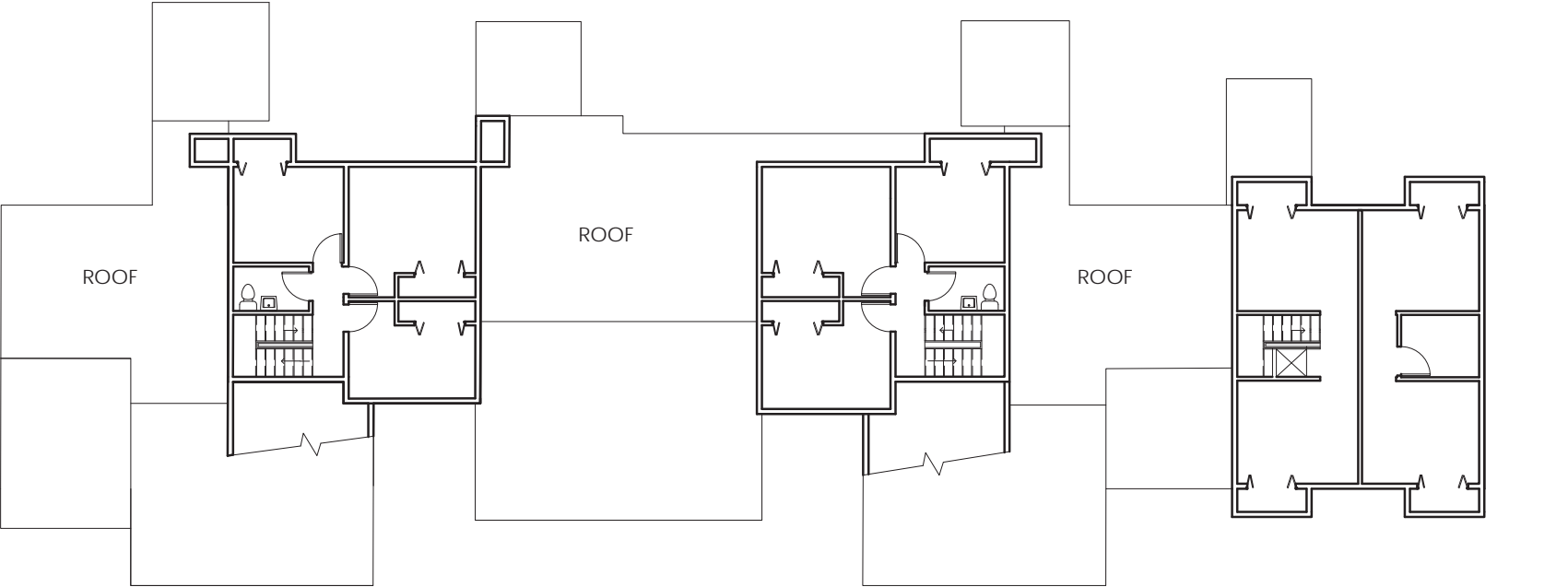


BUILDING:	Captain Robert Cook Drive Unit Building Type A - 6 Units
UNIT TYPES:	1 four-bedroom on 1 floor 2 three-bedroom on 1 floor 2 three-bedroom on 2 floors 1 two-bedroom on 2 floors
NO. OF FLOORS:	One Floor - partial second floor for two story apartments;
NO. OF BUILDINGS:	2 buildings out of 6 this configuration
COMMON SPACE:	None
ENTRIES:	Individual front and back entries
WINDOWS:	Double hung windows throughout
LIVING ROOM:	Small living room
BATHROOM:	4 bedroom 1 Floor: 2 bathrooms 3 bedroom 1 floor: 1 bathrooms 3 bedroom 2 Floor: 1.5 bathrooms; 2 bedroom on 2 Floors: 1 bathroom
KITCHEN:	U or L-shaped eat-in kitchen
STORAGE:	Coat, broom and bedroom closets
EXTERIOR:	Rear terraces with exterior storage
CONSTRUCTION:	2X4 wd frame with fiber cement sid- ing, fiberglass insul; slab on grade
ACCESSIBILITY:	One story apartments are accessi- ble from grade: Oversize bathrooms in one story apartments approach MAAB requirements. Doors & Kitch- ens are not MAAB compliant.
UTILITY ROOMS:	One utility room for two apartments
LAUNDRY:	Hook-ups in each apartment
HVAC:	Gas fired boiler; fin tube radiators, window AC by tenant in bedrooms, AC by tenant in sleeve in Living Rm.

BUILDING PLANS - CAPT. ROBERT COOK DRIVE BUILDING TYPE B



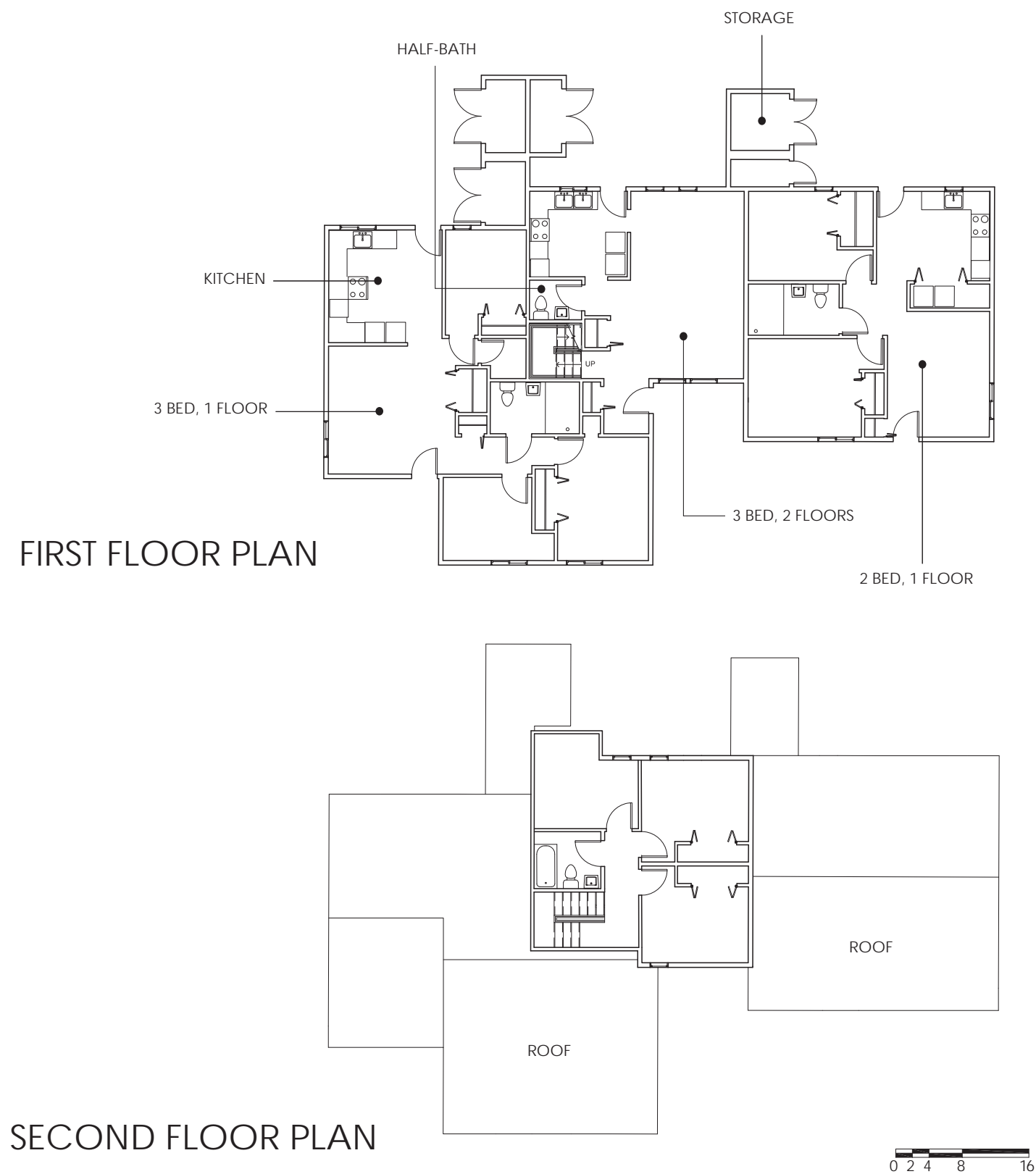
FIRST FLOOR PLAN



SECOND FLOOR PLAN

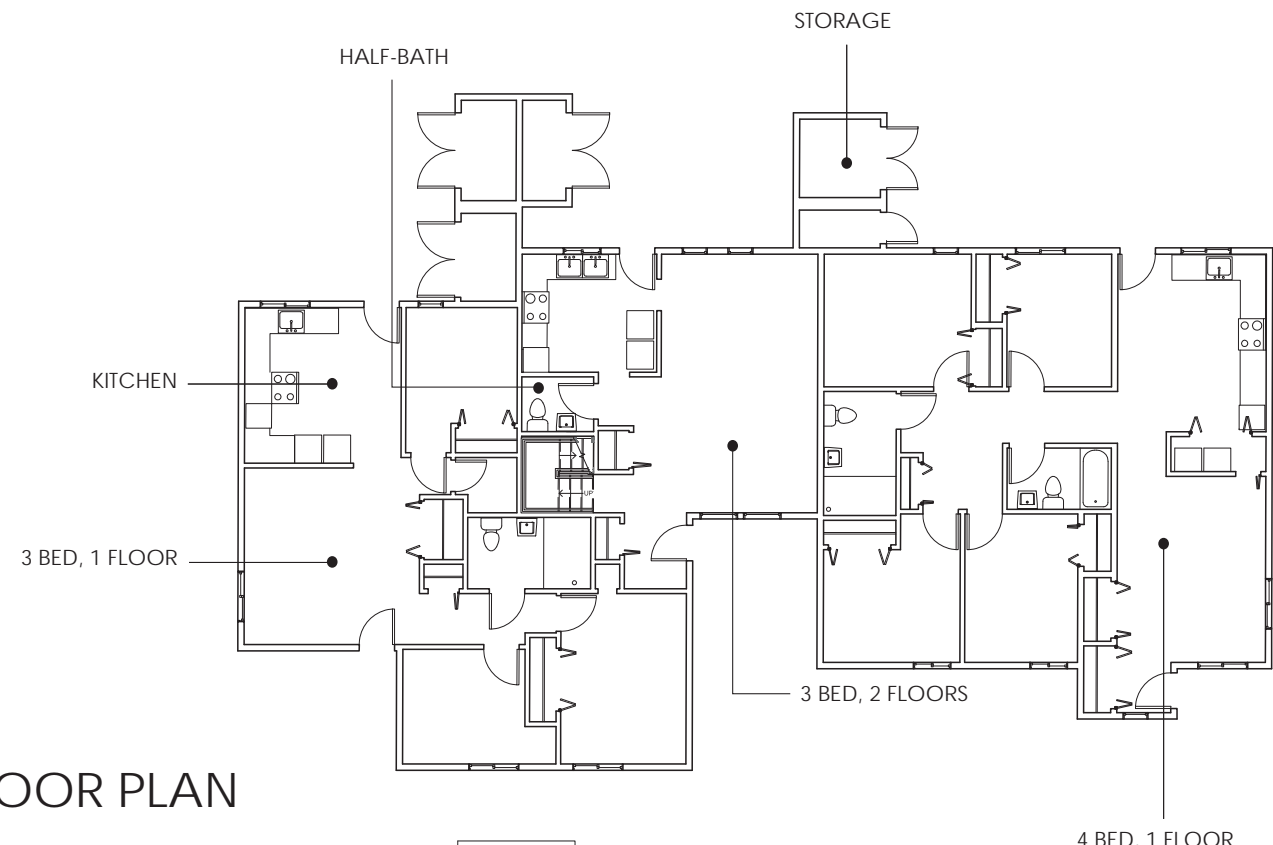
BUILDING:	Captain Robert Cook Drive Unit Type B- 6 units
UNIT TYPES:	2 three bedroom on1 floor 1 two bedroom on1 floor 2 three bedroom on 2 floor 1 four bedroom on 2 floors
NO. OF FLOORS:	One Floor - partial second floor for two story apartments;
NO. OF BUILDINGS:	2 buildings out of 6 this configuration
COMMON SPACE:	None
ENTRIES:	Individual front and back entries
WINDOWS:	Double hung windows throughout
LIVING ROOM:	Small living room
BATHROOM:	3 bedroom 1 floor: 1 bathroom 2 bedroom 1 floor: 1 bathrooms 3 bedroom 2 floor: 1.5 bathrooms 4 bedroom 2 floors: 1.5 bathrooms
KITCHEN:	U or L-shaped eat-in kitchen
STORAGE:	Coat, broom and bedroom closets
EXTERIOR:	Rear terraces with exterior storage
CONSTRUCTION:	2X4 wd frame with fiber cement siding, fiberglass insul; slab on grade
ACCESSIBILITY:	One story apartments are accessible from grade: Oversize bathrooms in one story apartments approach MAAB requirements. Doors & Kitchens are not MAAB compliant.
UTILITY ROOMS:	One utility room for two apartments
LAUNDRY:	Hook-ups in each apartment
HVAC:	Gas fired boiler; fin tube radiators, window AC by tenant in bedrooms, AC by tenant in sleeve in Living Rm.

BUILDING PLANS - CAPT. ROBERT COOK DRIVE BUILDING TYPE C

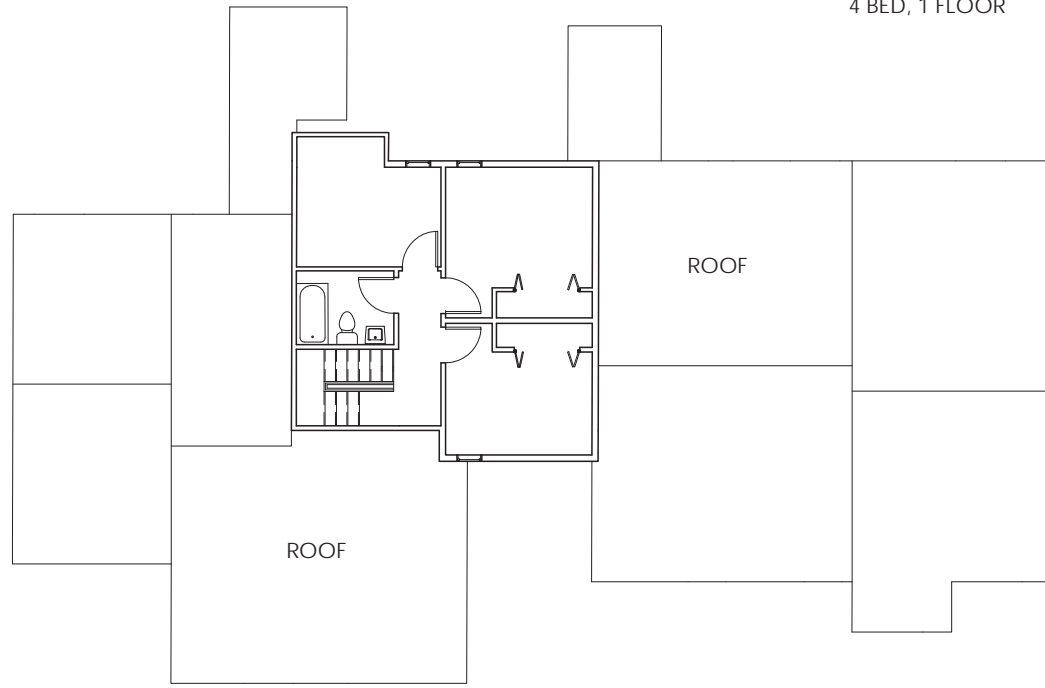


BUILDING:	Captain Robert Cook Drive Unit Type - 3 units
UNIT TYPES:	1 three bedroom on 1 floor 1 two bedroom on 1 floor 1 three bedroom on 2 floors
NO. OF FLOORS:	One Floor - partial second floor for two story apartments;
NO. OF BUILDINGS:	1 building out of 6 this configuration
COMMON SPACE:	None
ENTRIES:	Individual front and back entries
WINDOWS:	Double hung windows throughout
LIVING ROOM:	Small living room
BATHROOM:	3 Bedroom 1 floor - 1 bathroom 2 bedroom 1 floor - 1 bathroom 3 bedroom 2 floor - 1.5 bathrooms
KITCHEN:	U or L-shaped eat-in kitchen
STORAGE:	Coat, broom and bedroom closets
EXTERIOR:	Rear terraces with exterior storage
CONSTRUCTION:	2X4 wood frame w/ fiber cement siding, fiberglass insul; slab on grade
ACCESSIBILITY:	Flats are accessible from grade. Oversized bathrooms in one story apartments approach MAAB requirements Doors & Kitchens are not MAAB compliant.
UTILITY ROOMS:	One utility room for two apartments
LAUNDRY:	Hook-ups in each apartment
HVAC:	Gas fired boiler; fin tube radiators, window AC by tenant in bedrooms, AC by tenant in sleeve in Living Rm.

BUILDING PLANS - CAPT. COOK DRIVE BUILDING TYPE D



FIRST FLOOR PLAN



SECOND FLOOR PLAN

BUILDING:	Captain Robert Cook Drive Unit Type D - 3 units total
UNIT TYPES:	1 three bedroom on 1 floor 1 four bedroom on 1 floor 1 three bedroom on two floors
NO. OF FLOORS:	One Floor - partial second floor for two story apartments;
NO. OF BUILDINGS:	1 building out of 6 this configuration
COMMON SPACE:	None
ENTRIES:	Individual front and back entries
WINDOWS:	Double hung windows throughout
LIVING ROOM:	Small living room
BATHROOM:	3 bedroom 1 floor: 1 bathroom 4 bedroom 1 floor: 2 bathrooms 3 bedroom 2 floors: 1.5 bathrooms
KITCHEN:	U or L-shaped eat-in kitchen
STORAGE:	Coat, broom and bedroom closets
EXTERIOR:	Individual walks and rear terraces with exterior storage
CONSTRUCTION:	2X4 wd frame with fiber cement siding, fiberglass insul; slab on grade
ACCESSIBILITY:	One story apartments are accessible from grade. Oversize bathrooms in one story apartments approach MAAB requirements Doors & Kitchens are not MAAB compliant.
UTILITY ROOMS:	One utility room for two apartments
LAUNDRY:	Hook-ups in each apartment
HVAC:	Gas fired boiler; fin tube radiators, window AC by tenant in bedrooms, AC by tenant in sleeve in Living Rm.

EXISTING CONDITIONS IN PICTURES - CAPT. COOK DRIVE



1. Captain Robert Cook and Seabeds are entered off of St. Mary Street, to Evergreen Road and then Captain Robert Cook Drive. Evergreen and Cook are quiet tree lined streets flanked by mid-market houses and are not through streets. The area is relatively isolated from the surrounding town by interstate 95, Route 9 and Hurd Brook.



2. The NHA office is at the entry to Captain Robert Cook. A spur road rises up on the left to Seabeds, with a berm separating the two developments. The surrounding landscape is relatively open with trees beyond the developments in all directions.



3. The open landscape is not unattractive, but offers little privacy to the fronts of the houses, or a clear definition of public, semi-public, semi-private and private outdoor space. Benches and mailboxes do not create a pedestrian zone around them that could become a center of community life.



4. Curbs, sidewalks and streets are in relatively poor condition and do not adhere to all accessibility requirements. Most areas do have asphalt sidewalks adjacent to the street, acknowledging the importance of pedestrian safety for family housing.



5. Trash is accommodated in dumpsters in the corners of the parking lots, which are scattered throughout the development. They are not screened and are relatively far from many of the homes.



6. The curving road lined by one and two story townhouses in six buildings of various sizes provides a relatively attractive street-scape that is sheltered, and perhaps isolated, from the rest of Needham. The drives are quite wide given the limited traffic, and children use them for play.



7. The land rises up behind the townhouses, providing wooded hillsides that separate the development from the surrounding townscape. They offer a sense of tranquility, but have not been developed with walking paths or other amenities.



8. Each apartment has an outdoor storage and mechanical room extending off the back, with semi-private terrace space in between for each unit. Many are pushed up fairly close to the rising landscape. They appear to be well-used amenities. The chimneys are used to vent the heating and hot water systems.



9. Most apartments are at grade with a roll in entrance. The sloping landscape is accommodated with occasional retaining walls where buildings step down along with the topography.



10. Captain Robert Cook Drive ends in a cul-de-sac with a playground in the center. Although the equipment is in relatively good condition, the overall layout of the open space does not support a strong sense of community.



11. Siding and many of the exterior finishes appear to be near the end of their useful life. The underlying construction is of poor quality and vulnerable to deterioration and should be replaced in the near future as indicated in recent reports.



12. Roofs, eaves, soffits and trim are all in relatively poor condition. Their construction is similar to Seabeds, which suffered damage from ice dams in 2015 requiring \$1.6 million dollars in emergency repair funding. The current estimate to repair Captain Robert Cook construction defects is \$1.1 million.

INTERIOR EXISTING CONDITIONS IN PICTURES - CAPT. COOK DRIVE



1. First floor living spaces are relatively open, which begins to make up for their relatively small size. Each apartment has laundry hook-ups in the vicinity of the kitchen.



2. The openness of the living areas allows multiple furnishing options depending on the needs of individual families. This is particularly true in the four bedroom apartments pictured here.



3. Many of the apartments are on two floors with bedrooms upstairs and living spaces downstairs. The second floor is accessed by fairly narrow stairs that tend to be dark.



4. Bedrooms are accessed off a landing. Apartments range from 2 to 4 bedrooms. A 4-bedroom second floor apartment is illustrated here.



5. Bedrooms are adequately sized with fairly large closets and generous windows. Many are large enough for two children with typical furnishings.



6. Bathrooms need upgrading. Some first floor bathrooms are accessible although they do not meet all MAAB requirements. Second floor bathrooms are relatively small.

DEVELOPMENT NARRATIVE - SEABEDS WAY

SEABEDS WAY

Financing:	Federal
Zoning:	Single Family Residence B; Chapter 40B permitting
Density:	4.5 Acres site: 10.2 units per acre
Site:	Adequate parking and open space, sloping topography
Residents:	Mixed elderly, disabled singles
Buildings:	Four @ two stories, double loaded corridors
Construction:	Wood framing on concrete slab on grade
Apartments:	46 one bedroom apartments @ approx. 540 SF
Access:	1st floors visitable; 2nd floor by stairs; apartments not MAAB compliant
Common:	Laundry and small lobby each floor; Community Room
Amenities:	Private terraces and balconies
Parking:	Parking along entry drive and at turnaround

Development History:

Built in 1982, Seabeds was not renovated until ice damming and water infiltration in 2015 required roof and siding replacement and very significant interior repairs costing over \$1.5 million. The entry drive was repaved in 2018 with new precast concrete curbing added. Apartments and common spaces have not been improved beyond repairs done in 2015. Additional site improvements are desirable. Although Seabeds and Captain Robert Cook share a single site and were developed by the same architects at the same time they are separate in terms of access, character, and location on the site.

Site Layout:

Seabeds four buildings are virtually identical with the exception of one building with a small community center added on. They are oriented perpendicular to a relatively wide entry drive – Seabeds Way - that is a spur off of Captain Robert Cook drive. Seabeds Way terminates in a large swath of asphalt that functions as both a turnaround and a parking area. It appears to be used inefficiently – with more paving than is necessary to accommodate cars and parking. Five drives occupy the spaces between the four

buildings and the spaces on either side of each end building. Although these drives provide access for emergency vehicles and small storage buildings at the end of two of the drives, they appear to provide more paving than might actually be required for the functioning of the development. Dumpsters are located in prominent locations on site and are not screened from view.

Buildings are close to, but not at grade. A series of ramps have been added to building entries to provide accessibility. Most have been repaired but are in poor condition and could perhaps be eliminated if the site were regraded with less than a 1:20 slope up to entries. Every ground floor apartment has a terrace, which appear to be well used. Some have ramps, again in poor condition, for accessibility. Sidewalks and curbs are provided in some areas but not others.

The site is surrounded on the east, south and west with dense tree coverage and sloping topography that rises up steeply to the south and west, and down steeply to the west. With a few trees near building entries, and planting between buildings and provided on resident porches, the site has a verdant quality.

Towards the north a grassy berm rises up about eight feet, and then drops down approximately 18 feet to the Captain Robert Cook development. The berm appears to be a landscape feature designed to screen the two developments from one another. It may also have been built so that excavated soil did not have to be brought off site because of cost. If redevelopment requires soil to be brought off site it should be tested for any contamination that could lead to significant disposal costs.

The site has a pleasant quality overall, with the surrounding trees and open space being a major asset. Although there are benches scattered throughout the site, it has not been developed to provide gathering places that could help facilitate a sense of community and bring residents, many who live alone, together. Much of the open space has a leftover quality to it, too close to apartments to be usable but not sheltered enough to feel like an extension of indoor space. Although the site layout is very different from most of Needham where most of the housing is single or two family, the development is not visible from public ways and is never seen in contrast with smaller scale houses.

Building Character and Layout:

Although these are simple pitched roof buildings, the massing is articulated with projecting closets and balconies on either side and shed roofed bays at entries, common areas, and at the community center. They have a pleasant contemporary character that acknowledges New England vernacular architecture – now wrapped in new vinyl siding. Although the vinyl that replaced the original fiber cement siding in 2015 may not have the life span of brick, Seabeds does not immediately suggest “public housing” the way that brick clad buildings like those at the Chambers Street development often do. Buildings have a stair at each end and a double loaded corridor. There is a small two story

common area at one end and laundries on both floors.

Second floor lounges overlook the first floor common areas. These areas do not appear to be used very often by residents. Kitchens and baths line the corridor with chase space between bathrooms and hallways. This organization helps buffer apartments from sounds in hallways.

Apartment Layouts:

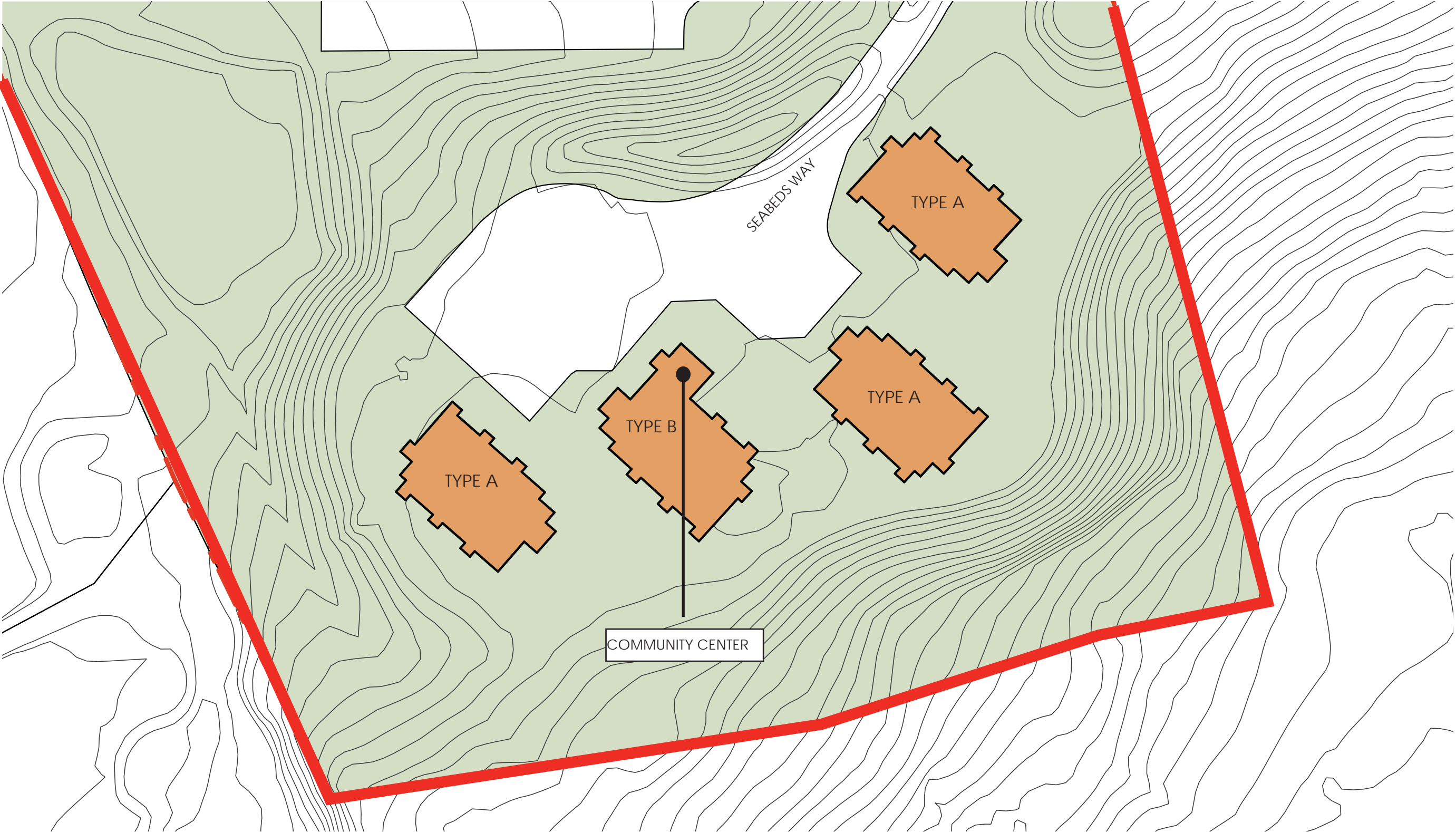
The one bedroom apartments are all virtually identical. At 540 square feet they are smaller than the 600 SF typical of today’s one bedroom affordable apartments, but are efficiently and effectively laid out. Bathrooms are accessed off of bedrooms, which is awkward if there are guests. Kitchens and baths are large in relation to bedroom and living room sizes – although they do not meet all accessibility requirements the space to meet MAAB/ADA is adequate.

Because apartments are small by contemporary standards there are limited furnishing options for the remaining spaces. Each apartment has 3 closets – which are adequate in size but not generous. Each apartment has an outdoor space – a terrace on the ground floor, a balcony on the second floor, which add usable space during summer months.

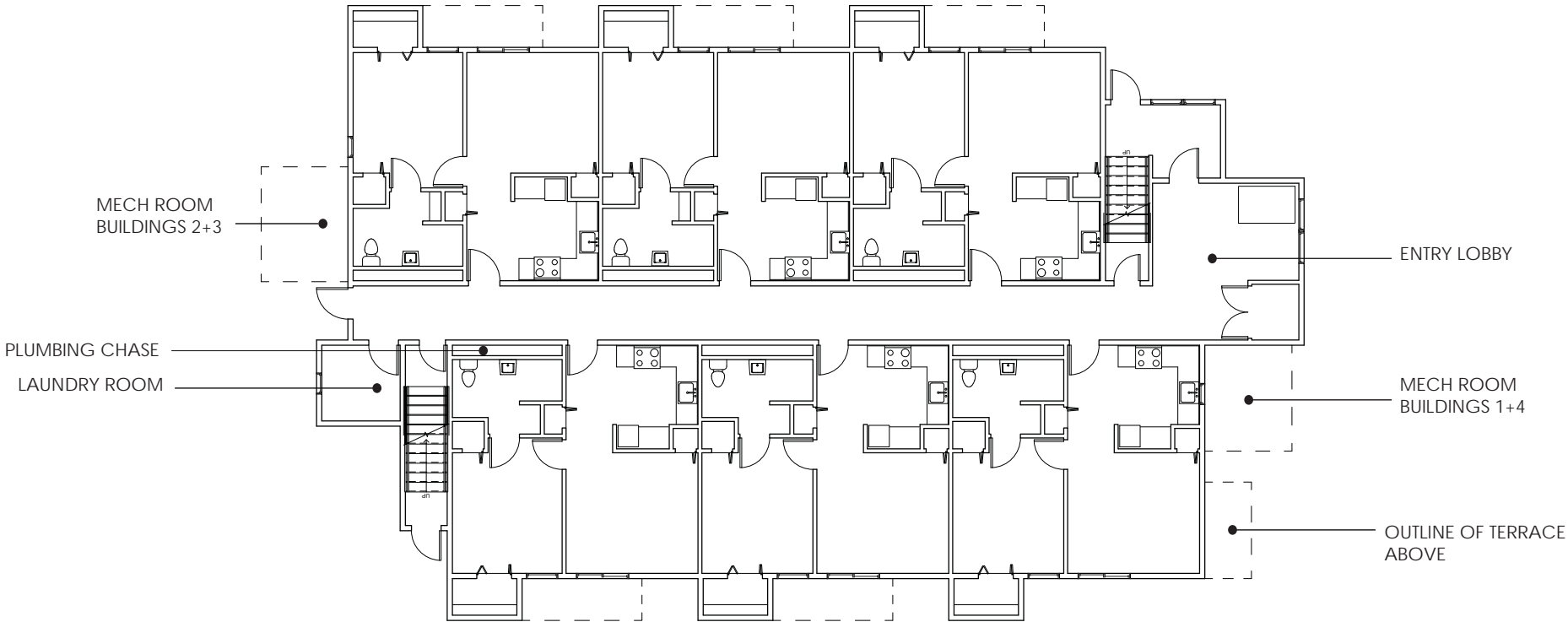
Design Challenges:

Because there is no elevator in any of the four buildings the second floors are not accessible. First floors are visitable with ramped access to each building, but bathrooms and kitchens do not meet MAAB requirements. There is a laundry and lounge on each floor so that first floor residents do not need to access the second floor. Nevertheless, the inaccessible second floors do not promote contemporary standards for “aging-in-place” that tends to suggest larger buildings with elevators.

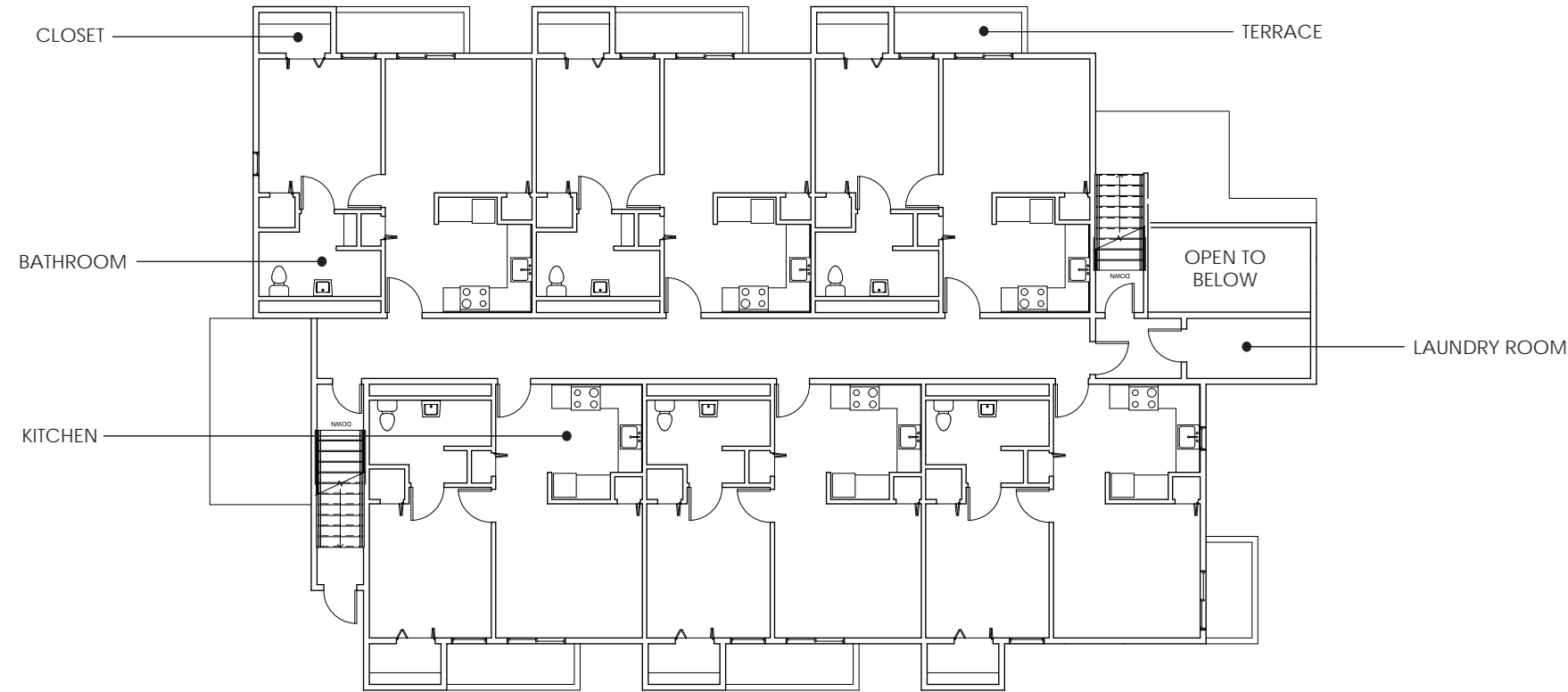




BUILDING PLANS - SEABEDS WAY BUILDING TYPE A



FIRST FLOOR PLAN

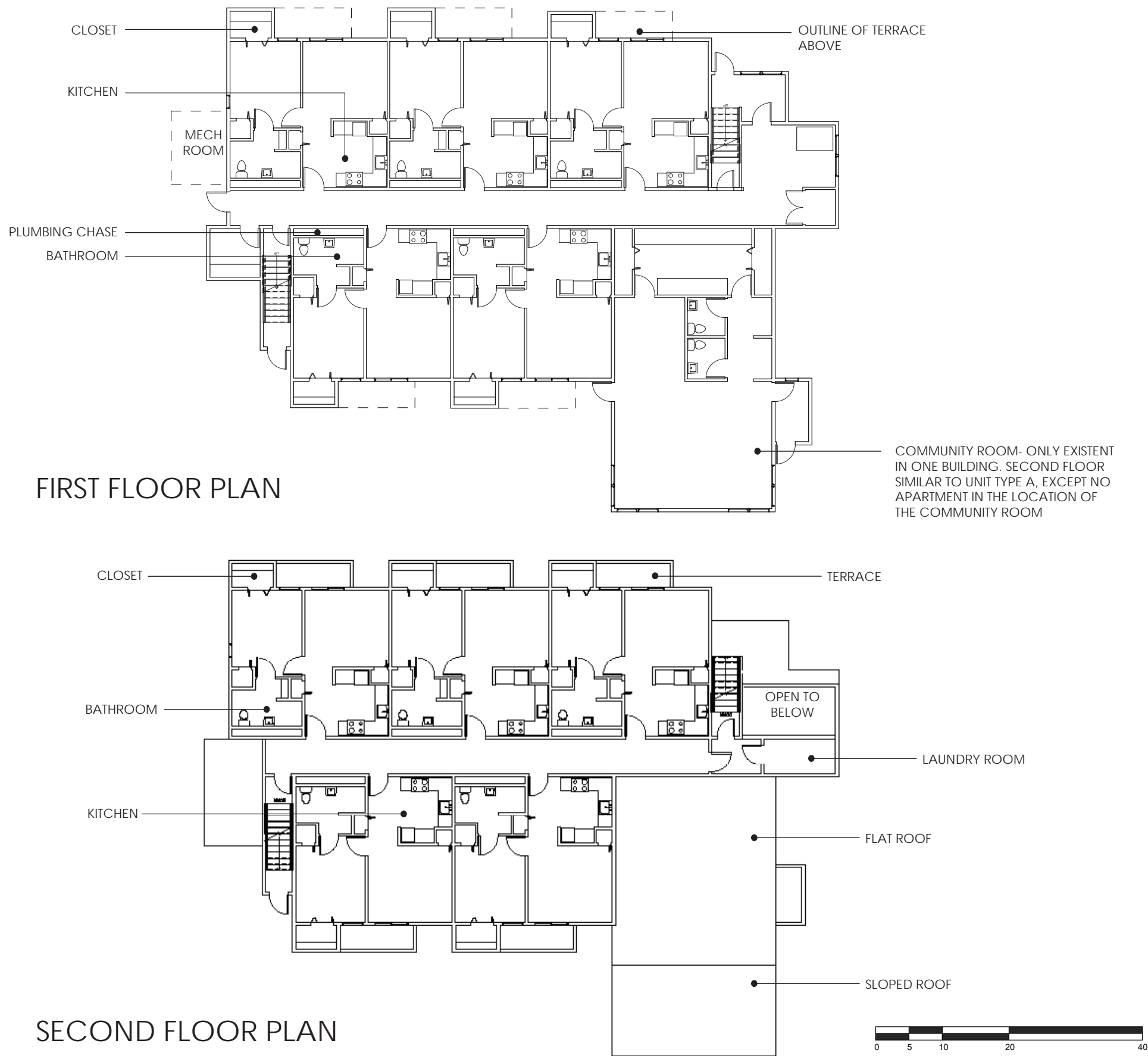


SECOND FLOOR PLAN



BUILDING:	Seabeds Way Building Unit Type A
UNIT TYPES:	One bedroom apartments - 580 SF
NO. OF FLOORS:	Two floors, 6 apartments per floor
NO. OF BUILDINGS:	3 identical buildings; fourth building has 10 apartments and a community room
COMMON SPACE:	Laundry and lobby/lounge on each floor
ENTRIES:	Double loaded corridor with doors and stairs at each end
WINDOWS:	Double hung window in bedroom, sliding glass door in living room
LIVING ROOM:	Small living room, and small bedroom
BATHROOM:	Oversize bathrooms approach MAAB requirements
KITCHEN:	U-shaped kitchen is relatively generous
STORAGE:	Coat, broom, linen and bedroom closets
EXTERIOR:	First floor terrace and second floor balcony for each apartment
CONSTRUCTION:	2 X 4 wood frame with vinyl siding, batt insulation, slab on grade
ACCESSIBILITY:	Ramp access to common hallways
UTILITY ROOMS:	Two utility rooms serve 4 buildings
LAUNDRY:	Laundry on each floor
HVAC:	Gas fired boilers in utility rooms, fin tube radiators in apartments, AC by tenant in sleeves

BUILDING PLANS - SEABEDS WAY BUILDING TYPE B



BUILDING:	Seabeds Way Unit Type B -
UNIT TYPES:	1 bedroom apartments at 580 sq ft.
NO. OF FLOORS:	2 floors, 5 apartments per floor
NO. OF BUILDINGS:	1 building; 3 other buildings have 12 apartments and no community room
COMMON SPACE:	Laundry on first floor, small lobby at entry; community room for Seabed
ENTRIES:	Double loaded corridor with doors and stairs at each end
WINDOWS:	Double hung windows
LIVING SPACES:	Small living room, and small bedroom
BATHROOM:	Oversize bathrooms in flats approach MAAB requirements
KITCHEN:	U-shaped kitchen is relatively generous
STORAGE:	Coat, broom, linen and bedroom closets
EXTERIOR:	First floor terrace and second floor balcony for each apartment
CONSTRUCTION:	2 X 4 wood frame with vinyl siding, batt insulation, slab on grade
ACCESSIBILITY:	Ramp access to common hallways
UTILITY ROOMS:	Buildings 2 and 4
LAUNDRY:	Laundry on each floor
HVAC:	Gas fired boilers in utility rooms, fin tube radiators in apartments, AC by tenant in sleeves

EXISTING CONDITIONS IN PICTURES - SEABEDS WAY



1. Seabeds is entered off of a tree lined curving spur road near the entry to Captain Robert Cook. Paving and curbs have been replaced and accessible curbs provided in this area. The road rises up with a berm between Seabeds and Robert Cook on the right.



2. 46 one bedroom apartments are in 4 parallel buildings with open space in between. Benches, tables and other site elements seem to be scattered on the site without defining semi-public spaces for community use. Dumpsters and other utility elements are not screened from view.



3. Asphalt roads are wide and paved areas used inefficiently for parking; a reorganization of these areas should be considered to provide more parking with less asphalt.



4. Apartments line both sides of a double loaded corridor; all residents have either a balcony or terrace.



5. Apartments between buildings have asphalt drives that dead end into hillsides. They facilitate emergency vehicle access and accessibility, but add to the amount of paving on the site.



6. The development is surrounded by open space and tree covered hillsides to the south that offer a sense of seclusion to the residents, but are underutilized as enhancements for livability and community use.



7. To the northwest the land slopes down, and is covered with vegetation that obscures neighboring properties.



8. Seabeds to the right is approximately ten feet above Captain Robert Cook to the left with a berm between them - rising up another eight feet.



9. Community space occupies the end of one of Building Type B, offering a meeting room and kitchen facilities.



10. Ramps provide accessibility to some building entries and terraces. Many have been patched but are still in poor condition. Some could be eliminated with regrading of the site, making it more attractive and lowering maintenance costs.



11. Residents appear to enjoy terraces and balconies, personalizing them with planting, furniture and decorative elements.



12. Roofing, siding, soffits and trim were replaced in 2015 along with underlying sheathing. The envelopes are in reasonably good condition.

INTERIOR EXISTING CONDITIONS IN PICTURES - SEABEDS WAY



1. Two story lobby and lounge areas are located inside the front entrance of each building. They tend not to be used and do not offer many amenities.



2. Apartments are off of double loaded corridors with handrails that recognize the needs of the elderly. They are will lit with natural light coming in from the end.



3. Kitchens are adequately sized, but dated. They are separated from the living and dining areas by a wall with a pass through that limits furnishing options such as an eat in kitchen.



4. Living and dining areas are adequately sized and open onto a balcony on the second floor or a terrace on the first. There is enough room for eating and living areas.



5. Bedrooms are reasonably sized with relatively generous closet space on interior and exterior walls. Each bedroom has one window.



6. Bathrooms are dated but larger than minimal size. They do not have natural light and back up to the central corridor. Expansion of bathrooms to meet MAAB requirements would be difficult. Apartments do not have laundry hook-ups; there is a common laundry room on each floor.

DEVELOPMENT NARRATIVE - LINDEN STREET

LINDEN STREET

Financing:	State Chapter 667
Zoning:	Single Residence A, General Residence
Density:	3.5 Acres; 20.5 units per acre
Site:	Buildings tightly packed, inadequate parking, fragmented open space
Residents:	Mixed elderly, disabled singles
Buildings:	18 one-story buildings, 4 apts. per building; two utility buildings
Construction:	Wood framing with brick veneer on slab on grade
Apartments:	72 studio apartments, 405 SF each
Access:	Apartments are not visitable or compliant with MAAB
Common:	Two small utility buildings, 8 laundries (4 in use) and 8 mechanical rooms within 8 buildings
Amenities:	Stoops front and back
Parking:	54 spaces in the central lot - deemed inadequate

Development History:

Built in two phases between 1959 and 1962, repairs have been made over the years and buildings are in adequate condition. Roofs and boilers were replaced in 2018. The low density, out-of-character appearance and aging materials and systems have led to a town-wide perception that replacement is advisable – possibly in conjunction with Chambers Street redevelopment.

Site Layout:

The site layout deviates in substantial ways from typical neighborhood site design, and from typical public housing. It appears to be modeled on post war retirement communities in southern California where bungalow-style buildings alternate with green spaces to create a pedestrian oriented environment. At Linden Street 18 long, low buildings alternate between being parallel and perpendicular, forming a “basket weave” patterns with green spaces between buildings. This open space is too close to apartments to feel fully public, but isn’t associated sufficiently with individual apartments

to create yards associated with individual apartments. The low density, out-of-character appearance and aging materials and systems have led to a perception by some in the Needham community that replacement is advisable.

There is one parking lot accessed from Linden Street near the center of the development. Offering 54 spaces for 72 apartments it has been noted as providing insufficient parking. It is in relatively poor condition. No overnight parking is allowed on the street. A series of asphalt walkways weave throughout the development providing access to front doors of each unit. The housing seems disassociated from the surrounding neighborhood, although the designer’s goal was clearly to make a separate neighborhood with its own spatial structure.

Across Linden Street to the west is the High Rock School. It is set back from the street with playing fields on front. To the west is a dense linear stand of trees 100+ feet wide separating Linden Street housing from single family houses along Maple Street. Even during the winter visibility from one development to the other is minimal. To the south is the NHA’s Chambers Street development, to which Linden Street is connected by pedestrian walkways, and the shared use of a community center building. To the north is a single family house behind a dense stand of trees. Individual trees are located through the open spaces giving the entire development a pleasant quality. Green spaces are relatively well maintained.

Eight of the buildings have laundry rooms and mechanical rooms located in the center of each of the buildings, although only 4 laundries are in use. Trash barrels are clustered through the development, often near the laundry rooms and associated clothes lines, and are not screened from view. Overall the development has no center or focused gathering areas that would support a sense of community. Benches seem scattered and the potential to develop shared common areas near laundry rooms or elsewhere has not been developed - which would realize the potential of this development’s original layout. Two small utility buildings are located on the north side of the site.

Although the development is close to the Chestnut Street commercial area it is cut off from it by railroad tracks and the Maple Street homes development. Residents have to go north to Oaks Street or South to High Rock Street to access Chestnut Street for shopping or the community services - nearly 3/4 of a mile away.

Building Layout and Character:

Buildings are one story with low roofs sloping down in the long direction, and close to grade. They are predominately brick with wood infill above windows. Wood eaves project almost four feet beyond the building fronts on both sides supported by 5 wood and steel columns. The roof projections suggest porches, although every apartment is accessed by a small concrete stoop with several concrete steps, not by a porch. The stoops are too small to serve as porches and are cut off by handrails and their elevated position from the covered areas on each side in a somewhat odd juxtaposition of familiar architectural features.

Some of the covered areas have plantings and a few have chairs. A few buildings do not have stoops and steps but do have a step up at the front door so that none of the apartments are accessible or visitable creating challenges for elderly residents.

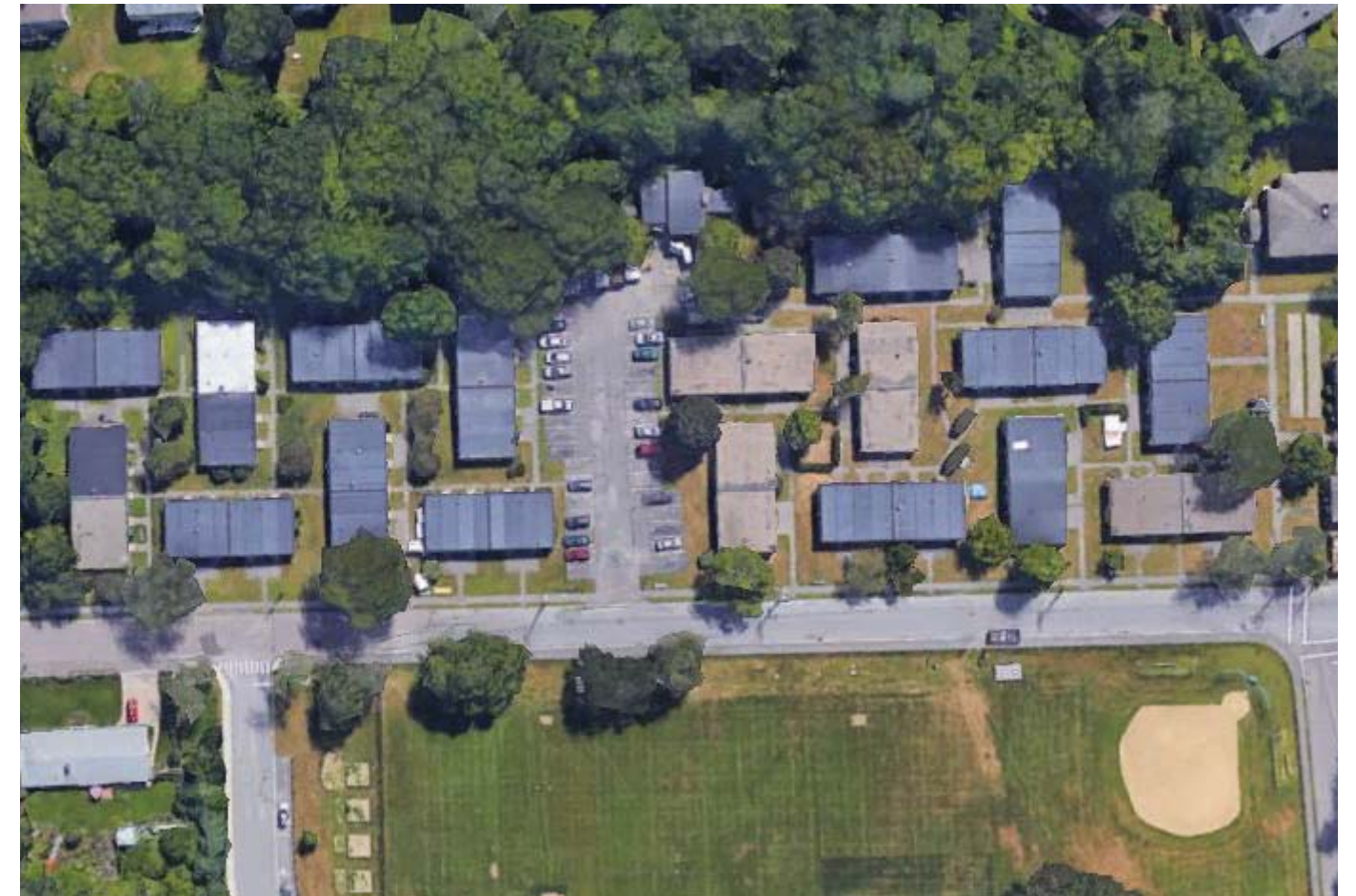
Although the red brick appears to be in good condition it is an unusual material in Needham where most houses are predominately wood. Along with the out-of-character site layout and the long low congregate buildings, Linden Street is likely to be perceived as public housing. In their small scale, pitched roofs, and conventional forms and materials used in unconventional ways, they do acknowledge the small scale suburban character of most of Needham adapted for affordable housing, and may be less out of context than other types of public housing.

Each building has four apartments that extend from front to back. Backs are nearly identical to fronts but without walks to main walkways. There is little to distinguish one apartment from the next, one building from the next, or one open spaces from the next, although some residents have taken modest steps to personalize their outdoor spaces. The lack of articulation of the laundry rooms and rear yards is a lost opportunity to create variety, suggest a shared public realm, and create semi private outdoor spaces for residents whose small apartments provide few amenities.

Apartment Layouts:

Apartments are all studios, and at 405 square feet are small by contemporary standards. Each one has an open living/dining/bedroom with a 6 foot tall storage unit that is used to divide the space in half. With windows and doors at both the front and back, and with windows in the kitchens and bathrooms, there is a fair amount of light throughout the main and adjacent spaces. Kitchens and bathroom are quite small – and do not come close to meeting accessibility requirements, nor is there enough space in the apartments to renovate them to meet these requirements. A single walk in closet is small and is supplemented by the storage units.

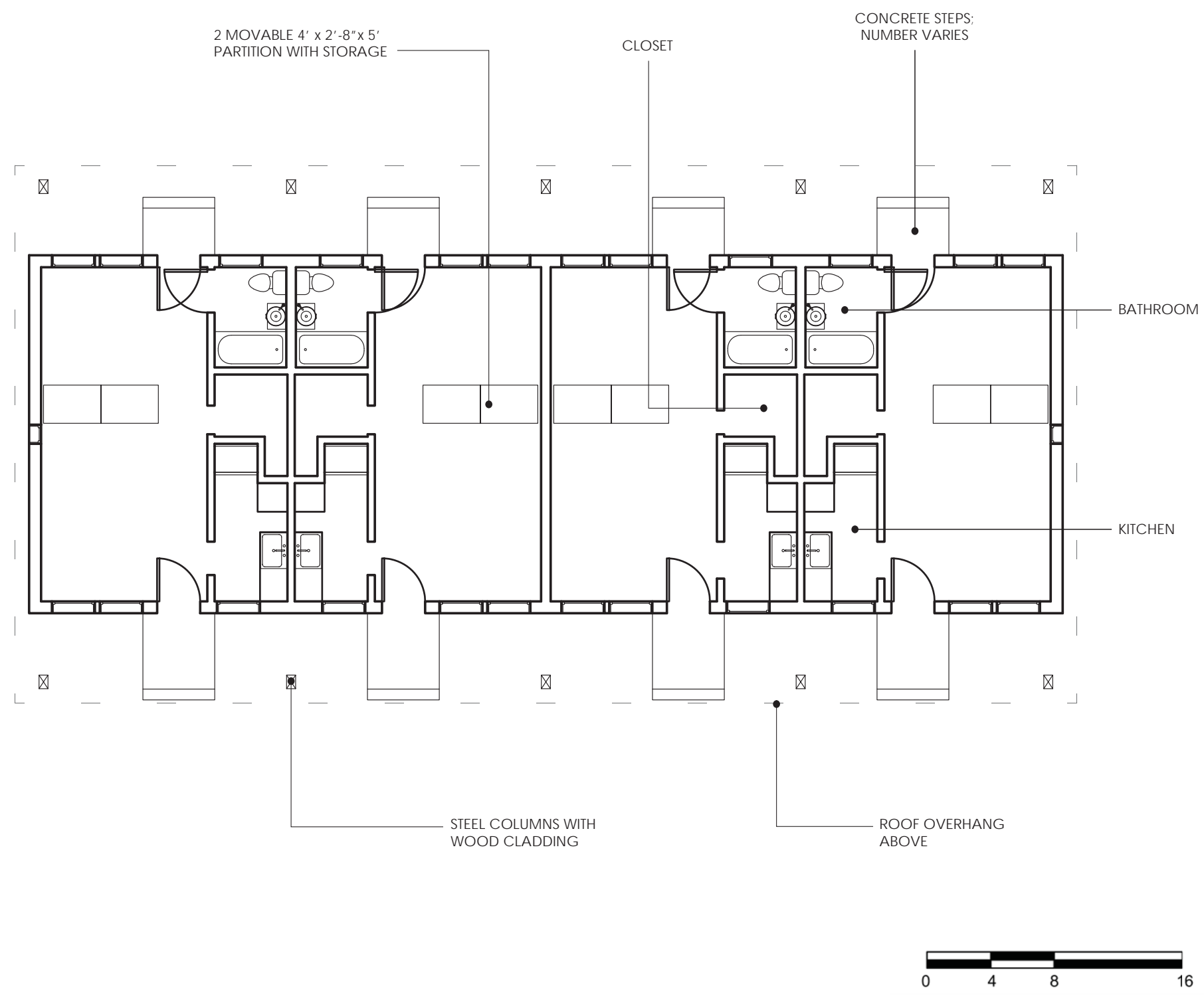
When the Linden Street development was built its site layout, building layouts and apartment design were probably seen as being innovative in the way that they provide intimately scaled living tied to the surrounding landscape at a modest cost. In general they do not seem to be perceived in this kind of a positive light today, although a significant modernization effort could build on the development's attributes.



TOPOGRAPHIC SITE PLAN - LINDEN STREET DEVELOPMENT

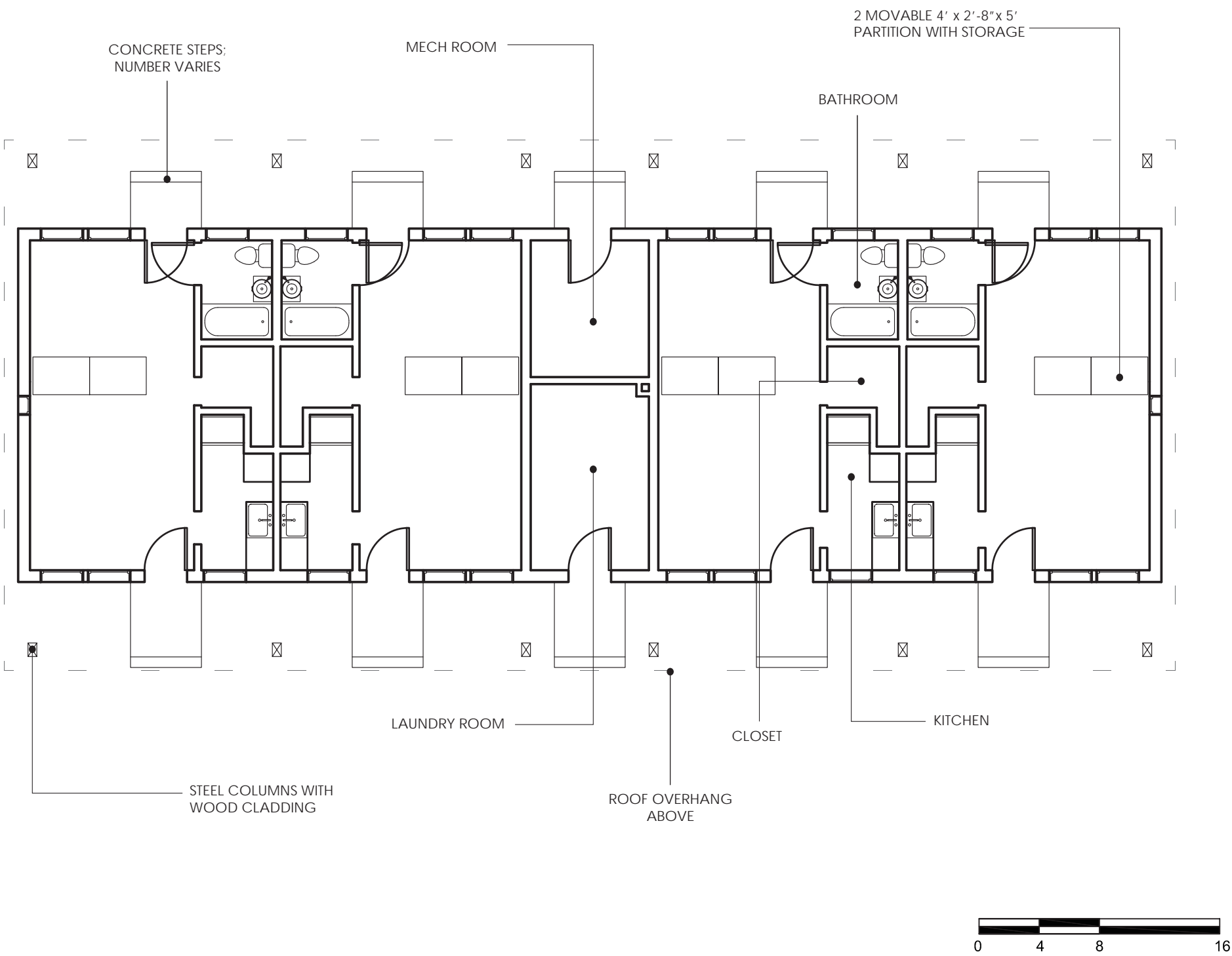


BUILDING PLANS - LINDEN STREET BUILDING TYPE A



BUILDING:	Linden Street Type A
UNIT TYPES:	Studio apartments at 405 SF
NO. OF FLOORS:	One floor, 4 apartments per floor
NO. OF BUILDINGS:	10 (plan B is similar but includes mechanical room and laundry)
COMMON SPACE:	None
ENTRIES:	Through units with doors front and back
WINDOWS:	Window front and back and in bathroom and kitchen
LIVING ROOM:	Open space with rolling storage unit dividers
BATHROOM:	5' X 7'-minimal size, not accessible Wall hung sink and bathtub
KITCHEN:	Minimal galley kitchen, non-accessible
STORAGE:	One walk-in closet and rolling storage
EXTERIOR:	Non-accessible entry stoops over continuous overhang
CONSTRUCTION:	2X4 wood frame w/ partial brick cladding, batt insulation. Slab on grade.
ACCESSIBILITY:	Apartments are not accessible
UTILITY ROOMS:	Located in 8 Type B buildings
LAUNDRY:	Space allocated in 8 Type B buildings; 4 in operation
HVAC:	8 gas fired boilers serving multiple buildings installed in 2018, radiators in units, window AC by residents

BUILDING PLANS - LINDEN STREET BUILDING TYPE B



BUILDING:	Linden Street Type B
UNIT TYPES:	Studio apartments at 405 SF
NO. OF FLOORS:	One floor, 4 apartments per floor
NO. OF BUILDINGS:	8 (plan A is similar but does not include mechanical room & laundry)
COMMON SPACE:	Mechanical room and laundry room accessed from exterior
ENTRIES:	Through units with doors front and back
WINDOWS:	Window front and back and in bathroom and kitchen
LIVING ROOM:	Open space with rolling storage unit dividers
BATHROOM:	5' X 7'-minimal size, not accessible. Wall hung sink and bathtub
KITCHEN:	Minimal galley kitchen, non-accessible
STORAGE:	One walk-in closet and rolling storage
EXTERIOR:	Non-accessible entry stoops over continuous overhang
CONSTRUCTION:	2 X 4 wood frame with partial brick cladding
ACCESSIBILITY:	No accessibility
UTILITY ROOMS:	Space allocated in 8 Type B buildings; 4 in operation
LAUNDRY:	Serves Type A and B buildings
HVAC:	8 gas fired boilers serving multiple buildings installed in 2018, radiators in units, window AC by residents

EXISTING CONDITIONS IN PICTURES - LINDEN STREET



1. Low one story brick and wood buildings line Linden Street Across the street are the playing fields for the High Rock School, with the school itself set back from the street. Linden St. is not a major thoroughfare, but traffic picks up at the beginning and end of the school day.



2. Half the buildings are oriented parallel to the street and half are oriented at 90 degrees, forming a kind of basket weave pattern in the overall layout. The brick buildings have overhanging roofs on both sides supporting by steel columns clad in white painted wood.



3. The site layout creates a series of interstitial green spaces that don't feel either public or private – they have a “leftover” character. Although the overhanging roofs and columns have a porch like character, the small concrete stoops prevent the apartments from using them as porches.



4. One parking lot towards the center of the development provides all of the parking. A network of pedestrian pathways lead to apartments, some a fair distance away. Parking tends to be insufficient to meet the perceived need.



5. Overwhelmingly, apartments do not have accessible entries. Concrete stoops are several steps up from the walks in most locations. All of the 18 buildings have the same articulation and colors giving a sameness to every apartment, building and adjacent green space.



6. Some apartments have stoops at walkway level, but the first floor is still a step up so that none of the apartments are accessible or visitable (someone in a wheelchair can't visit).



7. Of the 18 buildings, 8 have laundries in a center bay. Trash barrels and close-lines are often grouped near the laundries, suggesting the possibility of developing social spaces.



8. Although the building scale, green spaces and tree-lined walkways create a pleasant scale. There is a homogeneous quality to the materials of the development with no center around which social activities could coalesce.



9. The backs of buildings are virtually identical to the fronts, but without walkways leading to back stoops. Like the building fronts, the backs do not facilitate private use for residents that could expand the space available to them.



10. Buildings are in relatively good condition. Roofs were replaced in 2018. Masonry is in good shape. Some of the wood trim and windows need to be replaced.



11. Paving is in relatively poor condition, especially in the parking areas. Walks are adequate but warrant ongoing maintenance.



12. A maintenance building at the rear of the site is the only non-residential building at the development. Linden St. residents share the community center building facing the adjacent Chambers St. development with Chambers Street residents.

INTERIOR EXISTING CONDITIONS IN PICTURES - LINDEN STREET



1. Studio apartments are small by contemporary standards with one living/dining/sleeping space with a half height storage wall defining two areas.



2. Glazing at each end of the main space brings in sufficient light and helps extend the interior to the outside. The storage walls are useful for subdividing spaces and storage but reduce the sense of openness.



3. Kitchens are cramped and in poor condition. Because of the spatial structure of the apartments, alternative layouts are unlikely to be possible.



4. A relatively large walk in closet is the only storage (besides the half height storage wall). Contemporary standards suggest separate closets for clothes and cleaning/utility supplies.



5. Both bathrooms and kitchens have windows - which is unusual for studio housing. This is made possible by the front-to-back apartment layout, in contrast to apartments that are on each side of a double loaded corridor.



6. Bathrooms are minimally sized, and like the kitchens, would be difficult or impossible to reorganize or enlarge. They are outdated in terms of finishes and fixtures.

DEVELOPMENT NARRATIVE - CHAMBERS STREET

CHAMBERS STREET

Financing:	State Chapter 667
Zoning:	Single Residence A, General Residence
Density:	4.7 Acres; 17 units per acre
Residents:	Mixed elderly, disabled singles
Buildings:	5 two-story buildings with double loaded corridors; Community Center building with attached maintenance garage
Construction:	Wood w/brick veneer, crawl space below wood framed first floor
Access:	1st floor visitable; 2nd floor by stair; not fully compliant w/ MAAB
Apartments:	80 studio apartments. 430 SF; 8 per floor
Common:	Community Center on site, laundries & decks on second floors
Amenities:	Common porches at entries
Parking:	62 parking spaces in central lots - deemed inadequate

Development History:

Built in 1971, the Chambers Street development has undergone a series of upgrades and repairs over the years and buildings and site are in relatively good condition. Roofs and boilers were replaced in 2018. The low density, out-of-character appearance and aging materials and systems have led to a town-wide perception that replacement is advisable – possibly in conjunction with Linden Street redevelopment.

Site Layout:

The Chambers Street development site layout is typical of public housing. Chambers Street is a small spur road off of Linden Street with a parking area and community center/ maintenance facility just off of Linden and five buildings beyond around a parking lot parallel to but screened from Linden Street. Four buildings flank the parking lot on either side, east and west, with their ends 30 feet apart. A fifth building to the north is tucked behind the community center to the east.

The development is surrounded by dense tree coverage to the south, east and west that

comes quite close to the buildings. To the north is the NHA's Linden Street development. Unlike the Linden Street housing, the Chambers Street housing is removed from the public streets, with the exception of the one story community center / maintenance building adjacent to Linden Street which does not have a strong street presence. There are wetlands adjacent to the development on the south and east sides, and a small stream runs in a culvert under the parking lot, daylighting at the northeast and northwest corners and at the south end of the developed area.

There are entries at either end with simple one story porches with wood columns. They are approximately 12" above grade; one porch on each building has a ramp. Trash barrels are grouped throughout the development with no screening. The community center perhaps provides a focus for the development, but in general there are no developed gatherings spaces or significant accommodation on site that might encourage people to congregate.

The real focus for Chambers Street is the parking lot, although at the south end there is a central green space beyond the end of the parking lot that could be developed further. Brick walls and asphalt dominate the perception of the development to a greater extent than at other NHA developments. The paving is in poor condition throughout. Parking spaces should be clearly marked to insure that all asphalt is being effectively used for pedestrian access, vehicular access or parking, and if not utilized, removed. 62 spaces are provided for the 80 apartments which is considered inadequate. Overnight on street parking is not allowed.

Although the development is close to the Chestnut Street commercial area it is cut off from it by railroad tracks and the Hartney Greymont property adjacent to them, so that residents have to go north to Oaks Street or South to High Rock for shopping and the community services that they may need - nearly a mile.

Only a small portion of the Chambers Street site is developed. The property stretches to the south between the High Rock Homes to the west and the railroad tracks to the east. Although the NHA owned land is narrow there are portions that are free of wetlands and relatively flat. If this land were aggregated with a portion of the High Rock Homes land there would be a significant site for additional development.

Building Layout and Character:

The buildings lack the articulation of Linden Street housing, and are more or less bland two story brick boxes with hip roofs. The porches at either end soften the character of the buildings in a modest way. They lead to stairs to the second floor and to a double loaded corridors with four studio apartments on each side on each floor. There is a center recess at each building with a balcony off of the second floor laundry and a mechanical room on the first floor serving each building. The laundry location is a challenge for those with

difficulty going up stairs. The mechanical rooms are not a particularly attractive focus for the center of each building facing the public. They now appear to be oversized after the replacement in 2018 of the boilers and water heaters, and could perhaps be re-purposed as first floor laundry areas.

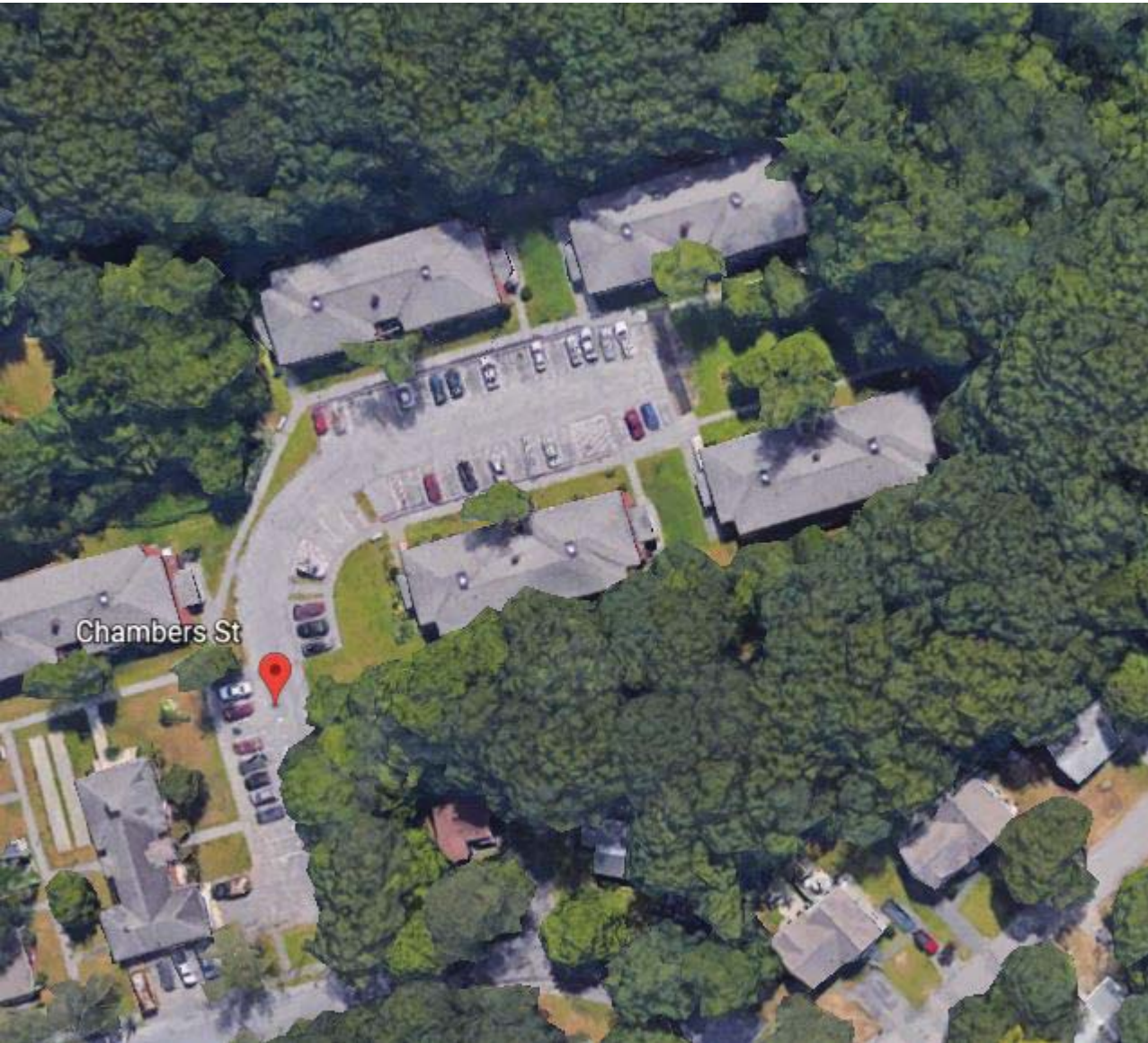
The buildings are in relatively good condition. The brick does not appear to be spalling or cracking and roofs were replaced in 2018. Windows and doors are in need of replacement. The primary flaw inherent in the building organization is that half of the apartments are only accessible by going up stairs, and everyone needs to go to the second floor to do laundry.

Apartment Layouts:

At 430 square feet the studio apartments are a bit bigger than those at Linden Street but are undersized by contemporary standards. They have fewer windows which are located just along one wall. A second door to the corridor was added at some point in time, pushing refrigerators into the living space. These doors are not required by code and are an unusual feature that detracts from the usability of the space.

The 5' x 7' bathroom is minimal in size and the kitchens are a single run along one wall with the refrigerator displaced in an awkward way because of the added door. A single 2' x 7' closet provides limited storage space, supplemented by movable six foot tall storage units. Apartments are generally in good condition.

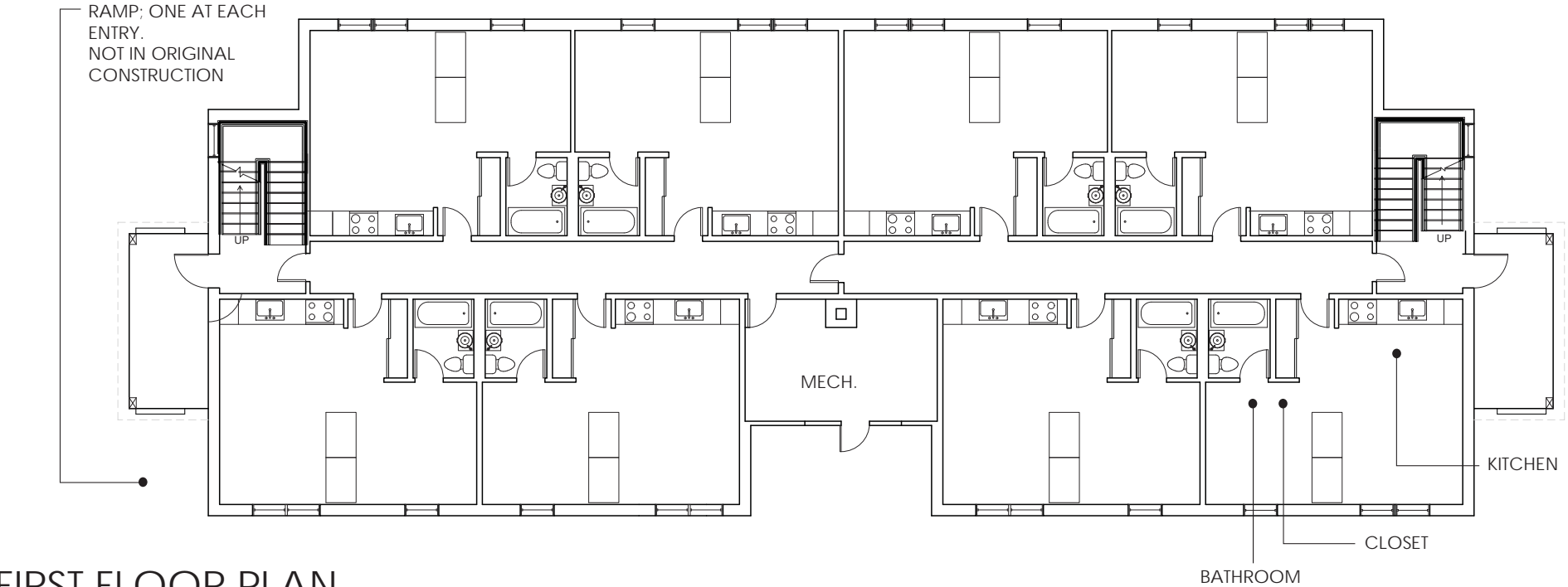
The remainder of the apartment is a single 11'-6" x 23'-3" open space large enough for various furnishing options. The movable storage units allow this space to be divided into two use areas with a modest amount of privacy between them. Some residents appreciate this option; others do not. Unlike the partial height storage units at the Linden Street development these can be pushed to the side to open the space up.



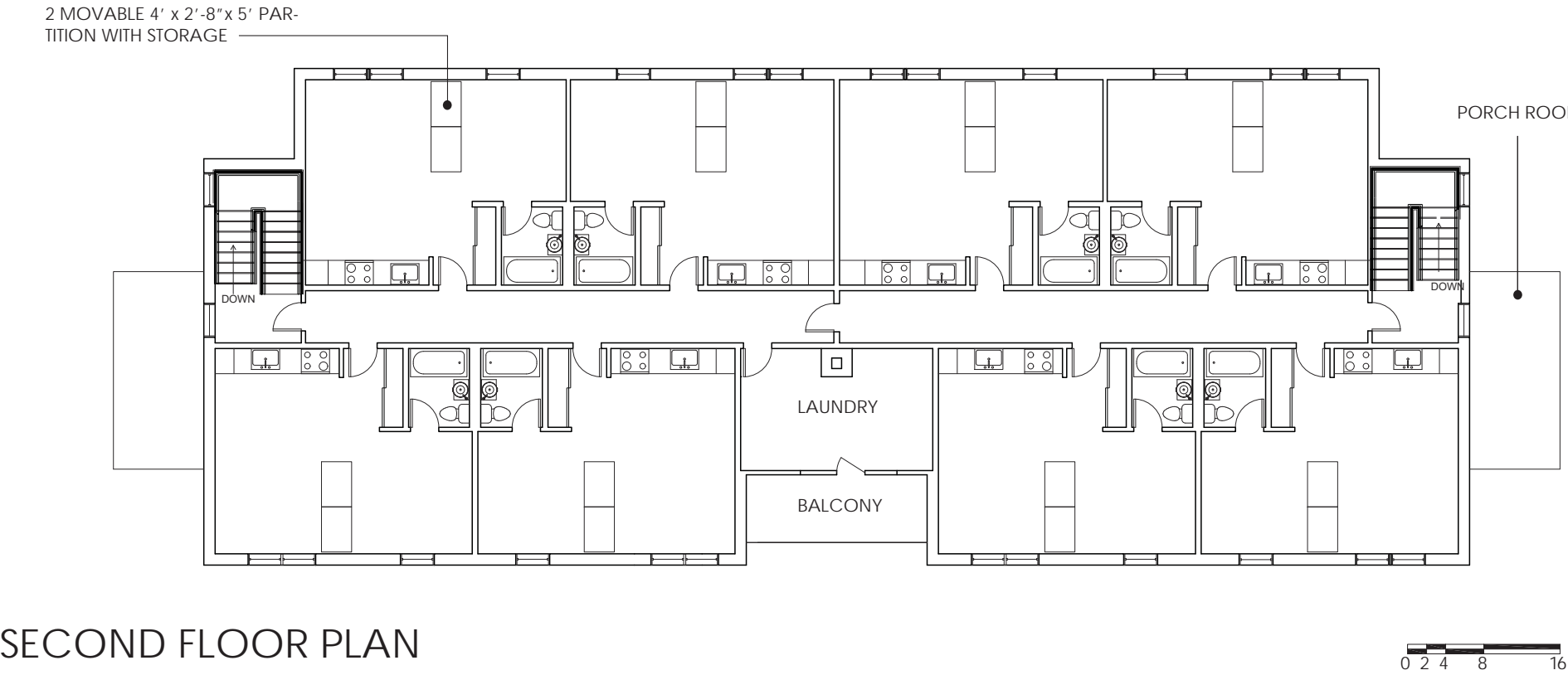
TOPOGRAPHIC SITE PLAN - CHAMBERS STREET DEVELOPMENT



BUILDING PLANS - CHAMBERS STREET BUILDING TYPE



FIRST FLOOR PLAN



SECOND FLOOR PLAN

BUILDING NAME:	Chambers Street Unit
UNIT TYPES:	Studio apartments at 430 SF
NO. OF FLOORS:	2 Floors, 8 apartments per floor.
NO. OF BUILDINGS:	5 identical buildings
COMMON SPACE:	Mechanical room on ground floor, laundry on 2nd floor (not accessible)
ENTRIES:	Double loaded corridors with stairs at each end
WINDOWS:	Double and Single Window in living space
LIVING ROOM:	Open space with rolling storage unit space dividers
BATHROOM:	5' X 7'-minimal size, not accessible. Wall hung sink and bathtub
KITCHEN:	Minimal galley kitchen, non-accessible
STORAGE:	One 2' closet & rolling storage units
EXTERIOR:	Porch at each end at shared building entries; porch at 2nd flr. laundry
CONSTRUCTION:	2 X 4 wood frame with brick cladding, batt insulation, crawl space
ACCESSIBILITY:	Ramp access to common hallways; no units meet MAAB requirements
UTILITY ROOMS:	One per building on first floor
LAUNDRY:	One per building on second floor
HVAC:	Gas fired boilers in each building installed in 2018, radiators in units, window AC by residents

EXISTING CONDITIONS IN PICTURES - CHAMBERS STREET



1. This 5 building two story development lines Chambers Street, a small spur road off Linden Street owned by the NHA. A one story maintenance and community center building is located at the corner of Linden and Chambers.



2. The spur road is a wide swath of asphalt in relatively poor condition. Parking spaces should be more clearly laid out so that the paving is used more effectively.



3. The five 16 unit buildings wrap a central parking lot. The facades are relatively bland with entries on both ends of each building. A second floor balcony at the center of each building is entered off of the second floor laundry room.



4. Entries on each end are similar- several steps up with a porch roof and railings. One entry at each building has a ramp up from grade that was not part of the original construction.



5. Three sides of the development are wrapped by dense woods. To the north, the ground slopes up to abandoned railroad tracks. To the south, (shown here) the ground slopes down to a wet area.



6. The entire site is relatively low and adjacent to the wetlands. Running water is culverted under the development, daylighting in three locations.



7. The Chambers Street and Linden Street developments are adjacent to one another, sharing walkways and the community center building. All apartments are studios, although the Chambers Street apartments are slightly larger than the Linden Street apartments.



8. Although there are a few benches and a fair amount of green spaces, there are a few other site amenities, or featured spaces that could attract residents. The parking lot and drive take up most of the open space, although there is a grassy lawn just beyond the end of the parking lot.



9. Mechanical rooms in each building on the first floor beneath the laundries face the central parking area and tend to be unattractive. The new boilers and water heaters are smaller than the originals, leaving extra space in these rooms, which perhaps could be re-purposed as first floor laundry areas.



10. Trash is handled with groups of trash barrels that are scattered around the site. They are not screened or associated with other site features.



11. The Chambers Street development is flanked by the Linden Street development on one side, and the High Rock development on the other- around the bend in Linden Street.



12. Paving is in poor condition, and the site is undeveloped in terms of offering resident amenities. The surrounding trees and topography shelter the Chambers Street buildings from the surrounding neighborhood. Recent paving has improved some areas.

INTERIOR EXISTING CONDITIONS IN PICTURES - CHAMBERS STREET



1. Each end of the building has an entry space and an attractive stair that feels welcoming, if not accessible.



2. Laundry rooms are large and open out to a balcony but are on the second floors. Potentially, laundries could be located on the first floors carved out of the mechanical rooms.



3. Apartments are off of double located corridors with light coming in from windows at the end. Handrails line one side.



4. Kitchens are adequately sized but need updating. They are open to the main living space of the apartment.



5. Living/Dining/Sleeping areas are in one open space, with a movable storage unit used to subdivide it into separate areas at the discretion of residents.



Bathrooms are minimally sized and are out of date. Expansion would be difficult.

DEVELOPMENT NARRATIVE - HIGH ROCK ESTATES & HOMES

HIGH ROCK ESTATES & HIGH ROCK HOMES

Financing:	State Chapter 200 funding later federalized by NHA
Zoning:	Rezoned from Single Residence B to General Residence
Density:	25 Acres; Originally 3.2 units per acre, now 4 units per acre
Site:	Houses along private streets on steeply sloping topography
Residents:	Families
Buildings:	Free standing houses <ul style="list-style-type: none">- 60 original rental single family houses (High Rock Estates)- 20 recent duplexes w/ 1 rental / 1 ownership unit (High Rock Homes)
Access:	Each unit is accessed by steps; not visitable or accessible
Common:	Streets - several are private ways owned by the NHA
Amenities:	Yards associated with each building
Parking:	Each home has a driveway

Development History:

High Rock Estates - In 1948, 80 small single family homes were built on 10,000 square foot lots lining private streets on this hillside site. Houses are small and in adequate condition.

High Rock Homes - in a 2009 redevelopment project 20 single family homes were replaced with two-family duplex buildings. Additional replacements are being considered contingent on funding.

Site Layout:

The original High Rock Estates houses were built on a topographically active site with steeply rising hills and protruding ledge in places. Some of the homes are up to 8' above the street, accessed by steps. Most are much closer to the surrounding grade. The entire site and surrounding area, where not cleared for homes and streets, is covered with dense mature trees.

A series of private streets owned by the NHA wind through the site: Yurick Road, Murphy road, Summit Road, Memorial Circle, Fairview Road and Sylvan Road. Neither the street design nor home construction suggest public housing – they are similar to starter home neighborhoods in many communities. One side of Linden Street has curbs and a sidewalk; other streets do not. Every home has a driveway extending 25' to 40' into the yard.

In 2009 20 of the original one story single family High rock Estates homes were replaced with 20 new two family homes that are two stories and have front porches and exterior storage (High Rock Homes). The new buildings are scattered throughout the site, sometimes clustered, sometimes not. They are larger in scale but stay within the original lots lines.

The original density of the High Rock site is a little less dense than surrounding neighborhoods, altered by the replacement with duplexes. Both the original layout and the new duplex homes are within the area's base zoning. The development is accessible to the Chestnut Street commercial district from High Rock St. that crosses over the railroad track that run along the west side of the High Rock and Chambers Street NHA developments.

Building Layout and Character:

The original one story homes have a modest character – wood siding, hip and gable roofs, and front stoops a step or two above grade, and occasionally shutters. They are in relatively good condition with some landscaping and trees along the street. Landscaping around the duplexes should be improved with trees and shrubs at a minimal cost. There has been a minimum of recent investment given the success of the replacement with duplexes that has been considered successful and will hopefully continue. If replacement were not an option, the addition of bays and porches would be useful amenities for residents that would raise the perceived value of the homes and the character of the neighborhood.

There is no common space other than streets and the sidewalks that exist, which are in adequate condition. Renters generally respect the character of their homes and yards which appear to be well maintained. Houses have a fair amount of variety in massing, roofs, windows and colors – so that they do not have a “cookie cutter” quality.

Interiors of the original home of have been relatively well maintained. They are adequately sized but far from generous. Some have had kitchens and baths replaced. They have front and back doors. The 20 new duplexes are two stories with porches and dormers that add character and outdoor space for residents. They are further off the ground making them less accessible but giving them a dignity that the original homes lack. Landscaping is minimal. Rooms are larger, there more closets, and buildings are in very good condition.

Governance Issues

All of the roads are private ways that are owned and maintained by the NHA. The NHA has an agreement with the Town of Needham for snow plowing in the winter. The combination of rental and ownership units in the 20 new duplexes provides governance challenges and makes obtaining loans difficult. The NHA anticipates that new development at High Rock that would continue the replacement of single family homes with duplexes, and that these duplexes would be rental only.

Note that drawings for the 60 remaining homes are not available. Drawings for the 20 replacement duplexes are shown on the following pages.

TOPOGRAPHIC SITE PLAN - HIGH ROCK ESTATES & HIGH ROCK HOMES



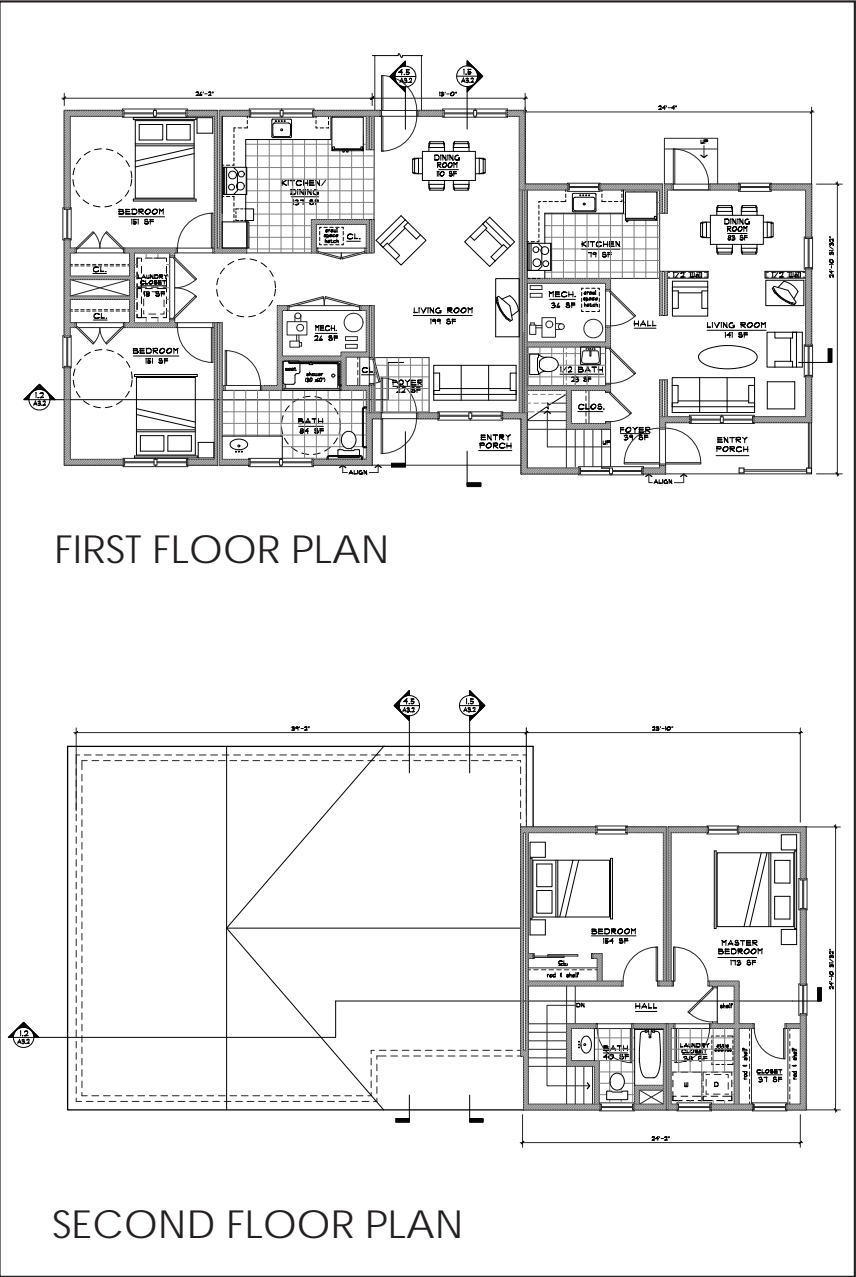
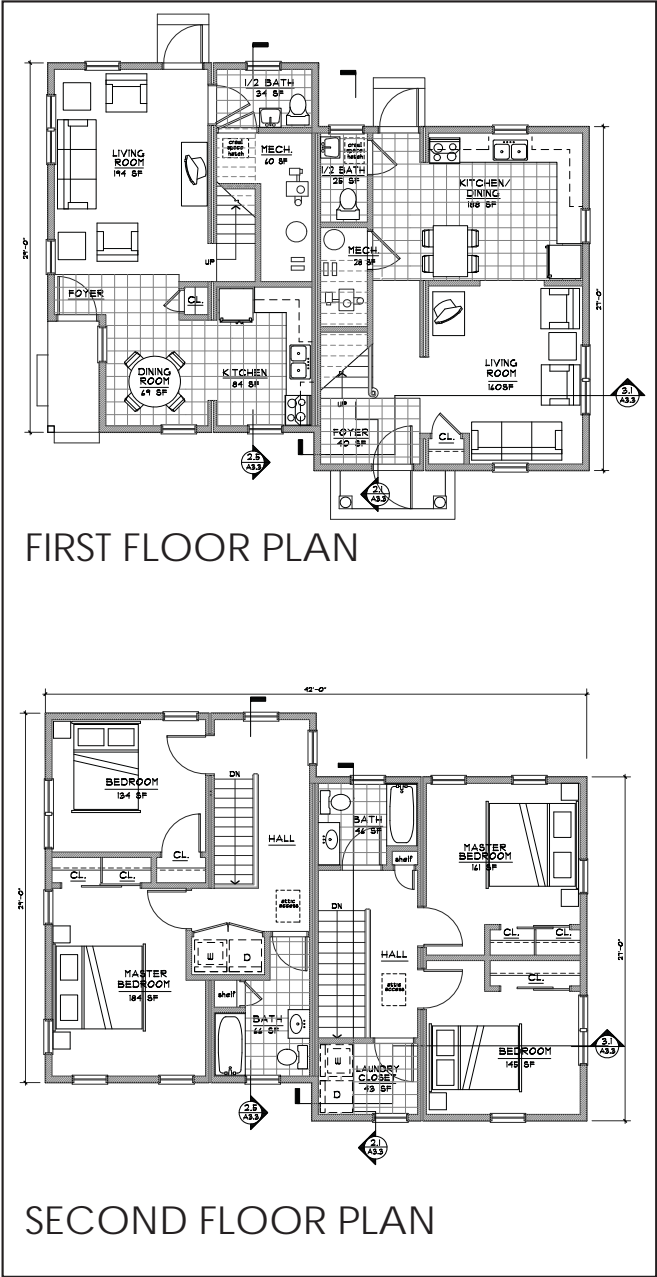
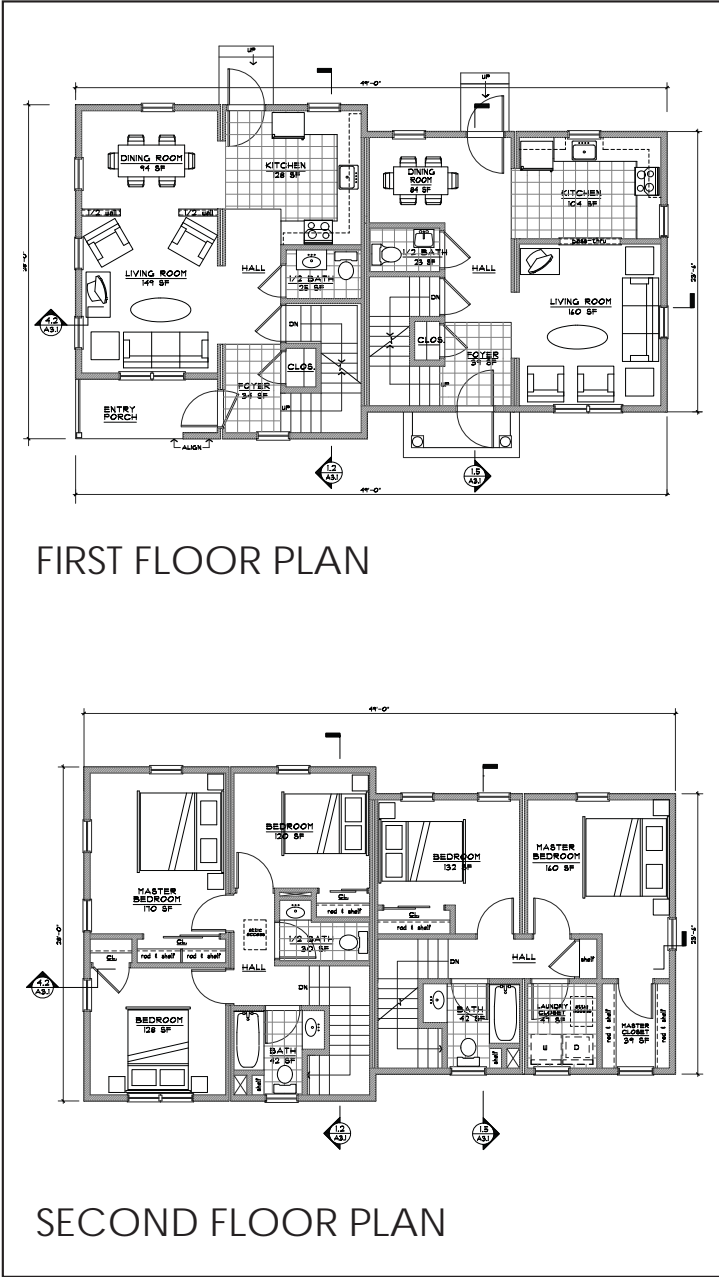
SHADING INDICATES LOTS WHERE DUPLEXES (HIGH ROCK HOMES) HAVE REPLACED SINGLE-FAMILY HOUSES (HIGH ROCK ESTATES).

UNIT TYPE A

UNIT TYPE B

UNIT TYPE C

NAME:	High Rock Estates
UNIT TYPES:	Single Family Houses. Size, plans and massing vary.
NO. OF FLOORS:	One
NO. OF BUILDINGS:	60
COMMON SPACE:	None
ENTRIES:	Front and back doors for each unit - need replacement.
WINDOWS:	Need replacement
LIVING ROOMS:	Need updating
BATHROOMS:	Need substantial improvements
KITCHENS:	Replaced 10 years ago. In relatively good condition.
STORAGE:	Closet space adequate.
EXTERIORS:	Materials and massing vary. Siding and roofing in varying conditions. Repair and replace as needed. Water infiltration a problem in some houses.
CONSTRUCTION:	2 X 4 wood frame construction on slab on grade.
ACCESSIBILITY:	No houses meet MAAB requirements. Improvements contingent on topography.
UTILITY ROOMS:	One in each house.
LAUNDRY:	Hook-ups in each house.
HVAC:	Gas fired boilers and water heaters in each house to be replaced in 2019. Window AC by tenants



PLANS ARE FOR REPLACEMENT DUPLEXES (HIGH ROCK HOMES); SINGLE FAMILY HOME PLANS (HIGH ROCK ESTATES) NOT AVAILABLE.

EXISTING CONDITIONS IN PICTURES - HIGH ROCK ESTATES & HIGH ROCK HOMES



1. This development originally consisted of 80 small 2 and 3 bedroom single family homes, 60 of which remain. They are arrayed along a series of private curving streets owned by the NHA, Streets are lined with tall trees.



2. Part of the 25 acre site is flat, with houses very close to grade. Most houses have fairly dense tree coverage behind them.



3. Parts of the site are quite hilly with protruding ledges. Houses may be up a series of steps from the roads down below.



4. 20 of the small houses were replaced by two two-story family houses to double the density on the lots. Each unit has its own porch up a number of steps with small storage buildings in the rear.



5. At the corner of Yurick and Linden there are two of the new duplexes, establishing a new scale for the neighborhood. Although larger than the original High Rock homes they are consistent with most of the private homes in the surrounding neighborhoods.



6. In other locations the duplexes abut the bungalows, suggesting divergent scales but adding variety to the neighborhood.



7. Trash is collected from barrels associated with each home or unit. Because of the topography, the character of the streetscape changes from location to location.



8. Paving is in relatively poor condition. In some areas there are curbs and sidewalks, but most areas have only vehicular paving and no curbs. The NHA owns and maintains most of the roads. By agreement the Town of Needham plows in the winter.



9. Each home or unit has a driveway off the road extending a limited distance into the front yard.



10. Fairly large new homes line High Rock Street near Murphy Road before it transitions to NHA owned property. The surrounding properties are buffered from the NHA High Rock development with large trees.



11. An abandoned railroad line and dense tree coverage runs behind High Rock homes and the Chambers Street developments, cutting both off from the Chestnut Street commercial area, but separating them from surrounding residential neighborhoods.



12. Tall trees and relatively plentiful space suggests that the High Rock site is underutilized in terms of providing opportunities for affordable housing.



1. Houses vary in size and layout but all are one story. They have open living/dining areas that offer furnishing options



2. A back hallway connects bedrooms to the living/dining areas of the house.



3. Some of the houses have a mechanical room right at the center, which tends to separate kitchens from other parts of the house.



4. Bedrooms are adequately sized with adequate closets and windows on two sides.

MATTHEWS HOUSE

Matthews House is a group home funded under the Massachusetts “Chapter 689”, which provides housing for persons with mental illness, or developmental or physical disabilities. Located on Great Plain Avenue a mile from Needham center, this 8 unit building is owned and maintained by the NHA, with managed living services provided by the Department of Mental Health. Ongoing maintenance, repairs and modernization will be required, and possible resources beyond DHCD formula funding can be explored in the same way as the 5 other NHA developments.



1. The Matthews House building appears to be a fairly typical home in a residential neighborhood. Because of the number of residents and their need for services there is a fairly large drive and parking area.



2. The wide drive and ramp distinguish Matthews House from others in the neighborhood suggesting fencing and planting to help integrate it into the neighborhood.



ROUTINE REPAIR & IMPROVEMENT NEEDS FOR NHA PROPERTIES

INTRODUCTION

This Section 4 summarizes the routine repair and improvement work that has been done at each NHA Property over the past decade and identifies work that needs to be accomplished in the next few of years to better facilitate the setting of priorities. Over the past decades the Needham Housing Authority has been able to maintain its existing housing stock and associated sites and keep them in reasonable repair. Although the State and Federal funding has become increasingly limited, roofs have been replaced as needed, finishes improved when they reach the end of their useful life, mechanical systems replaced when they no longer function as intended, and the most damaged paving replaced. But because of funding limitations, there is always more work to be done than available resources, and maintenance is always a step or two behind what is needed. Buildings will continue to age and needs will increase.

Larger sums of money are available for substantial modernization through the programs noted in later Sections of this report, but there is competition for funding and resources are limited. It is important for the Authority to look comprehensively at current and anticipated needs across all of their developments so that staff time and limited funding can be allocated as effectively as possible. The federal developments - Seabeds, Captain Robert Cook and High Rock, have different funding sources from the state developments - Linden and Chambers, although local funding can be allocated to either.

The NHA will need to evaluate which work items can wait for the yearly allocation of State and Federal funding, and what work may be part of a larger scope modernization project funded by HUD's Rental Assistance Demonstration Program (RAD), Massachusetts High Leverage Asset Preservation Program (HILAPP) or other programs noted in Section 7, or by Community Preservation Act (CPA) funding. It is critical for the NHA to maintain a nimble and wide-ranging search for repair/improvement funding options.

NHA has recently received grants for hydronic heating boiler replacement through the DHCD and ABCD (Action for Boston Community Development) sustainability programs and these have been installed at the Chambers Street and Linden Street developments. MassSave, the source of ABCD's funding, can also provide energy audits that can recommend additional energy conservation measures. Along with utilities they may also provide rebates or fixtures/replacement, LED lighting, high efficiency boilers, low flow sinks and toilets, insulation, weather stripping and replacement of refrigerators over 10 years old. The NHA has employed these energy audits and has received a grant covering new boilers for the Captain Robert Cook buildings (value: \$200,000) and a second grant for new boilers for the 60 High Rock Estates single family homes ((value: \$400,000)

There are also inexpensive accessibility and wayfinding improvements that would benefit residents. These include:

- Signs with larger lettering on doors
- Site signage directing residents, visitors and emergency personnel to specific buildings

- Maps or plans providing directions to buildings and site services
 - Sub captions in common resident languages and in braille
 - Lever door handles meeting MAAB and ADA requirements
- This Section 4 describes the routine repairs and improvements that are within the reach of the NHA's annual formula funding from DHCD and annual HUD capital funding or other grants such as MassSave. Section 5 describes more ambitious modernization projects that can make substantial improvements in buildings and sites and Section 6 describes redevelopment options for Seabeds/Cook and Linden/Chambers/High Rock. Although repairs that protect residents and the value of properties should be made on a timely basis, the potential for substantial redevelopment should be kept in mind when allocating funds for more limited repairs that might be affected by a larger modernization effort.
- Some of the work recommended in the next Section 5 may be best implemented across an entire development, but essential components can be integrated into the work described in this Section 4 to leverage limited funding. Seeing every repair as an opportunity to not only fix something that is broken but to improve the character, quality, sustainability and accessibility of each development and move them toward longer terms goals will be beneficial to residents, staff and the surrounding communities.
- Other needs not withstanding, envelope work at Captain Robert Cook is a very high priority.

REPAIRS AND IMPROVEMENTS NEEDED: CAPTAIN ROBERT COOK DEVELOPMENT

Site:	Continue patching and/or replacement of paving and curbing and bring into compliance with accessibility requirements. Improve landscape.
Security:	Install cameras at strategic locations.
Exterior Walls:	Serious deficiencies to be remedied ASAP to avoid ice dams and water infiltration. See Russo Barr report. Work includes sheathing, insulation, siding, trim and roofing.
Roofs:	Replace at the same time exterior wall work is executed,
Exterior Doors & Windows:	Replace at the same time exterior wall work is executed,
Kitchens:	100% of plastic laminate on particle board cabinets and counters need replacement.
Kitchen Flooring:	Replace existing with sheet vinyl in 100% kitchens.
Vanities:	Replace 100% of plastic laminate/particle board vanities
Toilets:	Replace all with 1.28 GPF

Showers:	Replace 100% of showers with new fiberglass showers Refit 3 handicap bathrooms to provide roll in access.
Bathroom Flooring:	Replace existing with new sheet vinyl in 100% of bathrooms.
Living and Bedroom Flooring:	90% of flooring has been replaced with VCT. Replace remaining 10%. Provide assistance to tenants as needed to acquire area rugs.
Wall finishes:	Patch and paint plaster and trim as required.
Interior Doors:	Replace all hollow core doors with new solid core doors and new hardware to meet contemporary standard.
Heat, Hot Water	High efficiency gas fired boilers with hydronic distribution and associated domestic hot water will be installed Spring, 2019 with a grant from ABCD Energy audits. Boilers for 2 units are paired in sheds behind buildings. Remove chimneys if not needed after replacement.
Heat Distribution:	Existing fin tube radiators are in poor conditions. Replace with new fin tubes radiators.
Air conditioning:	All units have sleeves; units by residents. No change required. Coordinate with envelope work.
Common Areas:	No interior common areas. Improve playground and create exterior common areas for resident use.
Electric Service:	100 amps inadequate – upgrade to 200 amp service to meet contemporary standards.
Lighting:	Replace existing with LED. Utilize utility rebates.
Accessibility:	Bring curb cuts, walks and entry to the offices at 28 Captain Robert Cook drive into compliance with MAAB requirements. Repair heaved drain line at entry sidewalk. Most units have accessible entries. Considerer upgrading 5% of kitchens, baths and doors to full MAAB compliance.
Solar Photovoltaics:	Many roofs face southwest. Although south is ideal for panel orientation, roofs may still provide enough solar insolation to warrant consideration. Investigate 3rd party solar and other options.

REPAIRS AND IMPROVEMENTS NEEDED: SEABEDS WAY DEVELOPMENT

Site:	Continue patching and/or replacement of paving, curbing, and ramps. Entry drive repaved in 2018
Security:	Install cameras at strategic locations.
Exterior Walls:	Siding, insulation, sheathing, air and vapor barrier and exterior doors replaced in 2016.
Roofing:	Roofing, coping and flashing replaced in 2016 along with exterior wall work noted above.
Exterior Doors & Windows	Windows have been replaced; replace doors
Kitchens:	100% of plastic laminate on particle board cabinets and counters need replacement.
Kitchen Flooring:	Replace existing with sheet vinyl 100% of kitchens
Vanities:	Replace 100% of plastic laminate/particle board vanities.
Toilets:	Replace all with 1.28 GPF.
Showers:	Replace 100% of showers with new fiberglass units.
Bathroom Flooring:	Replace existing w/ new sheet vinyl in 100% of bathrooms.
Living and Bedroom Flooring:	80% of flooring has been replaced with VCT. Replace remaining 20%. Provide assistance to tenants as needed to acquire area rugs
Wall finishes:	Patch and paint plaster and trim as required.
Interior Doors:	Replace all hollow core doors with new solid core doors and hardware to meet contemporary standard.
Heat, Hot Water	: High efficiency gas fired boilers with hydronic distribution and associated domestic hot water will be installed with a grant from ABCD Energy audits. Contract and schedule pending. Boilers and water heaters are located in mechanical rooms, one per building.

Heat Distribution:	Utilize existing radiators that are in relatively good condition; replace covers as needed..
Air conditioning:	All units have sleeves; units by residents. No change required.
Common Areas:	Patching and painting in entries, hallways and laundries. Replace finishes to improve character and quality of spaces. Reconsider how space is being utilized.
Electric Service:	100 amps adequate.
Lighting:	Replace existing with LED. Utilize utility rebates.
Accessibility:	Continue patching of ramps and curb cuts. First floor units have accessible entries. Considerer upgrading 5% of kitchens, baths and doors to full MAAB compliance.
Solar Photovoltaics:	All roofs face east and west; south is ideal. West facing roofs may still provide enough solar insolation to warrant consideration. Investigate third party and other options.

REPAIRS AND IMPROVEMENTS NEEDED: LINDEN STREET DEVELOPMENT

Site:	Continue patching and/or replacement of cracked and potholed paving and curbing. Improve landscape to provide more “curb appeal” from Linden Street and within the development and to provide community gather places and defensible exterior spaces for residents.
Security:	Install cameras as strategic locations.
Exterior walls:	Brick and wood siding in good condition. Point, patch and paint as necessary.
Roofs:	Replaced except for 3 in 2018. Replace final 3.
Exterior Doors and Windows:	Replace with units to meet contemporary standards
Kitchens:	100% of plastic laminate on particle board cabinets and counters need replacement.

Kitchen Flooring:	Replace existing with sheet vinyl in all kitchens.
Toilets:	Replace all with 1.28 GPF.
Sinks:	Replace all wall hung sinks
Showers:	Replace 100% of showers with new fiberglass showers; roll in on first floor.
Bathroom Flooring:	Replace existing with new sheet vinyl in all bathrooms.
Living and Bedroom Flooring:	100% replacement with VCT required. Provide tenant assistance as needed to acquire area rugs.
Wall finishes:	Patch and paint plaster as required.
Interior Doors:	Replace all hollow core doors with new solid core doors to meet contemporary standard.
Heat, Hot Water:	Boilers and associated water heaters in 8 utility rooms serving 18 buildings were replaced in 2018 with high efficiency combination boilers and water heaters.
Hear Distribution:	Existing baseboard radiators are in relatively good condition. Replace as needed.
Air conditioning:	Window air conditioners by tenants. No change required.
Common Areas:	Improve laundry room finishes. Reopen four laundries indicated on plans but not currently in service.
Electric Service:	100 amps adequate.
Lighting:	Replace existing with LED. Utilize rebates.
Accessibility:	No apartments have accessible entries. Kitchen and bathroom layouts make compliance with ADA/ MAAB requirements virtually impossible. NHA should consider regrading of site to create visitable entries.

Moisture Infiltration:	Investigate crawl spaces for water infiltration and mold and remediate as needed.
Solar Photovoltaics:	25% of roofs face south, which is ideal Given the low slope of all roof panels panels may be able to be positioned on more than 25% of roofs in a way that makes panels worth consideration. Investigate third party and other options.

REPAIRS AND IMPROVEMENTS NEEDED: CHAMBERS STREET DEVELOPMENT

Site:	Continue patching and/or replacement of paving and curbing. Improve landscape to create more attractive community spaces and gardens.
Exterior Walls:	Brick and wood trim in good condition. Point, patch and paint as necessary.
Roofs:	Replaced in 2018.
Exterior Doors and Windows:	Replace to meet contemporary standards
Kitchens:	100% of plastic laminate on particle board cabinets and counters need replacement.
Kitchen Flooring:	Replace existing with sheet vinyl in all kitchens
Toilets:	Replace all with 1.28 GPF
Showers:	Replace 100% of showers with new fiber glass showers: roll in on first floor.
Sinks:	Replace all wall hung sinks
Bathroom Flooring:	Replace existing with new sheet vinyl in all bathrooms.
Living and Bedroom Flooring:	Replace 100% with VCT. Provide tenant assistance as needed to acquire area rugs.
Wall finishes:	Patch and paint plaster as required.
Interior Doors:	Replace all hollow core doors with new solid core doors to meet contemporary standard.

	Consider removing unneeded 2nd entry door to create more usable space in kitchens.
Heat, Hot Water:	Boilers and associated water heaters in 5 utility rooms, one per building, were replaced in 2018 with high efficiency combination boilers and water heaters.
Heat Distribution:	Original baseboard radiators re-utilized.
Air conditioning:	Window air conditioners by tenants. No change required.
Common Areas:	Patching and painting in entries, hallways and laundries. Replace finishes to improve character and quality of spaces. Reconsider how space is being utilized.
Laundries:	Washers and dryers are on second floors which make them inaccessible to those with mobility impairments - consider laundries on first floor utilizing excess utility room space.
Electric Service:	100 amps adequate.
Lighting:	Replace existing with LED.
Security:	Install cameras as strategic locations.
Accessibility:	Continue patching of ramps at entries and curb cuts. Integrate current MAAB and ADA requirements in replacement of doors, bathrooms and kitchens. Install laundry on ground floor of one or more buildings.
Solar Photovoltaics:	Hip roofs, most facing east and west, and fairly tall trees to the east, west and south make installation of panels at Chambers Street unlikely to be worth considering.

REPAIRS AND IMPROVEMENTS NEEDED: HIGH ROCK ESTATES
HIGH ROCK HOMES

The work noted below is for the 60 remaining original homes. The 20 replacement duplexes are less than a decade old and do not need work at this time other than routine maintenance. Drawings for the original homes are not available, making it more difficult to plan and design improvements. Buildings vary in size and layout. Window or door replacement, mechanical, kitchen or bathroom upgrades or virtually any other kind of improvement would require measuring each house. Sites vary as well. Replacement of driveways, porches, stoops or walks would vary from home to home.

Sites:	Continue patching and/or replacement of roads, and driveways at each house. Improve landscaping. Enlarge or improve porches, patios and stoops.
NHA owned Roads:	Continue Spring patching / repairing as needed.
Building Envelope:	Siding, insulation, windows, exterior doors are in fair condition but ongoing maintenance is required. Consider weather-stripping envelope sealing and attic insulation to improve solar performance with state or federal subsidies.
Kitchens:	Cabinets and counters were replaced approximately 10 years ago and are in relatively good condition.
Kitchen Flooring:	Replaced approximately 10 years ago and in relatively good condition.
Bathtubs:	40 tubs need replacement.
Bathroom sinks:	Replace all wall hung sinks
Bathroom Flooring:	Replace in all buildings.
Living and Bedroom Flooring:	Partial replacement has been done. Survey and replace remainder.
Wall finishes:	Patch and paint plaster as required.
Interior Doors:	Replace hollow core doors with solid core doors Replace hardware to meet contemporary standards.

Heat, Hot Water:	Boilers and associated water heaters in the 60 original homes will be replaced Spring, 2019 with high efficiency combination boilers and water heaters, one per home in utility rooms.
Heat Distribution:	Existing fin tube baseboard radiators are in relatively good condition. Replace as needed.
Air conditioning:	Window units by tenants. No change required.
Common Areas:	There are no interior common areas. Streets and side walks are the only exterior common areas.
Electric Service:	Current electric service (assumed to be 100 amps/unit) adequate.
Lighting:	Replace existing with LED.
Security:	None provided or required.
Accessibility:	Homes vary in their level of accessibility. Consider upgrading homes at or near grade to meet MAAB requirements for access, kitchens and bathrooms.
Solar Photovoltaics:	The small size and varying orientation of roofs and tree cover make solar panel installations unlikely to be worth considering.
Sustainability:	Conduct a MassSave energy audit for each building. Weatherstrip and air seal houses. Upgrade windows, doors and insulation with high performance products. meeting or exceeding current building codes Replace boilers and water heaters with high performance energy conserving systems. Pursue other options through MassSave.

REPAIRS AND IMPROVEMENTS NEEDED: MATTHEWS HOUSE DEVELOPMENT

Significant services are provided to residents at Matthews House. All proposed work should be carefully coordinated with services providers via the Department of Mental Health to insure continuity of services for a vulnerable population. Service providers should be consulted on the scope of work and on any fixtures or finishes considered.

Kitchens:	Replace both upstairs and downstairs with kitchens that meet or exceed MAAB, ADA and other applicable requirements. This should be a top priority. given the population housed.
Windows:	Replace windows with high performance units that meet or exceeding current code requirements.
Bathroom and Laundries:	Update and expand bathroom and laundry areas with new fixtures, accessories and locations that meet or exceed MAAB, ADA and other applicable requirements.
Site:	Add fencing and planting along the sidewalk to screen the driveway and parking from view, both to protect resident privacy and to better fit into a neighborhood with more limited parking and more planting in front yards and along the sidewalk.
Sustainability:	Weatherstrip and air seal house. Pursue other options through MassSave.

5

MAJOR MODERNIZATION OPTIONS

INTRODUCTION

The Needham Housing Authority’s aging portfolio of housing and surrounding sites will continue to need routine maintenance, repairs and improvements. Both the federal and state developments receive a yearly allocation of funding intended for basic repairs and upkeep. The routine repair and maintenance needs are discussed in Section 4, and the annual funding sources are described in Section 7. This yearly allocation of funds is generally not sufficient for upgrades to apartments, buildings or sites – it is just enough to maintain them in acceptable condition.

This Section 5 addresses opportunities for major modernization, including projects such as:

1. Significant remedies of faulty construction at Captain Robert Cook Drive – like the emergency reconstruction required at Seabeds due to faulty construction and associated ice dams in 2015.
2. Development-wide replacement of kitchens – which tend to get a lot of wear and tear on finishes and appliances and can be replaced more economically across a whole development.
3. Development-wide replacement of bathrooms – that like kitchens, are subject to wear and tear in an environment easily degraded by water and moisture.
4. Improvements inside apartments to meet accessibility requirements not in place when buildings were built. This can include work on closets, kitchens, bathrooms, dimensional requirements in apartments and buildings, accessible building entries, and laundries in accessible locations.
5. Upgrades to building envelopes, including insulation, to meet contemporary sustainability and energy use requirements. Note that significant work is required at Captain Robert Cook.
6. Additional, modified or improved common spaces to meet resident needs.
7. Grading and landscaping to make sites more accessible and attractive.
8. Replacement of paving and curbs throughout a development
9. Additional units added to existing buildings.
10. Added elevators to make second floors accessible.
11. Photo-voltaic panels and other renewable energy efforts and sustainability improvements.
12. Landscaping, fencing, regrading of sites for accessibility, outdoor community space, repainting and other efforts to improve the appearance and functionality of the NHA properties and to provide a sense of community and resident ownership.
13. Building a community center at Captain Robert Cook Drive to provide services to families and turning the current community center back into an apartment.
14. Adding space at Seabeds Way to provide aging-in-place services to residents.

Although some of this work has been done over the years – including the emergency building envelope work at Seabeds Way and the upgrades to the bathrooms at High Rock– it is generally done on a unit by unit or driveway by driveway basis due to the limited funding available. Ideally the work noted above – and below – is best and most economical when done on a development wide basis, but requires more extensive funding than is included in the yearly allocations from DHCD and HUD.

In this Section 5 major modernizations are described which could be undertaken at the NHA’s properties. Section 7 of this report outlines sources of funding that might allow this larger scale work to be executed. Refer also to Section 3 of this report for documentation of the existing conditions of the NHA developments, sites, buildings and apartments. In Section 6 new developments on existing sites are proposed that are more extensive in scope than what would be considered in a major modernization program.

MAJOR MODERNIZATION OPTIONS: CAPTAIN ROBERT COOK DRIVE DEVELOPMENT

Remedy deficiencies in building envelopes:

This development was constructed at the same time as Seabeds and was designed by the same architect utilizing the same construction materials and details. An analysis of Captain Robert Cook design and construction by Russo Barr Associates, architects and envelope consultants, after the ice dam damage at Seabeds, recommended replacement of the siding, wall sheathing, insulation, soffits and trim throughout the development. This is the same body of work performed at Seabeds and is anticipated to cost \$1,100,000 if publicly bid in 2019. (See Appendix for the Russo Barr report on anticipated costs). Because the repairs were made to Seabeds after significant water infiltration, not only the exterior building assemblies required replacement, but interior finishes as well. We highly recommend that envelope work be done at Captain Robert Cook before there is significant water infiltration so that work can be confined to the exterior. This work should be able to be done from the exterior so that no resident displacement will be required, and resident inconvenience is minimized. (See image 1)

Replace windows and entry doors:

Doors and windows throughout the development are original. When installed they did not meet today's standards, and glazing, weather-stripping, and frames have deteriorated over time. Replacement will reduce air infiltration and associated heating and cooling costs. Although an energy savings payoff date is fairly far off into the future, there are resident comfort and convenience payoffs as well, and replacement will reduce staff time required for routine maintenance.

Given that windows and entry doors are an integral part of the building envelope they should be tied into the air and vapor barrier on top of the sheathing and under the siding. It is advantageous to do the replacement at the same time as the envelope work noted above. This will save money through incorporation into a single bid package, eliminate the need to install window trim twice, and provide tighter buildings with

less air and water infiltration that can impact comfort and the integrity of building systems.

Kitchen Replacements:

Cabinets, counters and flooring are original and nearly 40 years old. Although some are in reasonable shape, and a few have been replaced, they are reaching the end of their useful lives. Piecemeal replacement could be done through yearly allocation of maintenance funds, but a major modernization kitchen replacement project for all apartments should be considered.

Bathroom Replacements:

Vanities, showers, and flooring are original. Although most are serviceable, and a few replaced, most are reaching the end of their useful lives. While piecemeal replacement could be done through yearly allocation of maintenance funds, a major modernization bathroom replacement project for all apartments should be considered, with 5% to 10% brought up to full MAAB accessibility standards. (See image 2 for an example)

Site improvements:

Although the site is relatively attractive and has been adequately maintained compared to other Housing Authority developments throughout the Commonwealth, there are a series of improvements that would be beneficial to residents – primarily families with children - and staff. All of these should be pursued with site planning professionals – a landscape architect and civil engineer – to insure that the result is an attractive and easy to maintain exterior environment. They can bring creative ideas to the challenge of using limited funding to make the greatest improvements in the lives of children and parents. They understand the kinds of materials that are most effective in meeting today's needs. Possible improvements are noted in 1,2,3, and 4 below:

1. Paving

Streets, curbs and sidewalks are in relatively poor condition. Repaving will allow all elements of the site circulation system



1. Problems caused by a damaged building envelope and outdated doors or windows can be remedied with exterior improvements and replacements, resulting in a high-quality facade and protecting residents from repairs requiring displacement in the future.



2. A replacement project involving the remodeling of all apartments would allow for some units to become handicap accessible; additionally, all other units would increase in value and appeal to present and prospective residents.

to be in compliance with accessibility requirements, improve safety, and improve the appearance of the development. The existing parking should be reconsidered by a site planning professional in concert with NHA residents and the staff, with goal of insuring that paving is used effectively. Is there more parking than necessary? Are there places where lot parking can be reduced and replaced by on street parking – which utilizes paving more efficiently, tends to slow down driving speeds, and creates a more traditional sense of neighborhood. These issues should be reviewed as part of an overall reconsideration of the site layout and open space to improve the character and quality of the development.

2. Yards

Although every apartment has its own front yard, there is no separation between adjacent yards, and between public sidewalks and private yards. Fences and landscaping can be used to define the boundaries between public and private spaces, making the Captain Robert Cook environment more comfortable for residents and providing a sense of ownership. These elements will make the development more like traditional neighborhoods – and less like public housing. Improved landscaping should be investigated as part of an overall site design strategy that considers the other issues noted above and below. (See image 3 for an example)

3. Community Space

Just as there are no fences or landscape elements defining front yards, there are no elements in the landscape defining community spaces. Open space is undifferentiated with no indications of the kind of public, semi-public, semi-private and private spaces that create a recognizable community fabric. There are shared elements like dumpsters, ganged mailboxes, benches, and the playground in the center of the turnaround, but none are defined in a way that creates comfortable neighborhood gathering spaces like the ones found in most traditional neighborhoods. A better located playground, a grouping of benches, a paved terrace or gazebo could create the kind of community center that would provide cohesiveness to the development. It could be associated with the NHA offices marking the entry to the residential area. The development of community spaces should be part of an overall site design strategy. In addition, screening of dumpsters should be considered, along with

alternative locations where they are convenient for access but less prominently placed. (See image 4)

4. Community Gardens

Gardens provide a number of advantages in family developments. They are a source of high quality and low cost food. They become a center for community life with efforts that bring people together. And they can be part of an educational effort that teaches kids about cooperation and responsibility, as well as an understanding of how food is grown. There is adequate space on site for community gardens; setting aside space should be considered.

Sustainability Upgrades:

There are a series of reasons for housing authorities to consider “greening” their developments. For energy related issues there are long term cost savings. Recycling has a positive impact on the environment. And “green” materials are better for resident health. Energy improvements are often supported through grants or rebates, or third party installers. Options to consider include:

- Solar PV on roofs or elsewhere on site – third party installation (See image 5) Many roofs face southeast or southwest with minimal shadowing from trees. Ground mounted panels could also be considered.
- Replace windows and doors with high performance units.
- Replace current heating system with combined heat and power (co-generation) system that produces both electricity and heat efficiently. Minimum system size would require both Captain Robert Cook and Seabeds Way to be included.
- Replace all lighting with LED lighting within apartments and on the exterior. Rebates may be available.
- Utilize storm water for site irrigation
- Add air and vapor barrier to exterior assembly
- Although insulation will likely be replaced if there is a major envelope improvement project like that at Seabeds Way in 2016, replacement may be limited to R9 in walls and R19 in attics. Additional insulation will decrease energy usage if there is the opportunity to add it, 1” of continuous rigid insulation outboard of the sheathing should be considered.
- Encourage recycling.



3. Fences and hedges can help define yards which offer a sense of “ownership” to residents and give shared open space a more public character.



4. A relocation and remodeling of a designated playground area would encourage communal, family-friendly activity throughout the Captain Robert Cook development.



5. The installation of solar panels makes houses within the development significantly more environmentally conscious, while simultaneously providing a long term cost-effective energy source.

MAJOR MODERNIZATION OPTIONS: SEABEDS WAY DEVELOPMENT

Note that Seabeds Way was designed by the same architect, and built in a similar way and at the same time as Captain Robert Cook so many of the recommendations are similar.

Replace doors:

Doors throughout the development are original. When installed they did not meet today's standards, and glazing, weather-stripping, and frames have deteriorated over time. Replacement will reduce air infiltration and associated heating and cooling costs. Although an energy savings payoff date is fairly far off into the future, there are resident comfort and convenience payoffs as well, and replacement will reduce staff time required for routine maintenance. Siding and windows were recently replaced at Seabeds; and effort will need to be made to tie new doors into the existing air and vapor barrier to provide a tight building envelope.

Kitchen Replacements:

Cabinets, counters and flooring are original and nearing 40 years old. Although some are in reasonable shape, and a few have been replaced, they are reaching the end of their useful lives. Piecemeal replacement could be done through yearly allocation of maintenance funds, but a major modernization kitchen replacement project for all apartments should be considered.

Bathroom Replacements:

Vanities, showers, and flooring are original. Although most are serviceable, and a few have been replaced, most are reaching the end of their useful lives. Piecemeal replacement could be done through yearly allocation of maintenance funds, but a major modernization bathroom replacement project for all apartments should be considered.

Site improvements:

Although the site is relatively attractive and has been adequately maintained compared to other Housing Authority

developments throughout the Commonwealth, there are a series of improvements that would be beneficial to the primarily older residents and to staff. All of these should be pursued with site planning professionals – a landscape architect and civil engineer – to insure that the result is an attractive and easy to maintain exterior environment suited to the older residents in this development. They can bring creative ideas to the challenge of using limited funding to make the greatest improvements in the lives of residents.

1. Paving

Although streets, curbs and sidewalks were replaced along the entry drive in 2018, the remaining paving is in poor condition. Repaving will allow all elements of the site circulation system to be in compliance with accessibility requirements, improve safety, and improve the appearance of the development. The existing parking should be reconsidered by a site planning professional in concert with NHA residents and staff, with goal of insuring that paving is used effectively. The turnaround is a large paved area with parking at its center, but could be used more effectively. The parking lot between the first two buildings also appears to be oversized giving the amount of parking it allows.

There are five drives – between each of the 4 buildings and at each end - that lead south down the entire length of each building. Although these may support accessibility and emergency vehicle access, and lead to small storage sheds, they appear to add more paving than is necessary. These issues should be reviewed as part of an overall reconsideration of the site layout and open space to improve the character and quality of the development.

2. Pedestrian Zones

Drives thread their way throughout the development. Although there are sidewalks, pedestrian zones appear to be overwhelmed by paving set aside for motor vehicles. Pedestrian areas can still accommodate emergency vehicles and support accessibility while providing more pleasant places for residents and visitors. By reorganizing parking and drives around pedestrian areas – rather than the other way around - Seabeds Way development can become a better place for residents. (See image 6 for an example)



6. Changes in paving can help define pedestrian zones that are more comfortable, and safer, for residents.



7. Benches, planters and other site elements can create comfortable pedestrian oriented gathering places.

3. Community Space

The development of improved pedestrian areas can provide gathering places for residents if properly defined with paving and landscape. There are currently benches and dumpsters that seem to be scattered around the site rather than positioned to facilitate social activities. Although open space is defined by the berm to the north and by buildings, none are given the kind of identity that encourages people to meet or to be outdoors. Outdoor terraces and balconies associated with every apartment help to animate the buildings and provide useful private outdoor space, but they have an ambiguous relationship to the adjacent open spaces – that aren't really public or private but in a kind of uncomfortable limbo.

A small plaza defined by paving and hedges, or a well-designed gazebo are the kind of traditional elements used to provide neighborhood centers – although they don't need to replicate traditional designs. The development of community spaces should be part of an overall site design strategy that is more responsive to resident needs. In addition, screening of dumpsters should be considered along with alternative locations where they are easy to access but less prominent. (See images 7 and 8)

4. Community Gardens

Gardens provide a number of advantages in elderly developments. They are a source of high quality and low cost food. They become a center for community life with efforts that bring people together. And they can be an incentive for older residents to leave their homes and meet neighbors and enjoy the outdoors. There is adequate space on site for community gardens; setting aside space should be considered.

5. Accessible Entries

Buildings meet accessibility requirements where ramps have been added to entries and to terraces. Every building has a ramped entry; a few terraces have ramps. Ramps are in relatively poor condition and most have been patched several times. Concrete ramps and steel rails tend to fare poorly in the New England climate where freeze-thaw cycles and the

use of salt degrades these materials. Given that all buildings are fairly close to grade, the site can probably be regraded to eliminate the need for ramps. A slope of less than 1:20 is not considered a ramp and does not require handrails on both sides that often interfere as much as help with making an entry welcoming. Regrading and sidewalk replacement to eliminate the need for ramps should be considered as part of a comprehensive site design strategy.

Accessible Second Floors:

Seabeds Way is intended for older residents but the second floors are accessed only by stairs, making it difficult for anyone with mobility limitations to live there or visit. Elevators could be added to the existing buildings to provide wheelchair access to second floors and help those with difficulty climbing stairs, however there are formidable barriers to overcome.

Although there appears to be space within the existing building envelope to add an elevator, the reality is that an elevator would likely require a section of the building to be demolished, and new concrete elevator pit installed, a concrete block or steel and wood hoistway constructed, the cab and track installed, and an elevator machine room with specialized equipment and a cooling system installed. Elevators are rarely installed unless they serve 20 or more units (Seabeds Way buildings have 6 apartments on the second floor); funding is unlikely to be obtainable for elevator installation in these buildings. Lifts are cheaper and easier to install, but do not meet ADA and MAAB requirements because their size and control systems generally don't meet the needs of those who need them. Although an elevator or lift could be considered, they are unlikely to be cost effective solutions to the challenge of providing accessibility and visitable second floors. (See images 9 and 10) A single elevator and bridge between buildings could be considered.

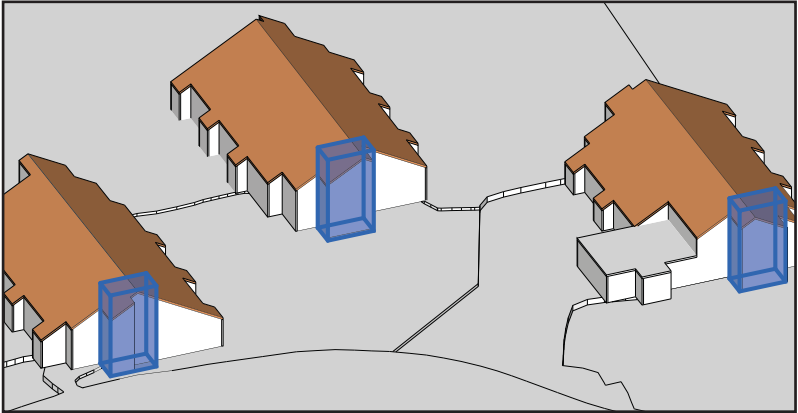
Sustainability upgrades:

Reducing energy usage is advisable at all NHA developments, and Seabeds Way offers significant opportunities to do so. Options to consider include:

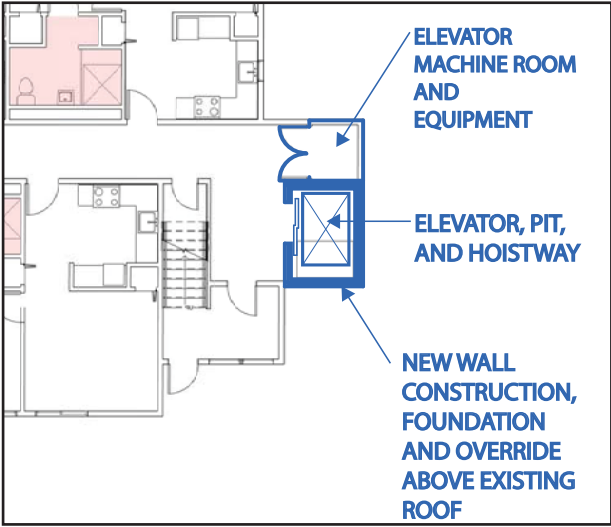
- Solar PV on roofs – roofs face east and west



8. Outdoor shelters can provide a center for community life and provide a focus for pedestrian oriented spaces.



9. Elevators could be added to all four Seabeds Way buildings to make second floors accessible, but costs are formidable.



10. Adding elevators would require significant demolition and new construction, although it could be contained within the existing building footprints.

which is not the ideal south facing orientation. Surrounding trees further diminish solar options.

- Replace current heating system with combined heat and power system for both Seabeds Way and Captain Robert Cook Drive.
- Replace all lighting with LED lighting
- Utilize storm water for site irrigation
- Although Insulation was added when the major envelope improvements were made in 2016, insulation was limited to R9 in walls and R19 in attics. Additional insulation will decrease energy usage if there is the opportunity to add in the future, particularly in the roof.
- Encourage recycling.

Heat/Hot water:

Four central boilers, one for each building, and water heaters need replacement. NHA has applied for a grant for boiler replacement through the DHCD sustainability program.

Common Space Improvements:

The lounge and lobby spaces are underutilized. The needs of the residents should be assessed and upgrades implemented for these spaces.

MAJOR MODERNIZATION OPTIONS: LINDEN STREET DEVELOPMENT

Both Linden Street and Chambers Street developments are over 50 years old; many or most materials or assemblies that have not been replaced are reaching the end of their useful lives - with the exception of building foundations, wood framing, and brick veneer.

Exterior Improvements:

Doors and windows throughout the development are original. When installed they did not meet today's standards, and glazing, weather-stripping, and frames have deteriorated over time. Replacement will reduce air infiltration and associated heating and cooling costs. Although an energy savings payoff date is fairly far off into the future, there are resident comfort and convenience payoffs as well, and replacement will reduce staff time required for routine maintenance.

Roofs and copings were replaced in 2018. Brick, wood siding and wood trim is in relatively good condition although there are locations where patching and replacing is warranted. Windows and doors should be replaced.

All wood siding, columns and trim are painted white, which gives a homogeneous quality to all of the buildings and suggests that this is an institutional development. Variation in colors, if well done, would add variety to the buildings and give each one its own identity. Good color schemes require an eye for design. A consultant – an architect or interior designer - should be retained to propose and test color options before finalizing and implementing. (See image 11)

Kitchen Replacements:

Cabinets, counters and flooring are original. Although some are in reasonable shape, and a few have been replaced, they are reaching the end of their useful lives. Piecemeal replacement could be done through yearly allocation of maintenance funds, but a major modernization kitchen replacement project for all apartments should be considered. Because of small unit size kitchen expansion is not possible, but walls facing living spaces could be opened up.

Bathroom Replacements:

Vanities, showers, and flooring are original. Although most are serviceable, and a few replaced, most are reaching the end of their useful lives. Piecemeal replacement could be done through yearly allocation of maintenance funds, but a major modernization bathroom replacement project for all apartments should be considered.

Site improvements:

Although the site is relatively attractive and has been adequately maintained compared to other Housing Authority developments throughout the Commonwealth, there are a series of improvements that would be beneficial to the primarily older residents and to staff.

All of these should be pursued with site planning professionals – a landscape architect and civil engineer – to insure that the result is an attractive and easy to maintain exterior environment suited to the older residents in this



11. Carefully chosen colors can help provide variety and a sense of identity to buildings that might otherwise be identical.



12. Patios and pergolas can provide a transition from inside to outside for individual apartments or at common spaces like laundries.

development. They can bring ideas to the challenge of using limited funding to make the greatest improvements possible. (See image 12)

1. Paving

Streets, curbs and sidewalks are in relatively poor condition. Repaving will allow all elements of the site circulation system to be in compliance with accessibility requirements, improve safety, and improve the appearance of the development. These issues should be reviewed as part of an overall reconsideration of the site layout and open space to improve the character and quality of the development. Parking space appears to be limited and the site does not offer opportunities for additional parking. Changing on-street parking by laws to allow resident parking in front of the development on Linden Street should be investigated.

2. Linden Street Frontage

The Linden Street development has a strong presence directly opposite the High Rock Public School (a Needham-wide 6th Grade Center) and playing fields, and is considered by many to be out of character with the neighborhood. The kind of variety that a well done painting scheme noted above will add to the frontage will begin to soften this presence. The addition of continuous hedges and/or fencing along Linden will also help integrate the development into its suburban context. Fencing should be carefully chosen – a traditional picket fence may clash with the mid-century modern character of the buildings, and a chain link fence is not advisable because it will reinforce the housing’s institutional character.

Simple spaced wood boards or metal verticals would complement both the building and neighborhood character. Continuous hedges open only at the walks to building entries are a viable alternative. In addition to screening the development from the street, they will offer residents a greater sense of privacy from automobile traffic and from those in the playing fields across the street.

Fencing at the rear of each building should be considered as well - to differentiate front yards from back and to provide residents with semi-private outdoor spaces associated with

their own apartments. The height and location of fencing should be carefully considered to insure that open space is used effectively and back yards do not leave awkward underutilized spaces between them. The creation of back yards should be part of a broader reconsideration of site utilization and the effective definition of public and private spaces. (See image 13)

3. Porches, steps and walkways

The “basketweave” layout of the 18 buildings set up odd entry conditions for apartments. The long front and back facades of every building have a four foot roof overhang on a row of columns suggesting traditional – if elongated – porches. But the front and back entry to every apartment is a small concrete stoop up one to three steps from the walk.

The stoops are too small to be real porches, but are elevated up enough that that space under the overhang on either side cannot be used as a porch space either. This design interferes with the potential of every apartment to have a usable exterior space right outside the door. This could be remedied by building a continuous deck the full length of the overhang, with low partitions extending out from the party walls to define the limits of each apartment’s porch. Stoops could also be enlarged so that they are usable without making them continuous – built with fiber composite decking on pressure treated framing on concrete piers. Alternatively, walks could be raised to floor level with paved terraces at grade to make apartments accessible. (Currently no apartments are accessible.) Grading and building construction would need to be studied – this may not be possible in all areas of the site. (See image 14)

4. Community Spaces

Green spaces are evenly distributed throughout the development. On the one hand – this allows everyone to have access to greenery right outside their door. And on the other, this makes it difficult to define a central open space that could provide a center for the Linden Community. The middle of each “pinwheel” of buildings is sufficiently large to locate a small terrace and benches with landscaping to make a small gathering space. Alternatively, benches and paved terraces adjacent to laundry rooms, clothes lines and trash



13. Fences and hedges can help provide privacy for residents while defining the adjacent public way.



14. Porches – whether associated with a single unit or built adjacent to common areas – facilitate resident socializing.



15. Community gardens may be a good use of Linden Street’s open spaces – which are now underutilized.

bin areas (if screened) could utilize these shared facilities to make social spaces for residents. At the south end of the development behind the Chambers Street Development community and maintenance building there is a larger space; a small plaza defined by paving and hedges, or a well-designed gazebo could help provide a neighborhood center. The development of community spaces should be part of an overall design strategy that is responsive to resident needs and the opportunities and limitations of the site, and that includes connections to Chambers Street to the south.

5. Community Gardens

Gardens provide a number of advantages to elderly residents. They are a source of high quality and low cost food. They become a center for community life with efforts that bring people together. And they can be an incentive for older residents to leave their homes and meet neighbors and enjoy the outdoors. Although space is limited, there are many locations where 24" wide raised beds could be provided for resident use. Setting aside this space should be considered. (See image 15)

Sustainability upgrades:

As previously noted, reducing energy usage in all of its developments should be a priority for the NHA. Options to consider at Linden Street include:

- Solar PV on roofs. Only 25% of roofs face south, but slopes may be low enough to consider panels on east and west facing roofs. There is not enough open land to consider panels elsewhere on site.
- Replace windows and doors with high performance units.
- Replace all lighting with LED lighting
- Utilize storm water for site irrigation

MAJOR MODERNIZATION OPTIONS: CHAMBERS STREET DEVELOPMENT

Exterior Improvements:

Doors and windows throughout the development are original. When installed they did not meet today's high standards, and glazing, weather-stripping, and frames have deteriorated

since installation. Replacement of these elements will reduce air infiltration and associated heating and cooling costs. Although an energy savings payoff date is fairly far off into the future, there are resident comfort and convenience payoffs as well, and replacement will reduce staff time required for routine maintenance.

Roofs and copings were replaced in 2018. Brick walls and wood porches, eaves and window trim are in relatively good condition although there are locations where patching and replacing is warranted. All wood columns and trim are painted white. Although this is a traditional color, alternatives should be considered to give the buildings more character. A consultant – an architect or interior designer – should be retained to propose and test color options before finalizing and implementing, perhaps as part of a larger improvement project. Alternative ramp designs should be considered too, for better integration into the landscape.

Kitchen Replacements:

Cabinets, counters and flooring are original. Although some are in reasonable shape, and a few have been replaced, they are reaching the end of their useful lives. Piecemeal replacement could be done through yearly allocation of maintenance funds, but a major modernization kitchen replacement project for all apartments should be considered.

Bathroom Replacements:

Vanities, showers, and flooring are original. Although most are serviceable, and a few replaced, most are reaching the end of their useful lives. Piecemeal replacement could be done through yearly allocation of maintenance funds, but a major modernization bathroom replacement project for all apartments should be considered.

Site improvements:

Although the site is relatively attractive and has been adequately maintained compared to other Housing Authority developments throughout the Commonwealth, there are a series of improvements that would be beneficial to the primarily older residents and to staff. All of these should be pursued with site planning professionals – a landscape architect and civil engineer – to insure that the result is an



16. Porches and colors can be used to add life to even the most basic buildings, and to differentiate them from each other.



17. Community spaces can be associated with building entries - forming outdoor rooms that facilitate socializing



18. Screening dumpsters and trash barrels makes sites more attractive and frees up other areas for resident uses.

attractive and easy to maintain exterior environment suited to the older residents in this development. They can bring creative ideas to the challenge of using limited funding to make the greatest improvements in the lives of residents.

1. Paving

Streets, curbs and sidewalks are in relatively poor condition. Repaving will allow all elements of the site circulation system to be in compliance with accessibility requirements, improve safety, and improve the appearance of the development. The existing parking should be reconsidered by a site planning professional in concert with NHA residents and staff, with the goal of insuring that the limited site area is used effectively and that paved space for parking is used efficiently.

Because densely forested areas push so close to buildings on the east and west sides of the site, open space is relatively limited and the asphalt drive and parking tend to dominate the site. Differentiating sidewalks by using concrete or pavers would give them a presence that would

help the development feel more pedestrian oriented and clarify the pathway from housing to Linden Street and beyond. These issues should be reviewed as part of an overall reconsideration of the site layout and open space to improve the character and quality of the development for residents and neighbors.

2. Community Space

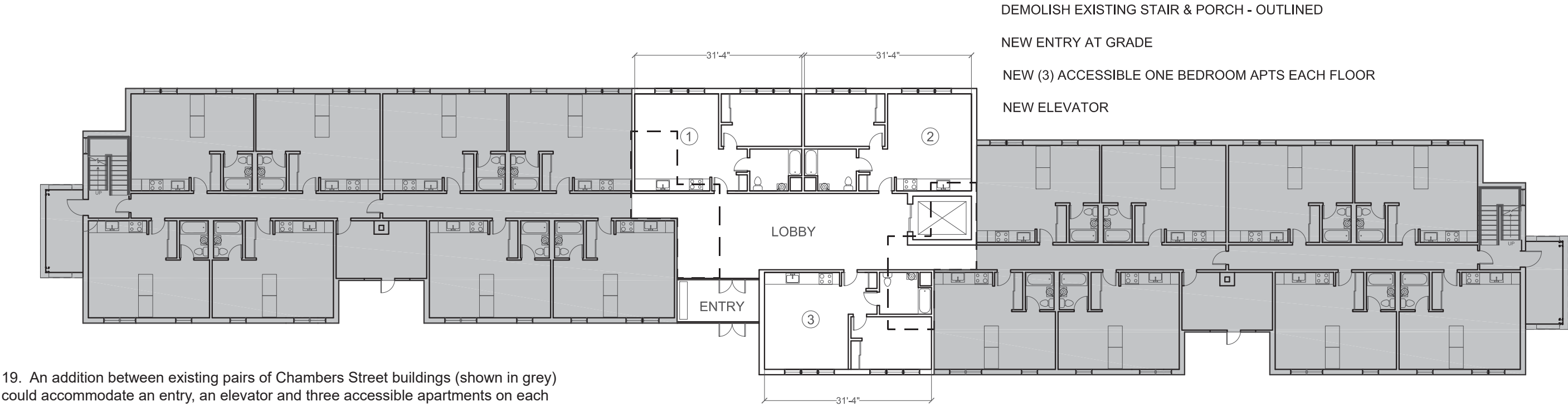
The development of improved pedestrian areas can provide gathering place for residents if properly defined with paving and landscape. There are currently benches and trash barrel areas that seem to be scattered around the site rather than positioned to facilitate social activities.

At the end of Chambers Street, at the curve in Chambers Street and in front and to the side of the Community Center Building there are open areas that could be developed to be more useful for residents. The porches at each end of each building, terraces and balconies associated with the second floor laundries help to animate the buildings and provide

useful shared outdoor space, but they have an ambiguous relationship to the adjacent open space and don't feel like they are part of a continuous public realm.

A small plaza defined by paving and hedges, or a well-designed gazebo are the kind of traditional elements used to provide neighborhood centers or community space – although they don't need to replicate traditional designs. The development of community spaces should be part of an overall site strategy that is more responsive to resident needs and the opportunities and limitations of the site, and that includes connections to the Linden St. Development to the north and adjoining open spaces. (See Image 17)

There is considerable space behind buildings which could be developed into outdoor space for community use. Areas along the wetlands and abandoned commuter rail line to the East and South could be developed into pleasant walking trails. Consolidating trash in limited screened locations to improve the character and quality of all outdoor areas should be considered.(See image 18)



19. An addition between existing pairs of Chambers Street buildings (shown in grey) could accommodate an entry, an elevator and three accessible apartments on each floor. The elevator would serve 19 second floor apartments. Each addition would include additional apartments. Construction would likely be very expensive on a per unit basis but would facilitate the provision of aging-in-place services.

3. Community Gardens

Gardens provide a number of advantages to elderly residents. They are a source of high quality and low cost food. They become a center for community life with efforts that bring people together. And they can be an incentive for older residents to leave their homes and meet neighbors and enjoy the outdoors. There is adequate space on site for community gardens; setting aside space should be considered. (See image 15)

Accessible Second Floors:

Chambers Street is intended primarily for older residents, but the second floors are accessed only by stairs, making it difficult for anyone with mobility limitations to live there or visit. This is especially problematic because all laundries are on second floors. Elevator additions could be added between pairs of existing buildings to the east and west of the parking lot to provide wheelchair access to second floors and help those with difficulty climbing stairs.

The space between these buildings is large enough to also accommodate community spaces or up to 6 additional apartments. Because this construction would take place between existing buildings rather than inserted inside, it may be more cost effective than adding elevators at Seabeds Way, and have the additional benefit of serving more residents – 16 apartments per elevator, not including any added units.

This is, however, a major undertaking. Additions may trigger compliance with other code requirements such as sprinklers and structural upgrades, and connections to existing buildings must allow for differential expansion and settlement. Elevators are rarely installed unless they serve 24 or more units. Funding is unlikely to be provided for elevator additions to these buildings, although additional apartments or other facilities bring greater value to the endeavor. (See image 19)

Sustainability upgrades:

Greening options to consider include:

- Add additional insulation at walls and roofs. At walls this would require removal of gypsum board, furring out walls

and adding additional insulation, or adding insulation on the exterior along with a new finish system. Although housing authorities have implemented these improvements they are unlikely to be practical at Chambers St.

- Replace all lighting with LED lighting
- Utilize storm water for site irrigation
- Encourage recycling.
- Replace doors and windows.

Accessible Laundries:

In each building there is a first floor mechanical room and a second floor laundry. When boilers and water heaters were replaced the new equipment took up less space, opening up the possibility of “carving out” space for laundry facilities that would be accessible.

MAJOR MODERNIZATION OPTIONS: HIGH ROCK ESTATES DEVELOPMENT

20 of the original 80 single family High Rock Estates houses were replaced by new duplex High Rock Homes in 2009. This is considered a successful program and the NHA has expressed a desire to continue redeveloping these houses into more duplexes

60 of the old High Rock Estates homes remain, all built in the late 1940's. Major modernization may not be warranted if homes are to be replaced, but it is not out of the question if replacement is still a decade away. Options for consideration for the 60 single family homes are noted below.

Note that drawings are not available for the 60 remaining houses, and they vary in size, layout, and materials. Planning, design and construction would require them to be field measured.

Exterior Improvements:

Doors and windows throughout the development appear to be original. Replacement with high performance doors and windows will reduce air infiltration and associated heating and cooling costs. Although an energy savings payoff date is fairly far off into the future, there are resident comfort and



20. The addition of porches, even if fairly small, would add an amenity for residents and improve the appearance of the neighborhood.



21. The addition of small bays would provide usable space and give these homes a more residential character similar to the new duplex replacements.

convenience payoffs as well, and replacement will reduce staff time required for routine maintenance. Roofs will continue to need replacement.

High Rock Homes were built as inexpensive “starter homes”, primarily for returning veterans after WWII. Expectations for the design of affordable housing has changed since then. The “basic box” of each unit has bays and porches that are both an amenity for residents and are a contribution to the street-scape. They increase the perceived value of the homes and neighborhood and remove what could be the perceived stigma of affordable housing in an affluent town like Needham.

The NHA should consider adding bays, porches, patios, terraces, dormers, changes in siding material, color and pattern, and adding trim details on the exterior that will improve the “curb appeal” of this neighborhood housing. Bays and porches that add usable space in addition to improving appearance are especially useful. (See images 20 and 21)

Site improvements:

Individual lots are relatively attractive and have been adequately maintained compared to other Housing Authority developments throughout the Commonwealth. Improvements should focus on neighborhood infrastructure and the creation of community spaces that would be beneficial to the High Rock families and would improve the character of the neighborhood whether or not homes are replaced.

All improvements should be pursued with site planning professionals – a landscape architect and civil engineer – to insure that the result is an attractive and easy to maintain exterior environment suited to the a family development. They can bring creative ideas to the challenge of using limited funding to make the greatest improvements in the lives of residents. These are noted in 1 and 2 below:

1. Paving

Streets are in poor condition. Repaving will allow all elements of the site circulation system to be in compliance with accessibility requirements, improve safety, and improve the appearance of the development.

Sidewalks encourage walking and outdoor activity. Unfortunately, High Rock is not equipped with many sidewalks, which directly contrasts with the paving and pedestrian zones of the adjacent, more affluent areas of Needham. This reinforces the perception of High Rock as an affordable housing development.

2. Community Space

The entire High Rock property has been subdivided into individual lots that are large enough to give each house a front and back yard. Missing from this neighborhood is any space for community use - with a playground being a major missing feature given that this is a family development. See image 22)

Although there are recreational spaces at High Rock School and Needham Forest, a park or playground at High Rock could provide a useful resource to residents and help reinforce the sense of community.

There appear to be three options for creating a park, playground or other kinds of outdoor community spaces accessible from the public way. One option is to demolish an existing house and replace it with open space. A relatively flat, large and prominently located site with play equipment, exercise equipment, benches, a small plaza, and perhaps a gazebo could provide a center for community life within easy walking distance even for small children. Community gardens could also be provided.

A second option is to utilize the southern end of the finger of Chambers Street Development land that extends between High Rock Homes and the railroad tracks. A public access would need to be provided off of Yurick Road or Murphy Road as a right-of-way taken from one or two of the lots. This option would be more expensive to develop given the clearing and regrading that would need to be done, but would not require the demolition of one of the houses.

A third option is to locate a community space between Chambers Street buildings and High Rock Homes - bringing families together with elderly residents. Clearing, grading and wetlands issues would need to be carefully considered, but there appears to be sufficient space for the development of multi-generational outdoor space.



22. A small park or playground could be inserted into the High Rock or adjacent Chambers Street development land – possibly replacing one of the single family homes.



23. Today’s housing tends to provide more open interiors that provide more furnishing options, and connect kitchens to dining and living areas. The duplex shown here is one story and fully accessible.

Interior reorganization/Additions:

Contemporary affordable family housing design is generally different than the design of High Rock homes. Kitchens, dining rooms and living rooms are open to each other to provide more flexibility in how they are used, and to make the small spaces feel larger. Heating equipment is pushed to an outside wall for venting and to avoid impacting the interior layout. (See image 23)

Although layouts vary at this development, many have a large utility room at the center of the house, separating rooms from each other, and kitchens are cut off from other rooms. (The houses are all slab on grade with no basement.) A reorganization would relocate a small high-efficiency heating unit to a small closet with interior walls opened up to create a sense of openness. Alternatively, wall mounted fan coil units in each room would connect to an exterior condenser - an air source heat pump system - with no mechanical closet required at all. This would free up significant space and improve the usability of the interior rooms.

Combined with an added bay or small addition and other improvements noted above, a major modernization could bring High Rock Homes up to contemporary standards. Whether these kinds of changes are a cost-effective way to support the NHA's mission, and use difficult-to-obtain funding wisely, is a question that should be considered. But the investment of significant money in new kitchens, bathrooms and mechanical equipment without improving the existing layouts may not result in significant advantages to tenants.

Kitchen Replacements:

Cabinets, counters and flooring were replaced in the last decade and are in reasonable condition. Reorganization of interior layouts should be considered utilizing existing cabinets that remain in good conditions.

Bathroom Replacements:

Vanities, showers, and flooring are original. Although most are serviceable, and a few have been replaced, most are reaching the end of their useful lives. Piecemeal replacement could be done through yearly allocation of maintenance

funds, but a major modernization bathroom replacement project for all 60 homes should be considered.

Sustainability upgrades:

Reducing energy usage is advisable at all NHA developments to save money and promote a sustainable agenda. Sustainability options to consider include:

- Add 1" or 2" of exterior insulation as part of a residing project. Add insulation to attics.
- Air seal all homes. Utility company state or municipal rebates may be available.
- Replace boilers with more efficient units - a MassSave grant has been received to implement this work.
- Replace windows and doors with high performance windows and doors.
- Replace all lighting with LED lighting. Utilize rebates.
- Utilize storm water for site irrigation
- Encourage recycling.
- Solar PV on roofs – this is unlikely to be practical given the small roofs, varied orientations, and tall trees.

24. By aggregating High Rock lots, townhouses or other multi-family buildings can be constructed with 6 to 24 apartments. Given the opportunity to develop new housing on a parcel that spans the High Rock/Chambers Street line, and is flatter than most of High Rock, we do not recommend pursuing the options shown here at the present time.

Lot aggregation:

The next Section outlines proposals for new development at the Linden Street/Chambers Street/High Rock developments. As part of this study lot aggregation options were considered that provided density increases that were larger than those provided by replacing single family homes with duplexes, but were smaller in scale than the major redevelopment proposal that follows. Two lots can be aggregated for a 6 family development, or 4 lots for a 16 family development. This kind of construction would require relief from the as-of-right one and two family per lot zoning now allowed, but could be considered as an alternative way to use the High Rock property.

A challenge associated with larger scale development within the High Rock residential fabric is the ledge and slopes associated with most of the property. Small houses are easier to fit into the landscape and require less regrading. Exploration of moderately scaled multi-family redevelopment did not progress beyond conceptual sketches but may warrant consideration in the future. (See image 24)



6

NEW DEVELOPMENT OPTIONS

INTRODUCTION

The Consultant Team was asked to evaluate NHA properties for potential development. The team identified three promising opportunities, contingent on funding being secured:

- New Development at Seabeds Way / Captain Robert Cook Properties
- Redevelopment of Linden and Chambers Properties
- Redevelopment into duplexes of the 60 remaining High Rock single family homes

This Section 6 describes these three development/redevelopment opportunities in detail and closes with a brief discussion of Needham zoning considerations, and of other non-NHA owned sites that might be suitable for the development of low-income housing.

NEW DEVELOPMENT AT SEABEDS AND CAPTAIN ROBERT COOK

The Seabeds/Captain Robert Cook site is fairly isolated from the adjacent neighborhoods. It is surrounded by woods and steeply sloping hills, Route 9 to the north, Interstate 95 to the east, and Hurd Brook to the west and south. Although the remote location may not necessarily be beneficial for residents who want to engage with the Needham community, it is advantageous for the development of affordable housing at a density that can really make a difference without significantly impacting nearby neighbors. The areas surrounding both of these developments are too small or steeply sloping for significant construction, but the sloping area between them is ideal for a new building. The 10' drop from Seabeds on the south to Captain Robert Cook on the north will allow parking to be cut into the hillside and accessed from the north, with the first habitable floor accessed at grade from the south - allowing the development of a compact building with cars screened from view at a reasonable construction cost. Approximately 50 cars could be accommodated under the building with additional spaces on grade along Seabeds Way, or between the new building and Captain Robert Cook.

From a funding perspective, a design that provides at least 61 one bedroom apartments is ideal (see Section 7 for further discussion of funding). This can be accomplished by stacking three floors of apartments over parking and configuring the building to fit the topography. Each floor would have approximately 20-22 apartments accessed by elevator from the parking below and the entry on Seabeds Way. Community and service spaces on the entry level and floors above would support healthful aging-in-place amenities residents - including those at Seabeds Way. The entire building would be accessible and meet high sustainability and size standards. The configuration of the building – nestled into the hillside, arced in response to the topography, and broken down into separate building masses, would reduce the perceived bulk of the building. Although it is urban in scale compared to the suburban scale of the existing construction, both of the existing developments would still be surrounded by trees and open space, the pastoral character maintained. Because the proposed new development would need land now occupied by the NHA offices, a new facility is incorporated into this proposal.

If the new 61 unit building is developed in conjunction with a major modernization of the 46 unit Seabeds Way buildings, it would provide attractive tenant relocation options during the Seabeds modernization.

SEABEDS/CAPTAIN COOK REDEVELOPMENT



1. Existing Conditions Plan

The hillside between Seabeds Way and Captain Robert Cook Drive developments offers the opportunity for new development with minimal impact on existing residences. The ground rises up from Seabeds approximately 8 feet, and then drops down 18 feet to Captain Robert Cook. The 8 foot rise is an artificial berm that is both a landscape feature and a way to utilize soil from the excavation for the existing buildings and can be removed down to the base 10 foot drop.



2. Proposed Development Plan

A new three story building with 61 one bedroom apartments would arc along the hillside between the Seabeds Way and Captain Robert Cook Drive developments where there is now an 8 foot tall berm. Construction would have minimal impact on the existing buildings or surrounding sites.



3. Parking

Space for approximately 51 cars would be cut into the existing hillside and accessed at grade from the Captain Robert Cook direction – at substantially lower cost than parking completely underground and without paving over green space. A screen wall and landscaping would hide cars. Stairs and an elevator would allow access to the building above from the parking level.



4. Massing

A three story building above the parking would follow the curve of the contours. The housing block is broken down into smaller units which are then articulated with projecting bays, balconies and terraces. Although the building is substantially larger than those around it, its bulkiness can be minimized through thoughtful design. Connections to the surrounding landscape can be emphasized. The entire roof has southern exposure, which is ideal for solar panels.



5. View from Captain Robert Cook

Projecting bays can give the building a village-like character. The arc of the building and a stepped back terrace above the parking level also help reduce the perceived size of the construction. Existing Seabeds parking and landscape would remain with very few changes.

Given that this new building faces the Captain Robert Cook Drive family development, it could include community facilities at the lower level for its residents along with facilities for Seabeds Way residents on the floor above - facing that development.



6. Integration into the Hillside

From the Seabeds side of the new development the parking completely disappears from view – the advantage of cutting it into the hillside. Landscaping and terraces can connect residents to nature and to each other. A new development and the existing Seabeds buildings can coalesce into a senior community offering more services and supports. Additional and replacement parking along the entry drive instead of in lots can help both new and old developments feel more like traditional neighborhoods.



7. Aging-in-Place services

The building can be accessed from the parking below or from a new entry lobby at the Seabeds level. The entire building would be accessible, and could provide a range of aging-in-place amenities that the NHA cannot currently provide. A new 61 unit building could reinforce the community character of the adjacent NHA developments while having virtually no impact – other than a small increase in traffic – on the surrounding neighborhood. The bucolic character of the site would remain.

LINDEN/CHAMBERS REDEVELOPMENT

NEW DEVELOPMENT AT LINDEN/CHAMBERS

Although these two developments are separate entities, they occupy contiguous sites totaling 8.2 acres that directly border the 25 acre High Rock site. From Linden Street, Chambers Street, or any of the roads that run through High Rock, the properties appear to be completely built out, requiring significant demolition in order to construct significant new housing. Wetlands and steep topography characterizes much of the remaining open space. In the southeast corner of the contiguous property there is a significant amount of unbuilt space that is relatively level and appears to be free of wetlands. By adding 9 of the High Rock properties to this portion of the Chambers Street parcel and demolishing 9 of the original single family bungalows, enough land can be aggregated for a significant new development.

This portion of the properties is bounded by railroad tracks to the southeast, the NHA's Chambers Street development to the northeast, High Rock Homes to the northwest, west and southwest. Due south there are three relatively new single family houses with a thick buffer of trees between them and NHA property. A new development could be built with minimal visibility from adjacent properties and virtually no impact beyond increased traffic on Yurick Road and Murphy Road as they lead out to Linden Street and High Rock Street. The configuration of the U-shaped building on a curving tree lined road presents only a small portion of its frontage at any one time; the building would not be perceived as an overwhelming presence on the site.

Although the Linden Street and Chambers Street developments could continue to serve Needham for another 20 to 30 years, the inadequacies of this housing, documented earlier in this report (such as small unit size and a lack of accessibility), suggests that replacement in the next five to ten years should be considered. The sale of the land that the existing housing occupies could help to pay for the cost of new construction. The new development proposed here includes 152 studio apartments – the same number of apartments in the existing Linden/Chambers buildings. New buildings could be constructed without impacting the current residents of these developments or abutters - except for the demolition of nine High Rock single family homes.

IMPROVED SERVICES FOR THE ELDERLY

The proposed conceptual design houses all residents in a single building served by an elevator for complete accessibility and compliance with Universal Design Principals. It can include community and service spaces that support aging-in-place for residents, and perhaps for others in Needham. A partnership with a local or regional service provider would allow the NHA to meet needs that go beyond what buildings, current staff or programs can provide for their aging population.

Apartments would meet contemporary standards for room sizes and accessibility and

compliance with Universal Design Principals. New buildings serving this population provide safety, security, communications and other systems that protect residents, and by creating a sense of community, residents are healthier, happier and tend to live longer.

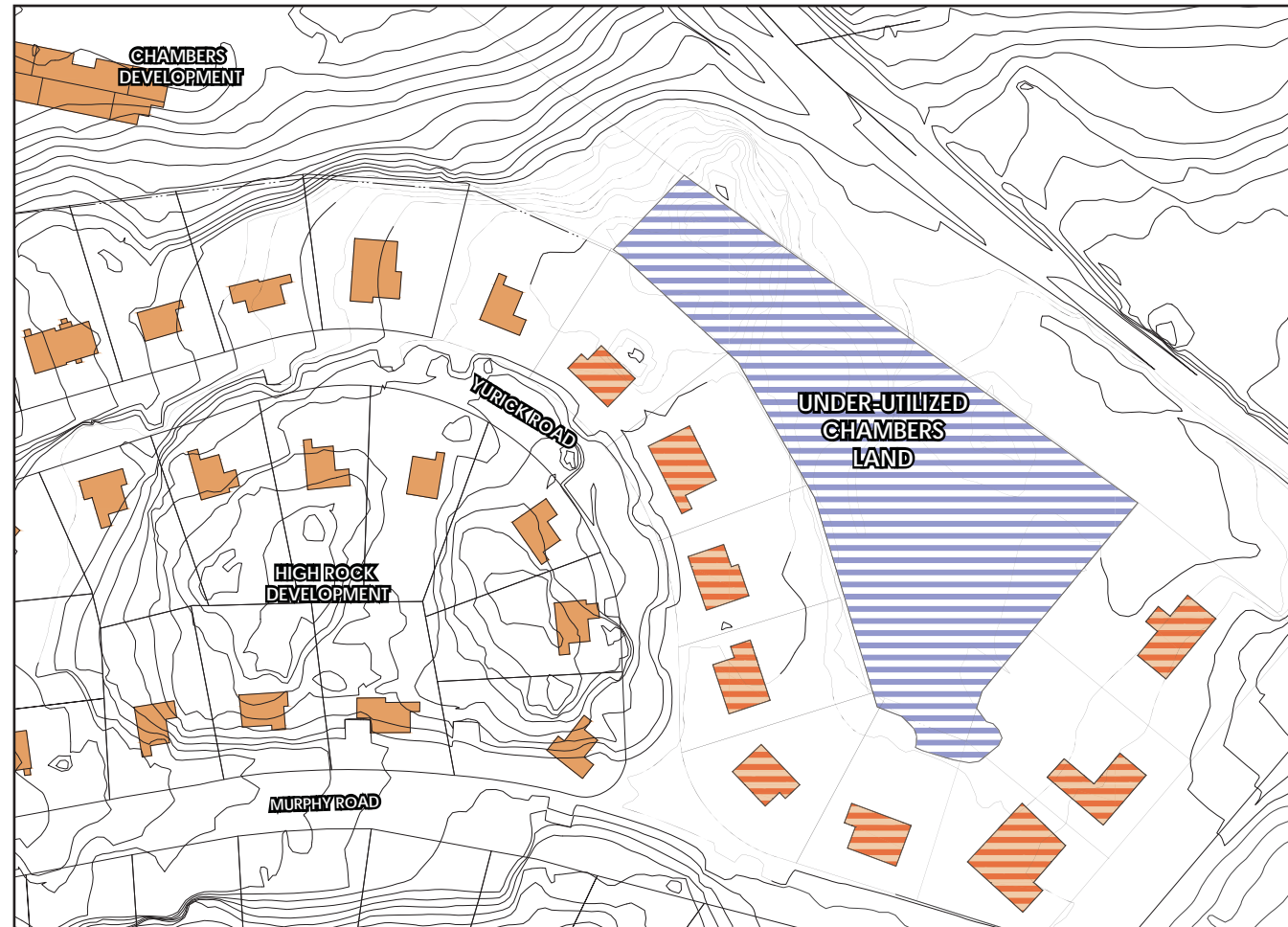
All building systems and assemblies would meet high sustainable design standards to reduce energy use and to provide healthy interior environments - reducing operational costs in relation to existing buildings and creating a model for the kind of construction that Needham would like to see.

This kind of ambitious development will require extensive outreach and cooperation with the Town, the neighborhood and potential funders, and the kind of expertise that very few housing authorities have on staff. It is far from clear that funding will be available in the near future. The NHA can take incremental steps to understanding the costs and benefits of this kind of a proposal as it looks at its capabilities and mission.

PREVIOUS DEVELOPMENT STUDIES FOR LINDEN/CHAMBERS

In the early stages of the investigations for this report several scenarios for adding new development to the Linden/Chambers/High Rock area were considered. They would provide less housing, have more impact on adjacent non-NHA neighborhoods, and be on pieces of land that are harder to develop because of topography and existing street layouts than the redevelopment options proposed below. Nevertheless, other options for utilizing this land could be explored, and the legal, environmental, and financial aspect of this kind of development investigated in more detail. The assumed sale of the existing Linden and Chambers Street development properties and their possible development by others is reviewed later in this Section, and is another aspect of the project that needs further exploration.

In 2014 a study was done for the NHA that proposed the replacement of the Linden and Chambers Street buildings with new construction that increased the number and size of units. Plans are included in the appendix. The ongoing exploration of options for these properties are a response to the perception that the Needham community would like to see existing construction replaced, that it does not serve its residents effectively, and that there are unmet needs in the community that these properties could fulfill.



1. Existing Conditions Plan

The NHA owned land proposed for new development “disappears” behind the Chambers Street and High Rock developments to the north and west with railroad tracks forming the boundary to the southeast. It will be virtually invisible from properties not owned by the NHA. It is higher and drier than the wetland areas, and is flatter and less rocky than other parts of the High Rock development and not currently being utilized.

Hatched homes indicate those that would be demolished for the proposed development shown to the right. The hatched land is owned by the NHA but is not currently being utilized



2. Proposed Development Plan

Nine existing single family homes along Yurick Road in the NHA’s High Rock development would be demolished and their site incorporated into the new buildout. A 152 unit development meeting today’s accessibility, sustainability and quality of life requirements could be integrated into the community with a 3 story U-shape building wrapped around a courtyard.



3. Parking

Underground parking is not feasible on this site for this project. Sufficient parking can be integrated into the site, with trees to buffer it from neighbors and the adjacent streets. The parking will further buffer nearby homes from the proposed construction.



4. Massing

The courtyard could be open to the public to provide a community asset. Placing a green space at the center of the new construction helps diminish its perceived size by pushing half of the build-out far back from the street and neighbors. Project bays, recessed areas, changes in material and stepping of the roof can break down the scale of the new construction.



5. View from Yurick Road

Because of the arc of Yurick Road, plentiful trees and homes across the street the development can only be seen at a glancing angle, with over half of the apartments on the back side of the courtyard. This minimizes the apparent mass of the building and its perceived impact on adjacent properties.



6. View into Courtyard Landscape

Terraces and the incorporation of community facilities into the courtyard will have a positive impact on the neighborhood and provide an amenity for residents. Trees will screen the building from the street and help it fit into its wooded context.



7. View of Entry

By consolidating the Linden and Chambers senior apartments into one building they can be served by a central entry and management facilities which will allow a higher level of security and aging-in-place services. The entry can be welcoming for residents and for the broader community.



8. Phasing

A project of this scale might need to be phased. Phase I to pull back from the street would have virtually no presence – even on Yurick and Murphy Roads. A full build out of the massing could be four stories in back and two stories in front to minimize community impact even more. Building 72 units would allow all Linden Street residents to move into new, larger, handicap accessible units and would free up 3.5 acres for market rate development to fund the overall project.

HIGH ROCK SINGLE-FAMILY REDEVELOPMENT TO DUPLEXES

In 2009 the NHA replaced 20 of the original 80 single story single family High Rock Estate bungalows with new two story, two-unit homes. These are shown on the High Rock site plan in Section 3. Twenty of the new units are rental units and 20 are income restricted ownership condominium units - one of each in each building.

The redevelopment is considered very successful. Aging buildings were replaced with new ones that are more attractive, and whose planning, design, construction and resident and neighborhood amenities are more in line with contemporary standards for affordable housing, and closer in appearance to the market rate housing in surrounding neighborhoods. The redevelopment added 20 new buildings totaling 40 units to the NHA portfolio without requiring the development of previously undeveloped properties or major changes to site infrastructure. This redevelopment was “as-of-right” per current zoning, making municipal approval relatively easy to achieve.

Continuing with the replacement of the original homes is recommended. Current designs can be re-utilized for the new development, interspersing different house models, changing colors, and perhaps porch and deck designs for variety. A survey of residents of the new buildings and staff would be advisable to determine if they have recommendations for design changes. The previous replacement project scattered new buildings throughout the overall High Rock property. If a complete replacement of the remaining 60 units is not fundable as one project, a phased approach could be considered and replacement sites would need to be chosen for the next phase. Some considerations that go into the selection are:

1. The master plan for Linden and Chambers proposes a 152 unit new development that utilizes nine High Rock Homes sites. Although this construction may be many years in the future we recommend that significant investments not be made in these nine properties with the expectation that ultimately this larger redevelopment can be funded and built.
2. Many of the single family homes are elevated on ledge with steep slopes and steps. It may be difficult or expensive to redevelop these sites, and lots without these challenges should be developed first.
3. Replacing an existing home with a park and playground would provide an excellent community asset. A visible corner site might be the most appropriate location. If the NHA is considering a site for a park it should not be redeveloped with housing.
4. Some lots are more visible than others; the redevelopment of more visible sites would have a bigger impact on the character and quality of the neighborhood.

Obtaining financing is the primary challenge for continuing this redevelopment effort. The NHA should look comprehensively at redevelopment options, funding sources and required investments of time and effort and evaluate new High Rock construction in relation to other options. If the NHA is interested in pursuing this option it will require a developer and development team not unlike the team responsible for the first phase – with a significant amount of planning and design work already in place.

The one aspect of the 20 unit replacement project that the NHA does not want to repeat is the creation of additional income restricted ownership units. In the present economic and regulatory climate it has proven extremely difficult to locate potential owners which can meet both low-income requirements and qualify for a personal mortgage to buy the unit.



1. Lots shaded in dark green have not had single family homes replaced with duplexes.
2. Lots shaded in light green have had duplex replacements.
3. Lots shaded in brown would be reserved “as-is” for potential incorporation into a future Linden and Chambers redevelopment project..
4. To the left - one of a variety of types of High Rock duplex replacements.

ALLOWABLE DEVELOPMENT AT NHA PROPERTIES

The redevelopment of the Linden/Chambers/High Rock site with new replacement housing offers the opportunity to provide state-of-the-art accessible and sustainable aging-in-place facilities that meet contemporary standards. While there is no clear funding mechanism in place to achieve redevelopment at this time, there are opportunities for demonstration projects that could conceivably achieve this goal. The availability of underutilized and developable land on NHA properties means that land acquisition costs do not need to be added to the proformas. And the fact that this land will allow the existing Linden and Chambers developments to remain occupied during construction reduces relocation costs.

Also implicit in the redevelopment proposal is the assumption that the land under Linden and Chambers developments will be sold – most likely to a private developer for market rate housing. Included in the zoning analyses below are site layouts and zoning requirements associated with these parcels of land. If the current housing is demolished the site will revert to the underlying zoning. The value of the land is based on this development potential. Variances for denser development may be possible, but cannot be assumed – especially if 152 units of affordable housing have just been developed by the NHA a block away.

Linden (SRB District):

The likely as-of-right redevelopment scenario for the Linden parcel would be a nine lot single family subdivision with all lots having the minimum 80' frontage directly on Linden Street. See sketch (top right). Lot sizes would range from a minimum of 13,600 SF to a maximum of 24,800 SF. While the minimum required lot size is 10,000 SF, because of the configuration of the site and the location of the stream running along and within the length of the back of the site, it is unlikely that a more advantageous subdivision plan could be achieved.

Chambers (GR District):

The Chambers parcel is hourglass shaped with a larger and more immediately accessible north lobe and a remote south lobe that is separated by wetland and slopes. The likely as-of-right redevelopment scenario for the north lobe would be a 12 lot two-family subdivision on a cul-de-sac drive limited by required lot size, frontage and access. See sketch (bottom right)

High Rock (GR District):

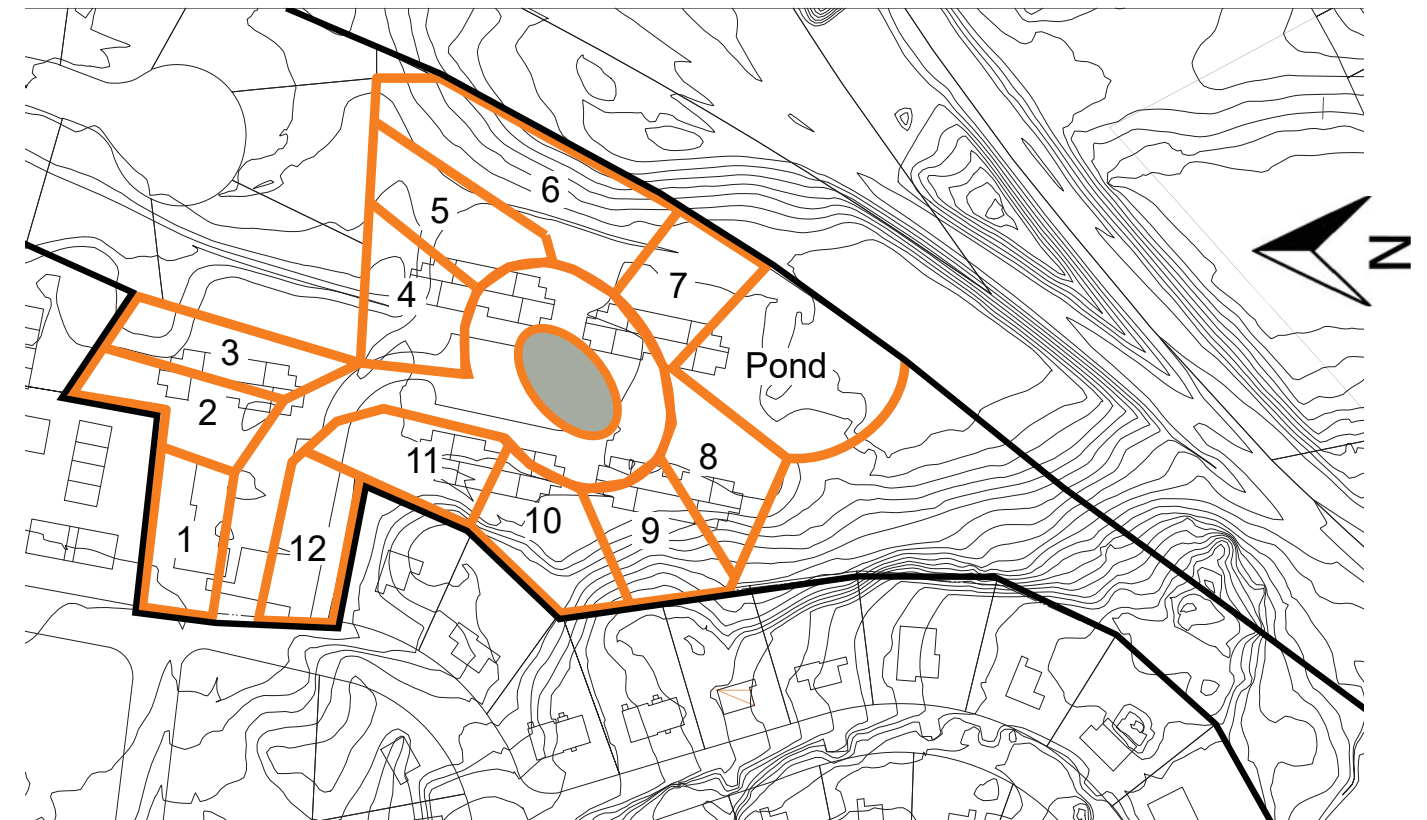
The likely as-of-right development scenario for the remaining single family lots at High Rock is to redevelop them individually as two-family dwellings, similar to what was already achieved a decade ago with the first development.

Seabeds and Captain Robert Cook (SRB District):

There does not appear to be an as-of-right opportunity to increase unit density at Seabeds and Captain Robert Cook. Adding buildings at this site would appear to require a Comprehensive Permit (or amendment of an existing Comprehensive Permit) as a Local Initiative Project (LIP) or “friendly 40B.”

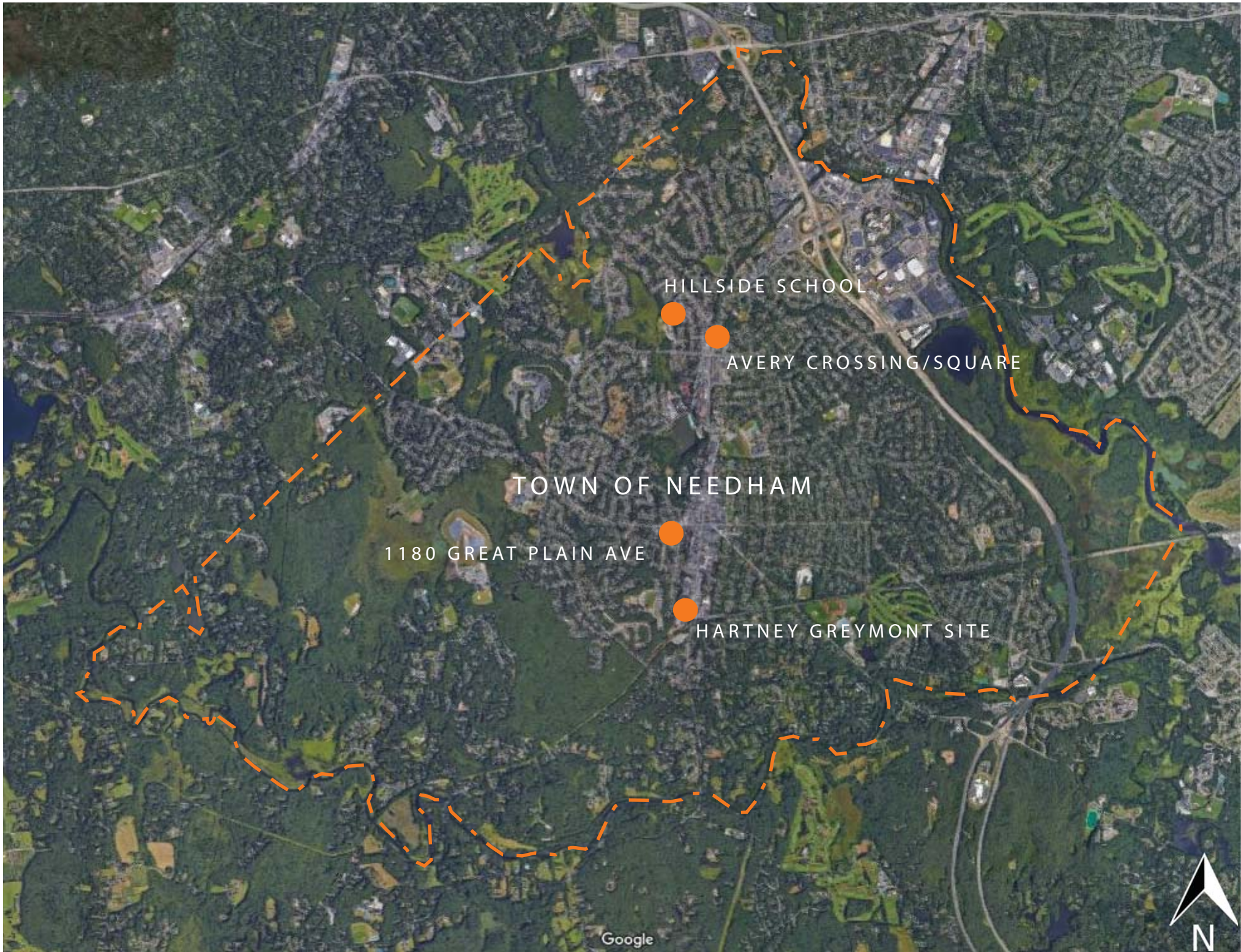


9 single family homes could be developed on the Linden Street land per existing zoning



12 two family homes could be developed on the Chambers Street land per existing zoning

DEVELOPMENT ON NON-NHA OWNED SITES



Given the NHA’s mission to not only improve the affordable housing it already has, but to advocate for the growth of low income affordable housing in Needham, the team considered properties that the NHA does not own for affordable housing development.

Given the other opportunities available to the NHA on properties they own, we do not recommend actively pursuing any of these, or other non-NHA owned properties for development at the present time. Nevertheless, ongoing communications with the Planning Department, Needham Public Schools, non-profit organizations and local real estate brokers could be beneficial if the situation changes with these or other properties. These sites are noted here for the record.

HARTNEY GREYMONT SITE

Located at 433 Chestnut St, Needham, Hartney-Greymont has been providing landscaping, lawn care and tree services since 1938. When they opened, they occupied a marginal piece of land in a triangle of leftover property between three railroad tracks. As land values have increased and the desire for pedestrian oriented communities has become a priority, Hartney-Greymont can now be seen to occupy a pivotal piece of land whose redevelopment could serve a broad range of needs. In parallel with these changes, the rail line to Dover has been decommissioned (and redeveloped into an attractive rail trail) suggesting a rethinking of how the property could be used.

This property has become interesting to the NHA because it is adjacent to – but could connect – the Linden Street, Chambers Street and High Rock developments to many nearby amenities, situated in the Chestnut Street

retail district (Roche Brothers supermarket, several restaurants, dry cleaners, coffee shops, hair salons) and community resources (Needham Junction Commuter Rail Line, Beth Israel Deaconess Healthcare, dental practices, the Charles River YMCA and the Salem Five bank). Currently NHA residents need to go to Oak Street to the north to access these neighborhood assets.

A new connection would have to tunnel under the decommissioned tracks, but to the extent that the Linden and Chambers Street connection to Chestnut Street would be advantageous to the entire Town of Needham, new or replacement development at Hartney-Greymont warranted consideration. Ultimately this option was not pursued because:

1. Zoning changes would require 2/3 Town Meeting approval.
2. Sale price would likely be high given the site's location.
3. Site constraints would inhibit design flexibility.
4. NHA currently owns land that could be redeveloped – which would ultimately be more cost effective way to get additional units or replacement apartments.
5. There is no assurance that a connection across the tracks could be made in a cost effective manner.

HILLSIDE SCHOOL SITE

Located at 28 Glen Gary Road this elementary school, built in 1959 and expanded in 1968, is being replaced by a new school building on Central Avenue (The Sunita L. Williams School) which is slated to open Fall, 2019. The Hillside School building's design and layout do not appear to be advantageous for cost effective adaptive reuse for affordable housing, but the site does appear to be appropriate for the development of new low income housing.

It is a short walk to the east to access the Needham Heights Commuter Rail Station, a Trader Joe's grocery store, and a variety of banks, restaurants and other retail establishments along Highland Avenue and adjacent streets. MBTA public transportation - commuter rail and Route 59 bus - is available in nearby Needham Heights. The school is adjacent to Glover Meadows on the west. Although Hasenfus Circle housing is to the south east, most of the eastern and northeastern frontage is non-residential suggesting less community concern than there might be on other sites. Housing development would likely have less impact on neighbors than the current school, designed for 261 students but now enrolling 470.

Although the site could be appropriate for new or replacement affordable housing this option was not pursued further because:

1. Availability of the land did not appear imminent and the Town and Needham Public Schools intends to retain it for swing space in the near future.
2. If put on the market the price would likely be high given the site's location. It's sale and taxes would add significant resources to Needham - so the Town may not want to devote the site to low income housing

3. NHA currently owns land that could be redeveloped – which would ultimately be more cost effective way to get additional or replacement units.

AVERY CROSSINGS/AVERY MANOR

Kindred Living has closed Avery Manor & Avery Crossing, two large facilities providing independent and assisted living services, short-term and long term rehabilitation care, and respite care. They are planning to sell the buildings.

The Needham Heights location on Highland Street is ideally situated for senior affordable housing. The commuter rail station and Rt 59 bus line are steps away. The brand new Needham senior center is one block away. A CVS drug store, restaurants, Trader Joe's food store, banks, urgent care facility, liquor store and other community resources are all within a two block radius.

The Kindred facilities were built out in the former Carter clothing factory. One building is currently configured with one bedroom and a few two bedroom apartments – although they would likely require very significant rehabilitation and upgrades to meet current code. The other building is configured as a nursing home and would require renovation. The long three story masonry buildings might be challenging to get approved for redevelopment today, however the current density they offer would be advantageous in developing new or replacement housing.

Despite the advantages of this property it was not pursued because:

1. Sales price would likely be high given the site's location, and a private developer would likely offer significantly more money than the NHA could provide.
2. NHA currently owns land that could be redeveloped – which would ultimately be more cost effective way to get additional or replacement units.

1180 GREAT PLAIN AVENUE

The Needham Congregational Church owns property which was occupied by a 11,750 square foot Christian Science nursing home that has been closed for several years. The location near an unlicensed center and associated town services, and the mission oriented owner suggests that there might be redevelopment opportunities.

Despite the superficial advantages of the site, the property was not pursued for these reasons:

1. The current configured room sizes and building layout do not meet contemporary needs for affordable housing, and the small size and restricted zoning could make this building and site uneconomical to develop.
2. Funding would be difficult or impossible to obtain.
3. The NHA currently owns land which could be redeveloped without accepting a financial burden in order to do so.

7

FUNDING SOURCES

INTRODUCTION

Prior Sections of this report identify three scopes of work that the Needham Housing Authority is considering for maintaining and improving its portfolio of housing: Routine Repairs and Improvement (Section 4); Major Modernization (Section 5); and New Development (Section 6). In this Section 7 we describe the currently available sources of funding for this work and how the NHA can pursue and secure these dollars.

As previously noted, affordable housing needs in Needham, the Commonwealth and across the country outstrip the resources (i.e. dollars) that are available to meet them. Unmet needs continue to grow and competition for funding can be fierce. The Federal government and the Commonwealth understand that Needham Housing Authority properties should not be allowed to degrade, so a modest amount of money for repairs and basic maintenance is allocated by HUD and DHCD every year. But it is not enough to prevent deferred maintenance and capital needs from accumulating over time.

Funding for major modernizations or new development is much harder to obtain. Although there is some overlap between the available funding for repairs and improvements, major modernization and new development/construction will likely be enabled by programs specifically designed to fund this particular type of project. It should be noted that NHA's state and federal developments require different funding sources: most state sources cannot be used for federal developments, and vice-versa.

Another major consideration with respect to the fundability of new development is the income level of its potential residents, and thus the amount of rental income they collectively pay.

- New development at Seabeds/Captain Robert Cook becomes possible only if nearly all tenants make 60% of the Area Median Income (AMI). A mix that includes a large proportion of 30% AMI tenants does not generate enough rental income to make the project pro forma numbers work.
- For a Linden/Chambers redevelopment project targeted to produce 152 replacement units for the existing tenants, a viable funding model becomes near impossible. Why? Most Linden/Chambers tenants pay rents at or below the 30% AMI level, not enough to make redevelopment fundable using the currently available sources of funds.
- The bottom line at this time: funding of the Seabeds/Cook new development project is significantly more likely than the Linden/Chambers. The level of need and the likelihood of funding should both be taken into account when making decisions on what opportunities to pursue.

The following pages lay out in more detail the possible funding options available to the Needham Housing Authority. This Section 7 concludes with additional considerations, risks and rewards that must be understood before embarking on either major modernization or new development and construction.

FUNDING SOURCES FOR ROUTINE REPAIRS AND IMPROVEMENTS

There are two primary annual funding sources for relatively low cost capital improvements intended to prevent properties from degrading, one for federal properties, the other for state. The Needham Housing Authority, like most housing authorities in Massachusetts, applies for and receives allocations every year.

1. Federal properties

Seabeds Way, Captain Robert Cook - HUD Capital Fund Grants. The NHA applies for these funds on an annual basis and has typically received \$160-\$180,000 per year for the three properties consisting of 136 units. This amount provides ~\$909 - \$1,023/unit/year. Applying for these grants is part of the work that NHA staff know they need to do on an annual basis. The money can be spent in its entirety each year, or some can be aggregated for more significant improvements in future years. Recent repaving of the entry drive at Seabeds is the kind of work that this money supports.

2. State Properties

Linden Street, Chambers Street, and Matthews House Developments - DHCD Formula Funding. This state program allocates approximately \$140,000 annually to the Housing Authority for the three state properties consisting of 160 units. This amount provides \$875/unit/year, somewhat less than the Federal properties. Like the HUD funding, the money can be spent in its entirety each year, or some can be aggregated over several years for more significant improvements. The replacement of roofs and boilers at Linden and Chambers was paid for with the formula funding.

The NHA has managed the use of these funds effectively over the years – buildings and sites are in relatively good condition. As structures and infrastructure age, however, this funding will be increasingly insufficient to keep up with the routine maintenance that is needed, let alone pay for most of the upgrades that would be required to meet current building codes and contemporary affordable housing standards for accessibility, sustainability and quality of life. As current residents age, the size of apartments and the organization of buildings becomes increasingly problematic for achieving a goal of “aging in place”. Work beyond what the annual funding can support has been termed major modernizations, and funding must of necessity come from other sources.

FUNDING SOURCES FOR MAJOR MODERNIZATION

For more ambitious improvements the NHA must tap into funding sources beyond those noted above (i.e., HUD Capital Fund Grants and DHCD Formula Funding). As with the funding for these routine repairs and improvements, most of the funding for larger scale projects comes from different sources for the federal vs. state developments. For the funding sources that can be applied to either federal or state properties, the NHA must weigh priorities and trade-offs before choosing where to allocate these dollars.

Federal Properties: Rental Assistance Demonstration Program (RAD)

The NHA’s three major federal developments (Captain Robert Cook, Seabeds, and High Rock Homes) potentially qualify for HUD’s primary program designed to provide a more stable operating source than traditional public housing operating subsidies and larger amounts of money for major renovation projects.

The Rental Assistance Demonstration Program (RAD) converts annual public housing operating subsidies, and funds that pay for capital items (HUD Capital Fund Grants) into Housing Assistance Payments through the Section 8 program. Because Section 8 provides for a dependable long term funding stream (e.g. 20 years) this conversion enables housing authorities to take on mortgage debt (funded primarily by tax-exempt bonds) and acquire investor equity primarily from banks and insurance companies (utilizing the federal Low Income Housing Tax Credits). While it is problematic that the very low rents of NHA’s current tenants are below Boston’s high Fair Market Rents (FMR) , since they are primarily based on an Authority’s tenant income and operating expenses, the rental income generated from a RAD conversion can support some mortgage debt because: (1) a capital component can be included; and (2) Public Housing Authorities have typically project-based a portion of the existing mobile vouchers they administer to enhance the amount of supportable debt.

One recent HUD notice (PIH 2018-04) may result in a significant increase in the amount of supportable debt and rehabilitation that can be performed in RAD-funded modernization projects. A development which meets certain criteria under the notice (e.g., unit obsolescence) and qualifies under Section 18 can receive up to 25% Tenant Protection Vouchers at rents equal to the area Fair Market Rents. The effect of this is to allow an Authority to substitute regular high area Fair Market Rents for 25% of the units that would have been assigned low RAD rents. This means that the current very low income NHA tenants can remain in place while the RAD Conversion can use the much higher FMR to generate more debt capacity. The difference between the two is striking: the current proposed one bedroom RAD rent for Captain Robert Cook Drive and Seabeds Way is \$646 per month; the FY 2019 Fair Market Rent for the Boston Cambridge Quincy Metro Area under which Needham falls is \$1,561 per month.

In addition to accessing debt, the RAD program enables a Housing Authority to bring investor equity into a development program through the use of tax-exempt bonds and 4% Low Income Housing Tax Credits (LIHTC’s). These are annual credits used by an investor (typically a bank or insurance company) over a 10 year period. In turn, the investor provides an upfront

¹Under Section 18, a Housing Authority has the ability to demolish or dispose of public housing if it is in the best interest of the Authority and residents. HUD can issue Tenant Protection Vouchers that assists displaced tenants to find new housing. HUD is creatively interpreting this section for the RAD program to allow Authorities to “dispose” of 25% of RAD units that are meeting a minimum rehabilitation threshold, thus enabling an Authority undergoing a RAD conversion to utilize higher Section 8 Fair Market Rents (FMR’s) for 25% of the units. In effect, there is no actual disposition (or demolition)—there is simply a disposition of lower rent Section 8 RAD rents for higher Section 8 FMR’s.

infusion of their investment dollars which is often the largest capital source in an affordable housing transaction. 4% LIHTCs differ from the federal 9% Low Income Housing Tax Credit, discussed in several Sections below, in that they are not awarded through a competition. Rather the 4% LIHTCs are awarded by either MassHousing or MassDevelopment when they issue tax-exempt bonds as part of a loan commitment.

While RAD is a program primarily used for the rehabilitation of federal public housing, HUD has encouraged housing authorities to explore utilizing it for creating new units as well. In those instances, additional funding sources such as 9% LIHTCs will probably be required to cover the higher development costs associated with new construction. In the next Section, the funding model for High Rock Estates utilizes such an approach. It is also possible that if the modernization of Seabeds/Cook and the construction of a new 61 unit senior building at Seabeds/Cook are combined into one project, this element of the RAD program can be utilized.

NOTE: Pursuing RAD funding for the major modernization of a development will require the NHA to change its business model as described in the next Sections. The risks and rewards of these changes are also described.

RAD Projects Require a Different Ownership Structure

The ownership structure of a syndicated development project will be very different from previous Authority projects. Each project developed by the NHA that involves tax credits will have a different, single purpose ownership entity. This is typically a requirement of the lender who wants to ensure that their loan is not impacted by the performance of any other property in the Authority's portfolio.

1. The ownership entity will be a for-profit limited partnership to enable the tax benefits to flow through to the investor.
2. The NHA, while having a small ownership interest (less than 1%), will nevertheless be the controlling entity.
3. There are typically provisions for the NHA to purchase back the balance of the ownership in the project after the tax credit compliance period (typically 15 years).

Tenant Protection Under RAD

In addition to the program addressing important physical issues, RAD also provides for strong tenant protections. Housing authorities must notify and consult with tenants throughout the conversion process. If relocation is required, residents must be provided an option to return to the completed RAD project without rescreening. Long-term affordability is required of owners of converted properties—they must renew their subsidy contract and cannot opt out when expired.

Elapsed Timeframe for a RAD Conversion

The process for RAD conversion is likely to take at least 12 to 18 months. A housing Authority first submits a simple Letter of Interest to HUD and is placed on a waiting list. HUD will notify a Public Housing Authority when funds are available and it will have 60 days to submit a complete RAD application. During that period, an Authority will need to consult with residents before obtaining board approval. Once HUD approves an application, it will issue a Commitment to enter into a Housing Assistance Payment Contract, or CHAP. Obtaining a CHAP is a critical step to accomplish as soon as possible. There is a nationwide cap on the number of housing units that can be converted under RAD, currently 435,000. A CHAP is a reservation of Authority under the cap.

In parallel with the HUD process, the Public Housing Authority will need to work with a tax-exempt-issuing agency to seek approval of tax-exempt bonds and 4% Low Income Housing Tax Credits, as well as identify an investor to purchase the tax credits. If the project requires 9% LIHTCs, then the PHA will have to compete for them, a process that usually takes 2 - 3 rounds.

Resources That Would be Required by the NHA

While a few large authorities may have personnel in place to set up the groundwork and apply for this program, most will use outside development consultants to assist the Authority in assembling a team of professionals. This will likely be the case with the NHA's future work of this type, as it was when the NHA replaced single family homes with duplexes at High Rock.

Risks and Rewards of the RAD Program

Financial Risks:

- The NHA will need to expend funds up front for a development/financial consultant and other professional services to assist it in navigating the RAD process.
- Once designated by HUD, the Authority will need to borrow pre-development funds for architectural/engineering services, environmental, surveys, financing consulting, etc.
- There is still the risk that the NHA will fail to obtain debt and/or equity financing.

Most of these risks are manageable. A key to minimizing risk will be to work with the Authority's development/financial consultant early in the process to: (1) develop a realistic budget; and (2) have him/her meet with lenders and tax credit syndicators to obtain feedback on the NHA's preliminary development program. The pre-development costs are reimbursable at construction closing. The Authority should be able to obtain feedback early in the process from tax exempt lenders (MassHousing or MassDevelopment) as well as syndicators as to the feasibility of what is being proposed.

Financial Rewards:

- First, RAD provides an important initial infusion of capital into a project. In the case of Captain Robert Cook and Seabeds, the potential modernization dollars could vary between nearly \$77,000 per unit and over \$128,000 per unit if the new HUD notice is found to be applicable to the project.
- Second, the RAD program provides a more stable source of operating funding than annual public housing operating subsidy from the Operating Fund. It builds into ongoing operations annual revenue increases through Operation Cost Adjustment Factors (OCAF's) which should help project bottom lines.

The following websites provide additional information about the RAD program and links to other relevant websites.

<https://www.hud.gov/RAD> is a 2 day, 14 segment set of training videos that provide detailed information on how to pursue RAD funding.

<https://www.hud.gov/sites/dfiles/PIH/documents/pih2018-04.pdf> provides information on how to use Section 8 and Tenant Protection Vouchers for RAD projects.

State Properties: High Leverage Asset Preservation Program (HILAPP)

For work beyond what can be supported by the annual formula funding program noted above, DHCD has created a program called HILAPP (High Leverage Asset Preservation Program). It is intended to leverage a housing Authority's ability to bring additional capital to a modernization effort by theoretically providing \$1.00 of DHCD funding for every \$0.30 of non-tax credit funding that a Public Housing Authority can muster (e.g., Needham CPA funds). 75% of HILAPP funding is geared towards projects requesting no more than \$65,000 per unit. 25% of HILAPP funding is available for developments facing high levels of distress and/or functional obsolescence. The limit for these funds is \$165,000 per unit.

The goal of the HILAPP program is to preserve as many existing low income housing units as possible. It prioritizes developments (1) with significant capital needs that cannot be met with formula funding, in communities (2) with the highest needs for extremely low income housing units. There are five major evaluation criteria to qualify for HILAPP funding:

1. Scope of work (ability to address 20 years of capital needs)
2. Leveraging of other Funding Sources (excluding Low Income Housing Tax Credits but counting monies such as CPA and local HOME)
3. Project Management Capacity
4. Property Management Capacity
5. Community Need. In addition, an Authority's ability to provide supportive services also strengthens a HILAPP funding application.

A threshold requirement for HILAPP funding is that a development must have a Facility Condition Index (FCI) of 15% or higher as recorded in DHCD's Capital Planning System as of April 11, 2016. (The FCI is a measure of building condition which compares the value of failed building components to replacement costs.) While previously only Matthews House (the Authority's 8-unit special needs development) qualified for HILAPP funding, a DHCD representative recently confirmed that both Linden and Chambers Streets now meet the minimum threshold for applying.

DHCD is accepting HILAPP applications on a rolling basis. The NHA is allowed to submit only one application per year. The program is accepted applications on a rolling basis.

State Properties: Partnership to Expand Housing Opportunities (PEHO)

This program was created for housing authorities interested in developing mixed income housing. DHCD provides extra modernization funding to cover a portion of the construction costs of the project. No additional operating subsidies are provided. DHCD issued a Notice of Funding Availability (NOFA) in late 2015. The Somerville and Chelsea Housing Authorities were selected as the initial recipients of PEHO funding. As of the completion of this report, neither project has broken ground.

DHCD is determining over the next six months which capital programs it will be targeting for funding.

State Properties: Modernizing Public Housing and Supporting Elders (ModPHASE)

In 2016, DHCD initiated a program with the Executive Office of Elder Affairs (EOEA) designed (1) to preserve senior Chapter 667 developments with extensive capital needs, and (2) to encourage housing authorities to work with senior service providers to assist the elderly with "aging in place". Developments must have a minimum of 20 units, and similar to the HILAPP program, must have a Facility Condition Index of 15% or higher as recorded in DHCD's Capital Planning System at the time the NOFA was issued. DHCD is determining over the next six months which capital programs it will be targeting for funding.

State Properties: Public Housing Innovation Demonstration Program

The recent bond bill passed by the Commonwealth authorized \$50 million in general obligation bonds for this for a Public Housing Innovation Program (PHIP) to be allocated over a 5 year period. It is designed to support initiatives that demonstrate cost effective revitalization methods for state-aided family and elderly/handicapped public housing. While the stated goals of the program are innovative models for improvement management (coordination among housing authorities and encouraging new affordable housing units on municipal-owned or Housing Authority owned land) the program's primary focus in actual practice appears to be to supplement funding for projects financed through other DHCD programs that may require statutory relief from such requirements as the designer selection process or provisions of Chapter 121B. It does not appear to be a stand-alone program.

Funding Sources That Can be Used for EITHER Federal or State Projects: Major Modernizations and New Development

Community Preservation Act. The NHA can also apply for funding from CPA monies, a flexible source of funds within the control of the Town of Needham. While the CPA bars the use of CPA dollars for repairs and maintenance, it is a particularly useful funding source since it can be spent on either federal or state projects involving significant improvements, major modernization or new developments. It can also be used for feasibility studies or as a general capital subsidy source. It also can provide the Authority with the required local matching source of funds should it decide to participate in a DHCD funding competition.

A minimum of 10% of the town’s CPA monies awarded to the Town must be reserved for affordable housing under the CPA statute. Another 20% is reserved for open space, recreation and historic preservation. The NHA is not precluded from applying for additional funding from the remaining 70% of unreserved Town CPA funds. Applications must meet the requirements of the Town’s Community Preservation Plan, which is updated periodically by the Needham CPC.

Applications for CPA funding are submitted annually to the Needham Community Preservation Committee (CPC) not later than December 1 of each year. The CPC in turn make recommendations to Town Meeting, which must approve the appropriation.

Home Funds. Another potential source of capital funding is the Home Investment Partnership Program (HOME). Needham is a member of the West Metro Home Consortium making the town eligible for federal HOME monies. In Fiscal Year 2018 the Town’s share of the consortium’s funding was approximately \$20,000. HOME funds are useful but clearly will not be a major source of funding for any but the smallest projects.

FUNDING SOURCES FOR NEW DEVELOPMENT AND CONSTRUCTION

Beyond the previously described funding programs available to the NHA through the HUD RAD program and the Town of Needham, there are two additional sources of funding that are potentially available for new development and construction – DHCD funding competitions and Section 202.

DHCD Funding Competitions

These are annual or semi-annual competitions that provide sponsors and developers with the opportunity to apply for a mixture of 9% federal Low Income Housing Tax Credits, state Low Income Housing Tax Credits and a variety of subordinate loan programs which are further explained below.

To participate in these funding competitions also requires the NHA to apply for and receive private financing. This brings opportunities for significant new funding as well as new challenges for the NHA, which has a small number of units under management and a small

administrative staff. NHA should not be a deterred from submitting a funding competition application —there are examples of LHA’s with less than 350 units (e.g., Chelmsford, Falmouth, Marion) that have found success despite their size. However, if the NHA is interested in pursuing new development construction, it must engage the appropriate professional consultants to guide the application process.

Role of Department of Housing and Community Development (DHCD)

If any development option considered by the NHA involves new construction, then a funding competition administered by the Department of Housing and Community Development will likely be part of the process. While most projects entering DHCD competitions are requesting 9% LIHTC’s for new development and construction, a preservation project that needs additional capital sources, such as one of the DHCD subordinate debt programs or state LIHTC’s, can also apply. In addition to the Federal 4% and 9% Low Income Housing Tax Credits, the Commonwealth created its own Low Income Housing Tax Credit Program. The Federal and State LIHTC Programs differ as follows:

- While the Federal programs provide an annual credit against federal taxes for 10 years, the state credit is more limited, with a term of only 5 years.
- While both federal and state programs have project caps, the state LIHTC program has caps based on the number of units. For example, projects with 41 to 60 units are limited to \$700,000 per year of annual credit while projects sized between 61 and 100 units are capped at \$1 million annually. For this reason, in Section 6 of this report, a proposed 61 unit development at the Seabeds Way /Captain Robert Cook Drive has been identified to maximize the state LIHTC award.

There are also a variety of subordinate loan programs available for low income affordable housing projects.

- With the exception of HOME, which is a federal pass-through, programs such as the Affordable Housing Trust, Housing Stabilization Fund, and others are typically funded through bond authorizations of the state legislature. These are programs which are also referred to as “soft debt”—unlike a first mortgage on a property, they do not require on-going loan payments. They typically have very low interest rates (less than 1%) and the interest accrues over the 30 to 50 year term of the loans.
- The HOME Investment Partnerships Program provides \$750,000 to \$1,000,000 per project, with a per-affordable-unit maximum of \$50,000-\$75,000 in HOME entitlement/consortium communities like Needham. In communities receiving HOME funds directly from HUD, matching funds must be included as part of the DHCD application.
- The Commonwealth’s Housing Stabilization Fund has requirements similar to HOME.
- The Affordable Housing Trust Fund has a \$1,000,000 project limit and a \$50,000 per affordable unit limit.

Participating in a Funding Competition

In order to participate in a competition, a project must be pre-approved by DHCD via a pre-application process. The process is basically a “readiness” test—for example, if a project does not have zoning relief in place, DHCD will not extend an invitation since it is unlikely to be in a position to close on its financing in a reasonable period of time. In addition, a project must have site control and have closed all projects for which DHCD has previously awarded funding.

The rules for entering DHCD competitions are laid out each year in a document called the Qualified Allocation Plan. It establishes the set-aside categories (e.g. 70% production, 30% preservation), per unit cost limits (e.g. a suburban small unit new construction total development cost per unit limit for Needham in 2018 is \$319,000), and project subsidy limits (e.g. State LIHTC caps are \$400,000 annually for 40 or fewer units, \$700,000 for 41-60 units, \$1 million for 61-100 units and \$1.5 million for greater than 100 units).

Funding Rounds: Try, Try and Try Again

There is typically one funding competition per year, and sometimes two. Projects must be pre-approved. The applications are submitted on-line via DHCD’s Mass OneStop+ web-based application.

There are many more applications for funding through these competitions than there are available funds, and there is no guarantee that an application will ever be funded. However, after an initial rejection, DHCD staff will sit down with unsuccessful applicants and provide feedback as to how an application can be strengthened. This may involve design changes or advancing design documents to the construction phase. DHCD will also require local funding contributions as part of an application when a community is a member of a HOME consortium. This can be either CPA, HOME or another source. While an applicant may occasionally be funded after two rounds, it often takes three rounds for a successful proposal to receive an award given the ratio of proposals to available funding.

HUD Section 202

Section 202 provides interest-free capital advances for the development of very low income elderly housing. The capital advance does not have to be repaid as long as the project serves very low income elderly persons for 40 years. Project rental assistance funds are provided to cover the difference between the HUD-approved operating cost of the project and the tenants’ contributions to the rent.

For the first time since Fiscal Year 2011, HUD has authorized \$105,000,000 for new Section 202 construction and project based assistance. This authorization could result in approximately 760 new units of affordable senior housing nationally. The NHA should explore whether this program could meet their needs.

DEVELOPMENT CONSIDERATIONS

Steps to Consider in Pursuing Private Financing Options

Engaging with the world of private finance will have several significant implications for how the NHA conducts business. Both the RAD program and DHCD funding competition involve mortgaging Authority property and seeking out investors to purchase Low Income Housing Tax Credits. As was discussed earlier, this will require different ownership structures for the NHA than what is now in place. Obtaining sound technical expertise and pre-development resources to cover early costs is essential.

Other issues that will need to be addressed include:

- **Assembling a Development Team.** Putting together a successful RAD package, tax-exempt loan application, or DHCD funding application, and either 4% or 9% LIHTC equity syndication, will require an experienced team: a development/financial consultant, a design team and a law firm will be essential for the Authority to navigate the process.
- **Identifying Pre-development Loan/Grant Funding.** While approaches to funding vary, the NHA will need to spend funds on architectural and engineering plans, environmental studies, surveys, financial feasibility analyses, preliminary legal work, etc. Either CPA monies or pre-development loans from organizations such as the quasi-public agency CEDAC (Community Economic Development Assistance Corporation) should be considered to cover these costs. Once a development/financial consultant is retained, they can assist the NHA with identifying the most appropriate sources of funding.
- **Creating New Ownership Structures.** Each project will require a single purpose entity owner. In addition, a transaction involving the sale of Low Income Housing Tax Credits will involve the creation of a limited partnership in which the NHA will be part of a for-profit general partnership, with the tax credit investor being the limited partner. The NHA’s attorney and development/financial consultant will assist the Authority to create the most appropriate structures that protect the long-term interests of the agency and residents.
- **Exploring Alternative Management Options.** In evaluating potential deals, a tax credit investor/syndicator will focus on the experience of the developer and in particular, the property manager. A manager’s experience in leasing to tax credit-eligible households is critical in the evaluation process, since failure to perform will have significant financial impacts on the returns promised investors. A question for the NHA will be whether it can rely on its staff to be trained to perform all of the tasks required to provide comfort to an investor, or whether it will need to explore bringing in third party management to operate properties that are syndicated.
- **Project-Basing of Section 8 Vouchers.** The Authority’s ability to project-base some of its Section 8 mobile vouchers for its federal properties undergoing RAD conversions can have a significant impact on its ability to support debt. The NHA will also have to decide

whether to deploy Project Based Vouchers or Project Based Rental Assistance Vouchers. Given that it does not directly administer its own voucher program, the NHA needs to understand what steps to undertake to maximize the availability of Section 8 for Captain Robert Cook/Seabeds and High Rock Estates.

Other Issues to Consider in Moving Towards Private Financing Options

If the NHA is successful in either converting its federal developments to RAD tax credit projects, or developing new tax credit projects, there are several important issues which should be considered:

- There will be less funding for the NHA’s remaining properties to cover staff salaries and routine repairs and improvements.
- The Authority will have a greater number of organizations monitoring its operations. In addition to HUD, that will still be involved because of the long-term Section 8 contracts associated with RAD, there will be reporting requirements associated with the permanent lender, tax credit investor and tax credit compliance reviewer. These requirements will either be handled by a third party property manager or Authority staff.
- If the Authority initially relies on a private property manager to assist it with tax credit marketing and compliance issues, the agency will need to think through how to integrate the company with its overall operations.
- Rather than having either one waiting list for all of the NHA’s properties, tax credit developments require separate project-based waiting lists. This will necessitate a significant administrative change in how the Authority approaches leasing.
- The NHA will be potentially generating significant developer fees from RAD projects (e.g. an estimated \$970,000+ from the Captain Robert Cook Drive/Seabeds Way modernization). While some of the fees will be held to build up Authority reserves for future development projects, the fees can provide the NHA with flexibility to enhance its capacity in response to some of the increased administrative demands that accompany utilizing these programs.
- As the NHA does more development involving project-basing of Section 8, it should evaluate whether exercising greater control over its Section 8 portfolio merits consideration. Self-management of its Section 8 vouchers might make the development process easier as well as providing administrative fees for the organization.

RISKS AND REWARDS OF ENTERING DHCD FUNDING COMPETITIONS

Risks:

Similar to the considerations which were mentioned in the risks paragraph of the RAD section

of this report, the NHA would be required to incur pre-development costs for development/finance consulting and design services. However unlike RAD, the NHA would need to expend significant dollars without any guarantee of a funding/subsidy commitment—DHCD requires that projects exhibit a high degree of readiness to proceed to construction. In other words, they should be permitted and be far along in the construction document process. While DHCD staff provide feedback to development teams to improve proposals that are not initially funded, there is no guarantee of funding.

Rewards:

The DHCD competition is the only vehicle available to provide significant subsidy dollars for stand-alone affordable new construction projects. In addition, it is also available to supplement bond-financed 4% LIHTC preservation projects (although developers would need to be prepared to wait through the same 2-3 funding cycles as if they were applying for a 9% LIHTC project). Thousands of units of affordable housing have been constructed using tax credits, and various subordinate debt programs. Numerous housing authorities have successfully utilized these programs with the assistance of the numerous consultants that exist in the Commonwealth with the expertise to assist the NHA if it decides to pursue these funding sources.

LOW INCOME HOUSING REFERENCES

A great deal of information is available on-line that describes various programs, application requirements and guidelines for pursuing funding. Some of the most relevant websites include:

Qualified Allocation Plan

<https://www.mass.gov/files/documents/2018/04/26/20182019QAP.pdf>

Low Income Housing Tax Credits

<https://www.mass.gov/service-details/low-income-housing-tax-credit-lihtc>

DHCD Subordinate Debt Programs

<https://www.mass.gov/service-details/home-investment-partnerships-program-home>

Housing Stabilization Fund

<https://www.mass.gov/service-details/housing-stabilization-fund-hsf>

Affordable Housing Trust Fund Guidelines

<https://www.mass.gov/files/documents/2016/07/wm/ahtfguide.pdf>

8

COST ESTIMATES, PRO FORMAS AND FUNDING STRATEGIES

INTRODUCTION

The previous Section 7 outlines the federal and state programs that may be available to fund major modernization and new development/construction of the Needham Housing Authority properties. In this Section 8 we apply these programs to create funding pro formas for the four projects that could be realistically envisioned for the NHA, showing the costs and funding source which could be assembled for each project:

1. Major Modernization of the Existing Buildings at Seabeds/Capt. Robert Cook
2. Construction of 61 new Senior Apartments on the Seabeds/Capt. Robert Cook site
3. Replacement of High Rock Old Single-Family Bungalows with Two-Family Duplexes
4. Redevelopment/Replacement of Linden/Chambers Buildings

The pro formas that are associated with the Modernization recommendations for Captain Robert Cook and Seabeds require HUD approvals through the major Federal program known as the Rental Assistance Demonstration (RAD). Remaining funding (4% Low Income Housing Tax Credits, CPA) can be obtained without seeking monies through DHCD funding competitions. The pro forma for the replacement duplexes at High Rock would require both HUD approval and entering DHCD funding competitions since the final product would be new construction. The proposed new construction at Seabeds Way/ Captain Robert Cook Drive would also require competing for state funding through the DHCD funding competition.

The proposed model for Linden and Chambers Streets contemplates redevelopment/replacement as the only viable option. The current physical design of the site and buildings are not suited for seniors to age in place in New England, and could not be feasibly modernized to achieve this goal. While recent changes in the threshold scoring for the state HILAPP program theoretically enables the Authority to apply for modernization funding, it is unlikely that either development will be able to meet the funding criteria of the program.

Because of the extremely low income of senior households living in the Linden and Chambers St. Chapter 667 housing, significantly higher subsidy commitments will be needed to produce housing that truly meets the long term needs of older residents. Ultimately, we believe that some form of pilot program will need to be created that can address the needs of Linden and Chambers Street. This will require the board to develop a political strategy that builds on the support of town and state representatives. The state has shown a willingness in the past to fund models that could be used to successfully redevelop Linden and Chambers Street (e.g. Capen Court in Somerville).

Using the information in Sections 7 & 8 of this report, the Needham Housing Authority will be in the best possible position to avail itself of opportunities if it is clear on its aspirations, has defined desired scopes of work, and understands the changes in governance and staffing that may be required to move forward with more ambitious rehabilitation and new construction work. Establishing and maintaining relationships with a Community Housing Specialist, affordable housing advocates, state and federal agencies and local political representatives will help the NHA to find and pursue opportunities when they arise.

PRO FORMA NARRATIVE/REDEVELOPMENT ESTIMATES

1. Captain Robert Cook/Seabeds-RAD Modernization

The Modernization of Captain Robert Cook and Seabeds developments is done through HUD’s Rental Assistance Demonstration Program (RAD), tax exempt bonds and 4% Low Income Housing Tax Credits that are syndicated to an investor. The pro forma does not assume any contribution by the town in determining the maximum rehabilitation per unit (nearly \$77,000 per unit assuming a 10% construction contingency).

The projections do assume that the Authority will project-base eight of its mobile vouchers as part of the RAD conversion. This is a technique used by housing authorities to boost supportable debt since the Section 8 RAD rents are significantly lower than the local Fair Market Rents.

Construction costs assume prevailing wages.

Capt Robt Cook/Seabeds Modernization			
Unit Mix	Total	100%	
Total Units	76		
Total LIHTC Units	76	100%	
Total Affordable	0	0%	
Total Market Units	0	0%	
Total Moderate Units	0	0%	
Total Development Cost	Total	Total/Unit	Total/GSF
TDC	\$16,483,881	\$216,893	\$251.04
Acquisition	\$7,600,000	\$100,000	\$115.74
Construction	\$5,838,029	\$76,816	\$88.91
Soft Costs	\$1,371,819	\$18,050	\$20.89
Developer Fee/Overhead	\$1,300,000	\$17,105	\$19.80
Reserves	\$374,034	\$4,921	\$5.70
Total Sources	Total	Total/Unit	Total/GSF
Total Sources	\$16,483,881	\$216,893	\$251.04
Permanent Loan	\$2,764,669	\$36,377	\$42.10
Federal Tax Credit Equity	\$5,794,212	\$76,240	\$88.24
Housing Trust/CPA	\$0	\$0	\$0.00
Developer Fee Loaned	\$325,000	\$4,276	\$4.95
Acquisition Loan	\$7,600,000	\$100,000	\$115.74
Surplus or (Gap)	\$0		

Capt Robt Cook/Seabeds Modernization								
Proposed Unit Mix and Operating Assumptions								
Unit Mix		Units	% total	NSF	Total NSF	Annual Income	Mo Total Rent	Gross Monthly Rent
1 BR	Sec 8 RAD	44	58%	540	23,760	\$341,088	\$28,424	\$646
1 BR	Sec. 8	2	3%	540	1,080	\$34,104	\$2,842	\$1,421
Sub-Total 1 BR		46	61%		24,840	\$375,192	\$31,266	
2 BR	Sec 8 RAD	3	4%	736	2,208	\$28,908	\$2,409	\$803
2 BR	Sec. 8	2	3%	736	1,472	\$41,760	\$3,480	\$1,740
Sub-Total 2 BR		5	7%		3,680	\$70,668	\$5,889	
3BR	Sec 8 RAD	18	24%	921	16,578	\$215,352	\$17,946	\$997
3BR	Sec. 8	2	3%	921	1,842	\$52,368	\$4,364	\$2,182
Sub-Total 3 BR		20	26%		18,420	\$267,720	\$22,310	
4BR	Sec 8 RAD	3	4%	1,209	3,627	\$39,636	\$3,303	\$1,101
4BR	Sec. 8	2	3%	1,209	2,418	\$56,880	\$4,740	\$2,370
Sub-Total 4 BR		5	7%		6,045	\$96,516	\$8,043	
Total Units		76	100%		52,985	\$810,096	\$59,465	
GROSS POTENTIAL RESIDENTIAL INCOME						\$810,096		
Vacancy								
Affordable 5%						\$40,505		
EFFECTIVE RESIDENTIAL RENTAL INCOME						\$769,591		
Residential Operating Expenses						Annual Total	Monthly Total	Per Unit Annual
Total Residential Operating expenses								
Management Fee						\$46,175	\$3,848	\$608
Administrative						\$135,000	\$11,250	\$1,776
Maintenance						\$189,838	\$15,820	\$2,498
Monitoring Fee						\$5,556	\$463	\$73
Utilities						\$110,674	\$9,223	\$1,456
Taxes						\$20,407	\$1,701	\$269
Insurance						\$35,557	\$2,963	\$468
MIP						\$4,414	\$368	\$58
Replacement Res.						\$38,000	\$3,167	\$500
Total Expenses						\$585,621	\$48,802	\$7,706
Net Operating Income						\$183,970		
Debt Service						\$159,974		
Cash Flow						\$23,996		
DSCR						1.15		

2. Captain Robert Cook/Seabeds-New Construction Senior Apartments

The proposed 61 unit new construction of senior apartments achieves feasibility through entering a DHCD funding competition and obtaining 9% Low Income Housing Tax Credits, State Low Income Housing Tax Credits and subordinate debt through three of DHCD’s programs (HOME, Affordable Housing Trust Fund, and Housing Stabilization Fund). A mandatory municipal match is met through a \$950,000 CPA award.

53 of the 61 units are targeted for low income seniors at 60% of area median income. Eight of the units will be designated for seniors who are extremely low income by using project-based Section 8 which will be requested from DHCD as part of the funding competition.

Construction costs assume prevailing wages.

Capt Robt Cook/Seabeds Sr New Construction			
Unit Mix	Total	100%	
Total Units	61		
Total LIHTC Units	61	100%	
Total Affordable	0	0%	
Total Market Units	0	0%	
Total Moderate Units	0	0%	
Total Development Cost	Total	Total/Unit	Total/GSF
TDC	\$21,242,911	\$348,244	\$464.33
Acquisition	\$0	\$0	\$0.00
Construction	\$16,102,451	\$263,975	\$351.97
Soft Costs	\$2,780,572	\$45,583	\$60.78
Developer Fee/Overhead	\$1,984,000	\$32,525	\$43.37
Reserves	\$375,888	\$6,162	\$8.22
Total Sources	Total	Total/Unit	Total/GSF
Total Sources	\$21,242,911	\$348,244	\$464.33
Permanent Loan	\$4,245,491	\$69,598	\$92.80
Federal Tax Credit Equity	\$9,799,020	\$160,640	\$214.19
State Tax Credit	\$3,750,000	\$61,475	\$81.97
Housing Trust/CPA	\$950,000	\$15,574	\$20.77
State Soft Debt	\$2,300,000	\$37,705	\$50.27
Developer Fee Loaned	\$198,400	\$3,252	\$4.34
Surplus or (Gap)	\$0		

Capt Robt Cook/Seabeds Sr New Construction												
Proposed Unit Mix and Operating Assumptions												
Unit Mix			Units	%total	NSF	Total NSF	Monthly		Utility	Gross	Net Monthly	
							Annual Income	Total Rent	Allowance	Monthly Rent	Rent/SF	
1 BR	1 BA	affordable 30%	0	0%	600	0	\$0	\$0		\$0	\$0.00	
1 BR	1 BA	Sec. 8	8	13%	600	4,800	\$136,416	\$11,368		\$1,421	\$2.37	
1 BR	1 BA	affordable MRVP	0	0%	0	0	\$0	\$0		\$0	\$0.00	
1 BR	1 BA	affordable 50%	0	0%	0	0	\$0	\$0		\$0	\$0.00	
1 BR	1 BA	affordable 60%	53	87%	600	31,800	\$740,304	\$61,692		\$1,164	\$1.94	
1 BR	1 BA	affordable 80%	0	0%	0	0	\$0	\$0	\$0	\$0	\$0.00	
Sub-Total 1 BR			61	100%		36,600	\$876,720	\$73,060				
Total Units			61	100%		36,600	\$876,720	\$73,060				
Unit Summary			Total Units	% of Units	of Units/SF							
			Total Section 8	8	13%	13%	\$136,416					
			Total 60%	53	87%	87%	\$740,304					
			% of Units LIHTC-Eligible		100%	100%						
Percentage LIHTC Eligible												
Other Income												
Parking							\$0					
Laundry							\$2,928					
Storage							\$0					
Total Commercial and Other Income							\$2,928					
GROSS POTENTIAL RESIDENTIAL INCOME							\$879,648					
Vacancy												
Affordable 5%							\$43,836					
Market/Mod							\$0					
Other Income 5%							\$146					
Commercial							\$0					
EFFECTIVE RESIDENTIAL RENTAL INCOME							\$835,666					
Residential Operating Expenses							Monthly		Per Unit			
							Annual Total	Total	Annual			
Total Residential Operating expenses												
Management Fee							\$50,140	\$4,178	\$822			
Administrative							\$90,000	\$7,500	\$1,475			
Maintenance							\$109,800	\$9,150	\$1,800			
Resident Services							\$50,000	\$4,167	\$820			
Utilities							\$109,800	\$9,150	\$1,800			
Taxes							\$54,900	\$4,575	\$900			
Insurance							\$33,550	\$2,796	\$550			
Replacement Res.							\$21,350	\$1,779	\$350			
Monitoring Fee							\$0	\$0	\$0			
MIP							\$10,981	\$915	\$1			
Total Expenses							\$530,521	\$44,210	\$8,697			
Net Operating Income							\$305,145					
Debt Service							\$221,720					
Cash Flow							\$83,425					
DSCR							1.38					

3. High Rock Estates-Two Phase Redevelopment

The current High Rock Property consists of 60 single family homes (known as High Rock Estates) and 20 duplex homes that replaced 20 single family homes in 2009 (know as High Rock Homes). The proposed two-phase redevelopment assumes a HUD-RAD conversion involving the demolition of the 60 single family homes (or 51 homes if nine are incorporated into the Linden/Chambers 152 unit new development as proposed in the previous Section) and construction of 60 (or 51) new duplexes containing 120 units (or 102).

The project is divided into two phases to ease relocation issues as well as to divide the subsidy request between two competitions. Feasibility is achieved through entering a DHCD funding competition and obtaining 9% Low Income Housing Tax Credits, State Low Income Housing Tax Credits and subordinate debt through three of DHCD’s programs (HOME, Affordable Housing Trust Fund, and Housing Stabilization Fund). Each funding round assumes that the municipal matching contribution will made through a \$750,000 from CPA monies.

60 of the 120 units will have project-based Section 8 subsidies ensuring that those units meet the income needs of current public housing residents. (Eight of the units in each phase would ideally be project-based from the total vouchers assigned to the NHA to maximize the loan proceeds). The balance of the units will be established for households earning 60% of area median income.

Construction costs assume prevailing wage.

High Rock Estates Phase 1			
Unit Mix	Total	100%	
Total Units	60		
Total LIHTC Units	60	100%	
Total Affordable	0	0%	
Total Market Units	0	0%	
Total Moderate Units	0	0%	
Total Development Cost	Total	Total/Unit	Total/GSF
TDC	\$22,700,023	\$378,334	\$325.45
Acquisition	\$0	\$0	\$0.00
Construction	\$16,994,337	\$283,239	\$243.65
Soft Costs	\$3,215,536	\$53,592	\$46.10
Developer Fee/Overhead	\$2,086,000	\$34,767	\$29.91
Reserves	\$404,151	\$6,736	\$5.79
Total Sources	Total	Total/Unit	Total/GSF
Total Sources	\$22,700,023	\$378,334	\$325.45
Permanent Loan	\$6,537,623	\$108,960	\$93.73
Federal Tax Credit Equity	\$9,799,020	\$163,317	\$140.49
State Tax Credit	\$2,625,000	\$43,750	\$37.63
Federal Home Loan Bank	\$0	\$0	\$0.00
CPA	\$750,000	\$12,500	\$10.75
State Soft Debt	\$2,300,000	\$38,333	\$32.97
Developer Fee Loaned	\$688,380	\$11,473	\$9.87
Cash Equity from Land Sale	\$0	\$0	\$0.00
Surplus or (Gap)	\$0		

High Rock Estates Phase 1															
Proposed Unit Mix and Operating Assumptions															
Unit Mix							Units	%total	NSF	Total NSF	Annual Income	Monthly Total Rent	Utility Allowance	Gross Monthly Rent	Net Monthly Rent/SF
2 BR	1 BA	Sec. 8-RAD		13	22%	1,100	14,300				\$103,116	\$8,593		\$661	\$0.60
2 BR	1 BA	Section 8		4	7%	1,100	4,400				\$83,520	\$6,960		\$1,740	\$1.58
2 BR	1 BA	affordable 60%		13	22%	1,100	14,300				\$215,779	\$17,982		\$1,383	\$1.26
Sub-Total 2 BR				30	50%		33,000				\$402,415	\$33,535			
3BR	2 BA	Sec. 8-RAD		10	17%	1,225	12,250				\$98,520	\$8,210		\$821	\$0.67
3BR	2 BA	Section 8		4	7%	1,225	4,900				\$104,736	\$8,728		\$2,182	\$1.78
3BR	2 BA	affordable 60%		16	27%	1,225	19,600				\$306,797	\$25,566		\$1,598	\$1.30
Sub-Total 3 BR				30	50%		36,750				\$510,053	\$42,504			
Total Units				60	100%		69,750				\$912,468	\$76,039			
Unit Summary				Total Units	% of Units	of Units/SF									
				Total Section 8 RAD	23	38%	38%	\$201,636							
				Total Section 8	8	13%	13%	\$188,256							
				Total 60%	29	48%	49%	\$522,576							
				% of Units LIHTC-Eligible		100%	100%								
Percentage LIHTC Eligible															
GROSS POTENTIAL RESIDENTIAL INCOME											\$912,468				
Vacancy															
Affordable 5%											\$45,623				
EFFECTIVE RESIDENTIAL RENTAL INCOME											\$866,845				
Residential Operating Expenses											Annual Total	Monthly Total	Per Unit Annual		
Total Residential Operating expenses															
Management Fee											\$52,011	\$4,334	\$867		
Administrative											\$93,000	\$7,750	\$1,550		
Maintenance											\$96,000	\$8,000	\$1,600		
Resident Services											\$0	\$0	\$0		
Utilities											\$96,000	\$8,000	\$1,600		
Taxes (PILOT)											\$42,000	\$3,500	\$700		
Insurance											\$30,000	\$2,500	\$500		
Replacement Res.											\$21,000	\$1,750	\$350		
Monitoring Fee											\$1,800	\$150	\$0		
MIP											\$0	\$0	\$0		
Total Expenses (including meals and housekeeping)											\$431,811	\$35,984	\$7,197		
Net Operating Income											\$435,034				
Debt Service											\$378,290				
Cash Flow											\$56,744				
DSCR											1.15				

4. Linden Chambers Replacement

The replacement of the Linden and Chambers developments on an adjacent parcel (created by using nine of the High Rock bungalow properties) can be made possible by an allocation of 152 units of project-based Section 8 subsidy. This pilot is based on a model that DHCD utilized when it funded the Capen Court redevelopment in Somerville in which 64 state-aided walk-up senior apartments were converted into a 95-unit elevator Section 8 building.

Feasibility is achieved through entering a DHCD funding competition and obtaining 9% Low Income Housing Tax Credits, State Low Income Housing Tax Credits and subordinate debt through three of DHCD’s programs (HOME, Affordable Housing Trust Fund, and Housing Stabilization Fund). In addition, the financing assumes a two part subsidy award from the Federal Home Loan Bank Affordable Housing Program: (1) a \$1 million capital subsidy; and (2) an interest reduction subsidy. DHCD requires matching contributions from local communities as an important component of its funding round. \$2 million of CPA monies are shown as a source as part of the capital structure.

Finally, since the land that Linden and Chambers Street developments previously occupied will now be available for development, the pro forma assumes that the NHA will be able to net approximately \$6 million in land profit that will be reinvested in the redevelopment of Linden/Chambers through the sale of 21 single family house lots. The NHA will have to provide comfort to its construction lender. The NHA and land purchaser will obviously need to provide comfort to the project construction lender that the monies will be available by the end of construction.

Construction costs assume prevailing wages.

Linden Chambers Redevelopment									
Proposed Unit Mix and Operating Assumptions									
Unit Mix					Units	%total	NSF	Total NSF	
0 BR					152	100%	475	72,200	
1 BA					152	100%	72,200		
affordable Sec.8									
Sub-Total 0 BR					152	100%	72,200		
Total Units					152	100%	72,200		
Unit Summary					Total Units	% of Units	of Units/SF		
Total Section 8					152	100%	100%		\$2,514,019
% of Units LIHTC-Eligible						100%	100%		
Percentage LIHTC Eligible									
Other Income									
Parking					\$0	8			\$0
Laundry					\$4	152			\$7,296
Storage					\$0	0			\$0
Total Commercial and Other Income									\$7,296
GROSS POTENTIAL RESIDENTIAL INCOME									\$2,521,315
Vacancy									
Affordable					3%				\$75,421
Other Income					5%				\$365
EFFECTIVE RESIDENTIAL RENTAL INCOME									\$2,445,530
Residential Operating Expenses					Annual Total	Monthly Total	Per Unit Annual		
Total Residential Operating expenses									
Management Fee					\$146,732	\$12,228		\$965	
Administrative					\$182,400	\$15,200		\$1,200	
Maintenance					\$245,000	\$20,417		\$1,612	
Resident Services					\$65,000	\$5,417		\$428	
Utilities					\$228,000	\$19,000		\$1,500	
Taxes (PILOT)					\$91,200	\$7,600		\$600	
Insurance					\$83,600	\$6,967		\$550	
Replacement Res.					\$53,200	\$4,433		\$350	
Monitoring Fee					\$4,560	\$380		\$0	
MIP					\$0	\$0		\$0	
Total Expenses (including meals and housekeeping)					\$1,099,692	\$91,641		\$7,235	
Net Operating Income					\$1,345,838				
Debt Service					\$1,086,239				
Cash Flow					\$259,599				
DSCR					1.24				

Linden Chambers Redevelopment			
Assumptions			
9% Tax Credits + State LIHTC		New construction on adjacent site	
HOME, HSF & AHTF state soft debt		152 units of proj based Sec 8	
Equity from Sale of Old Linden & Chambers St sites			
Unit Mix	Total	100%	
Total Units	152		
Total LIHTC Units	152	100%	
Total Affordable	0	0%	
Total Market Units	0	0%	
Total Moderate Units	0	0%	
Total Development Cost	Total	Total/Unit	Total/GSF
TDC	\$47,199,911	\$310,526	\$522.99
Acquisition	\$0	\$0	\$0.00
Construction	\$35,707,536	\$234,918	\$395.65
Soft Costs	\$5,886,446	\$38,727	\$65.22
Developer Fee/Overhead	\$4,515,243	\$29,706	\$50.03
Reserves	\$1,090,685	\$7,176	\$12.09
Total Sources	Total	Total/Unit	Total/GSF
Total Sources	\$47,199,911	\$310,526	\$522.99
Permanent Loan	\$20,799,315	\$136,838	\$230.46
Federal Tax Credit Equity	\$9,799,020	\$64,467	\$108.58
State Tax Credit	\$3,750,000	\$24,671	\$41.55
Federal Home Loan Bank	\$1,000,000	\$6,579	\$11.08
CPA	\$2,000,000	\$13,158	\$22.16
State Soft Debt	\$2,300,000	\$15,132	\$25.48
Developer Fee Loaned	\$1,503,576	\$9,892	\$16.66
Cash Equity from Land Sale	\$6,048,000	\$39,789	\$67.01
Surplus or (Gap)	\$0		

High Rock Estates Phase 2			
Unit Mix	Total	100%	
Total Units	60		
Total LIHTC Units	60	100%	
Total Affordable	0	0%	
Total Market Units	0	0%	
Total Moderate Units	0	0%	
Total Development Cost	Total	Total/Unit	Total/GSF
TDC	\$22,947,046	\$382,451	\$328.99
Acquisition	\$0	\$0	\$0.00
Construction	\$17,183,718	\$286,395	\$246.36
Soft Costs	\$3,248,680	\$54,145	\$46.58
Developer Fee/Overhead	\$2,103,000	\$35,050	\$30.15
Reserves	\$411,648	\$6,861	\$5.90
Total Sources	Total	Total/Unit	Total/GSF
Total Sources	\$22,947,046	\$382,451	\$328.99
Permanent Loan	\$6,779,036	\$112,984	\$97.19
Federal Tax Credit Equity	\$9,799,020	\$163,317	\$140.49
State Tax Credit	\$2,625,000	\$43,750	\$37.63
Federal Home Loan Bank	\$0	\$0	\$0.00
CPA	\$750,000	\$12,500	\$10.75
State Soft Debt	\$2,300,000	\$38,333	\$32.97
Developer Fee Loaned	\$693,990	\$11,567	\$9.95
Cash Equity from Land Sale	\$0	\$0	\$0.00
Surplus or (Gap)	\$0		

High Rock Estates Phase 2										
Proposed Unit Mix and Operating Assumptions										
Unit Mix							Annual Income	Monthly Total Rent	Utility Allowance	Net Monthly Rent/SF
			Units	%total	NSF	Total NSF				
2 BR	1 BA	Sec. 8-RAD	12	20%	1,100	13,200	\$95,184	\$7,932		\$661
2 BR	1 BA	Section 8	4	7%	1,100	4,400	\$83,520	\$6,960		\$1,740
2 BR	1 BA	affordable 60%	14	23%	1,100	15,400	\$232,378	\$19,365		\$1,383
Sub-Total 2 BR			30	50%		33,000	\$411,082	\$34,257		
3BR	2 BA	Sec. 8-RAD	9	15%	1,225	11,025	\$88,668	\$7,389		\$821
3BR	2 BA	Section 8	4	7%	1,225	4,900	\$104,736	\$8,728		\$2,182
3BR	2 BA	affordable 60%	17	28%	1,225	20,825	\$325,972	\$27,164		\$1,598
Sub-Total 3 BR			30	50%		36,750	\$519,376	\$43,281		
Total Units			60	100%		69,750	\$930,457	\$77,538		
Unit Summary			Total Units	% of Units	of Units/SF					
			Total Section 8 RAD	21	20%		\$183,852			
			Total Section 8	8	13%		\$188,256			
			Total 60%	31	52%		\$558,349			
			% of Units LIHTC-Eligible		85%	100%				
Percentage LIHTC Eligible										
GROSS POTENTIAL RESIDENTIAL INCOME							\$930,457			
Vacancy										
Affordable 5%							\$46,523			
EFFECTIVE RESIDENTIAL RENTAL INCOME							\$883,934			
Residential Operating Expenses							Annual Total	Monthly Total		Per Unit Annual
Total Residential Operating expenses										
Management Fee							\$53,036	\$4,420		\$884
Administrative							\$93,000	\$7,750		\$1,550
Maintenance							\$96,000	\$8,000		\$1,600
Resident Services							\$0	\$0		\$0
Utilities							\$96,000	\$8,000		\$1,600
Taxes (PILOT)							\$42,000	\$3,500		\$700
Insurance							\$30,000	\$2,500		\$500
Replacement Res.							\$21,000	\$1,750		\$350
Monitoring Fee							\$1,800	\$150		\$0
MIP							\$0	\$0		\$0
Total Expenses (including meals and housekeeping)							\$432,836	\$36,070		\$7,214
Net Operating Income							\$451,098			
Debt Service							\$392,259			
Cash Flow							\$58,839			
DSCR							1.15			

9

CONSULTANT FINDINGS AND RECOMMENDATIONS

INTRODUCTION

This report can be considered an “owner’s manual” for the NHA’s properties, giving management, staff, the Board, tenants and the Town a common understanding of the Authority’s mission, resources and properties, and a master plan for their evolution. It is intended to lay out needs, options and opportunities for the next decade or more, although priorities may change along with the economic and political climate.

Although the NHA is well managed and properties are in relatively good condition, it is in the same position as most other housing authorities – over the next few decades affordable housing needs will continue to rise, along with standards and expectations, while the condition of the existing properties, now many decades old, will continue to decline.

This report provides descriptions of existing NHA developments, histories of recent renovations and lists of work to be done, options for more ambitious modernization projects, and new development opportunities at the Seabeds Way/Captain Robert Cook Drive, and Linden Street/Chamber Street/High Rock clusters. It also provides pro formas and funding options that may be available to the Needham Housing Authority. This Section 9 distills out of this information recommendations for opportunities to be pursued. It also suggests a change in mindset, where even small changes are seen in the context of the longer term master plan.

On May 31, 2018, Governor Charlie Baker signed the \$1.8 billion Housing Bond Bill (H.4536) into law. This is the largest housing bond bill in the state’s history and is expected to “increase the production of affordable housing and modernize public housing” according to CHAPA, (Citizens Housing and Planning Association) the state’s most influential affordable housing advocacy organization. Although there will continue to be a great deal of competition for very limited resources, the NHA can be in a better position to take advantage of funding opportunities if it has a master plan in place for its properties.

The modernization and new development work being proposed is exactly the kind of work being pursued by other housing authorities in the Commonwealth, and by community development corporations and for-profit developers designing and building affordable and mixed income projects. The Needham Housing Authority is in a less advantageous position to compete for this funding than some other organizations.

Unlike many Community Development Corporations and developers, the NHA has an aging portfolio of buildings and a large number of vulnerable tenants with limited staff to explore opportunities beyond making modest improvements in existing conditions. Unlike the Boston Housing Authority, the Cambridge Housing Authority and other major city housing authorities, the NHA is not large enough to have a development staff dedicated to pursuing funding and approvals for major projects.

The NHA’s routine maintenance and capital improvement needs are funded on an annual basis by HUD at Seabeds Way, Captain Robert Cook and High Rock, and by DHCD at Linden, Chambers and Matthews House. Financing for major modernization is more difficult to obtain, and for new development more difficult still. To accomplish more than ongoing repairs will take a concerted effort by the Needham Housing Authority staff and board, and will require outreach to town officials, state agencies and funders, and the expertise of affordable housing consultants. It may also take a restructuring of the ownership of the NHA properties, or the establishment of a new development entity and staff.

We recommend a series of incremental steps that will help the NHA staff and board envision opportunities for improvements and the impact they will have on properties, staffing and management. These can be pursued in parallel, with further development and implementation decisions based on funding, the need for approvals, and NHA priorities for accomplishing their mission.

PROPOSED PROJECTS

Based on the information and analysis provided by this Facilities Master Plan, the Needham Housing Authority needs to decide whether to pursue one or more of the major modernization or development projects noted in this Master Plan that can help the NHA improve their properties and advance their mission. The choices, in ascending order of estimated feasibility/difficulty are:

1. Major Modernization of Seabeds/Captain Robert Cook, including repairing Cook’s building envelope defects.
2. A new 61 unit senior building on the Seabeds/Cook property, located between the two existing developments.
3. Redevelop 60 High Rock Estates one family homes into 60 two family duplexes on the existing lots.
4. Develop the Linden and Chambers Street properties with new housing on adjacent underutilized portions of the NHA land and redevelop the current Linden and Chambers building sites.

STAFFING AND GOVERNANCE

Like most housing authorities of its size, the Needham Housing Authority has experienced staff that provides the day-to-day management of its properties, and a Board of Commissioners that oversees policies and their execution. The Town of

Needham employs a part time Community Housing Specialist, Karen Sunnarborg, who collects and analyzes housing and related data, coordinates potential affordable housing initiatives, monitors affordability, insures compliance with funding sources and addresses inquiries related to housing issues.

For the NHA to undertake major modernizations or new developments they will have to understand and implement changes in staffing and governance. These projects will also require additional expertise to navigate the planning, funding and execution of initiatives. This is especially true if RAD Conversion Low Income Tax Credits are being utilized as part of the financing strategy. In the early stages the NHA will have to manage a design team and an affordable housing financing specialist. As the planning progresses investor expectations must be anticipated and met. After completion there will be oversight of management and operations that will be more extensive than that now in place.

It is important that the NHA understands the changes that they will need to make in their staffing and governance to pursue the more ambitious redevelopment opportunities proposed in this study, or that may emerge in the future. These changes are put into context in the Funding Sources Section of this study and are summarized below.

1. Seek Professional Affordable Housing Expertise

The NHA has an excellent staff that appears to manage the Authority in a thorough and effective way. Applications for HUD and DHCD formula funding provide money every year for maintenance and repairs that keep facilities in good condition. However, the funding required for major modernizations or new development requires more time than current staff have available, and specialized expertise that only the largest housing authorities have in-house.

The Boston area has a very substantial number of highly qualified consultants that provide exactly the kind of services that the NHA needs, and are provided to other housing authorities, community development corporations, and for-profit developers who build affordable housing. CHAPA (Citizens Housing and Planning Association) provides a clearinghouse for affordable housing questions and concerns, and for connecting affordable housing owners and developers with appropriate consultants.

Once the NHA has decided that the projects noted in this Master Plan are worth pursuing, the NHA should hire consultants who can chart the path forward in greater detail than it is laid out here. Funding for new development, as outlined in previous Sections, will be hard to finance and will strain NHA resources. Nevertheless, it can also bring significant benefits to the Town of Needham and be the 21st century manifestation of the NHA’s mission.

This study outlines the planning, engagement, funding, staffing and governance

issues that the NHA has to address to accomplish new development. This outline is necessarily abbreviated given the much broader range of issues this study is meant to address.

We recommend that the NHA engage an affordable housing development consultant to help them take the next incremental steps in understanding the impact this kind of endeavor will have on the NHA staff, commissioners and mission, and the benefits it will bring. A consultant can provide a more detailed description of the step by step process that will be required for the development options noted here, so that the very best decisions can be made on what directions to pursue.

2. Develop a Preliminary Financing Plan

There are a series of possible funding sources noted in this Master Plan, and other options may become available as financing programs are initiated and evolve. The NHA and their team should familiarize themselves with the details of different financing options, prioritize both the projects they want to pursue and funding sources that are available, and develop a strategy for pursuing necessary Major Modernization and New Development financing.

Multiple sources of funding will likely be required, and several projects can be pursued in parallel in the preliminary stages of investigation until there is clarity on the best direction forward.

3. Investigate Converting to Project Based Section 8

This change in how the federal developments (Seabeds Way, Captain Robert Cook and High Rock) are funded is necessary to implement the larger scale redevelopment described earlier in this report. The NHA should investigate the impact that this change will have on its operating procedures and staffing given the reporting and other requirements associated with this change. Many housing authorities have made the decision to make this conversion, and along with consultants and other authorities can be a resource for the NHA.

4. Investigate New Ownership Structures

Accessing the Low Income Housing Tax Credits (LIHTC) necessary for major redevelopment will change the ownership structure of NHA properties as investors take an ownership stake in return for providing funding. The NHA should investigate the impact this will have on its governance and operations so that it can make a decision on whether to pursue LIHTCs. This is a very common way of funding Housing Authority and non-profit developer initiatives and expertise is available to lay out risks and rewards.

5. Investigate Alternative Management Options

NHA properties appear to be well managed, conforming with HUD and DHCD requirements. Buildings and apartments are kept in good repair and residents seem to appreciate staff's responsiveness. Once investors become part of the ownership structure requirements change, and there is a higher level of scrutiny over how developments are managed. The NHA's review of whether LIHTC should be used to fund major modernizations or new development should include an analysis of whether a third party manager should be utilized to supplement NHA management. Other housing authorities that have made this choice can provide valuable information on the impact it has had on operations and management costs.

6. Assemble a Development Team

Obtaining funding for new development will require time and expertise beyond what the Needham Housing Authority has on staff. Modernization requires a different pathway than new development, and HUD and DHCD have very separate application protocols. It would be beneficial for the NHA to hire an affordable housing funding consultant that can provide a more detailed outline of the steps forward than what can be provided in this report.

A typical team for a significant new development would include:

- An experienced developer who can both manage the development process and engage possible funders – similar to the role Peter Smith and Oxbow Partners played for the 2009 redevelopment at High Rock.
- An architect and engineering team to prepare initial designs for review and revision and to provide drawings for funding, approval, bidding and construction. Construction cost estimates are generally provided by the architects or their estimating consultants.
- A marketing agent for the affordable units to insure compliance with regulations.
- An attorney to respond to the myriad legal requirements and coordinate with attorneys representing funders and the Town
- A tenant relocation specialist if tenants will be relocated during construction or after completion. Note that many of the proposals in this Master Plan are designed to minimize relocation challenges.

PUBLIC AND REGULATORY ENGAGEMENT

1. Build the Case for Affordable Housing

Although many residents of Boston area cities and towns understand the necessity for building more affordable housing, they often resist construction in their neighborhoods. Given that many people do not have a vocabulary or clear concepts to use in discussing the planning and design of housing, they may be concerned about the number of apartments being proposed, whether that will actually impact their neighborhood in a significant way or not. If the NHA is interested in pursuing new development it is advantageous to have clear descriptions of why housing is being proposed and what its impact is likely to be. “Talking points” for the planning proposals illustrated in this study include:

- There is a lack of affordable housing in Needham. The sons and daughters of current residents may not be able to afford a house or apartment in the town that they grew up in. If long-time resident seniors wish to pass their homes on to the next generation, they may not be able to find another affordable place to live in Needham without the creation of more housing.
- Teachers, police, fire fighters, municipal employees and many people in the service industries, construction and manufacturing cannot afford to live in Needham.
- Housing for those with very low incomes – families and the elderly – are in particularly short supply. They could be our friends or relatives or provide services to us, our children or our parents.
- Increasing the amount of housing helps create diversity in Needham – although the character and quality of life in the town certainly has to be protected when development takes place.
- All of the sites on which development is being proposed are essentially invisible to everyone except those who already live in NHA housing.
- All sites are screened by trees on all sides, so that even at three floors, these buildings will barely be visible from adjacent properties.
- Although traffic will be increased it should have minimal impact. A traffic study will evaluate mitigation options if needed.
- All parking for proposed housing will be on site.
- A majority of the possible development projects are for the elderly; there will be no significant increased demand on schools.

2. Engage in Community Outreach

Housing Authorities like those in Boston and Cambridge, and Community Development Corporations that make substantial improvements in existing affordable housing, or develop new affordable housing, do not do it alone. Transformations that seem to suddenly emerge on a street corner are the result of years of work building broad based support from a series community stakeholders. Some provide financial support, others regulatory relief, and still others, moral support, or at least the decision not to engage in active opposition.

There are three reasons for active outreach early in the process. One is to determine if anticipated plans may not be possible because of regulatory or other requirements. Another is to facilitate the kind of dialog that minimizes the chances that active opposition to proposals will occur. The third is to actively build community support so that the majority of Needham’s citizens, elected officials, departments and committees support the NHA proposals with their time and with funding. The NHA does not have to be 100% committed to pursuing an ambitious modernization or new development effort to begin the dialog with selected members of the Needham community.

Outreach to funders at the state and federal level is described in Sections 7 and 8 in this report. Local engagement that will be needed for the approval of modernization and redevelopment efforts would include:

- **NHA Staff and Commissioners.** Despite the very significant existing demands on staff and Commissioner time, and on the Authority’s resources, it is critical that there be broad agreement to embark on new projects (either Major Modernization or New Development). This Master Plan is a starting point for building consensus on the best directions forward.
- **NHA Tenants and Residents.** Inclusion of NHA residents in planning efforts will help ensure that proposals are responsive to their needs and that concerns are addressed. Public housing resident opposition to proposed changes can be a significant setback to what are intended to be beneficial improvements. Resident Associations should be actively involved in the effort and their input solicited.
- **Abutters and Neighbors** Those who live in close proximity to housing Authority developments may be concerned that changes will have a negative impact on their lives or property. Although every proposal in this study is intended to benefit not only the NHA, but Needham neighborhoods as well, it will take outreach to get the input and support that is needed. Generally outreach is best organized with the support of the Planning Department and Board along with any neighborhood organizations in the area that are active in these kinds of issues.
- **Planning Department and Planning Board.** Lee Newman, Director of Planning

and Community Development, is very familiar with development issues in Needham. Along with her staff, she can provide valuable input on community engagement and approvals issues, and how NHA proposals can support the Department's broader vision for the Town. The department can facilitate the kind of dialogue that is critical to integrating the Authority's properties into a larger community context and to seeking relief through the Zoning Board of Appeals. They may recommend public meetings as part of the review and approvals process.

- **Community Preservation Committee (CPC)** Any significant modernization or new development effort is likely to utilize Community Preservation Act funding allocated by the CPC with money from a surcharge on real estate taxes. Funding is limited. The NHA will have to decide on its priorities, and investigate what other funding sources may require CPA allocations as a sign of local support. Priorities should be reviewed with the CPC and applications should be submitted that conform to the goals of the Needham Community Preservation Plan.
- **Conservation Commission** Given the proximity of some NHA sites to wetlands, any proposed new development should be reviewed with the Conservation Commission early in the process. Definitive delineation of wetland boundaries may need to be established in the field if it might impact the location or type of construction that could occur. Replication of wetlands impacted by development may be necessary for new construction and requires Conservation review and approval.
- **Department of Public Works** To the extent that proposed NHA work impacts sidewalks, streets or utilities beyond the limits of their property, review with DPW is advisable early in the process. They may require the NHA to have a recent site survey showing utilities and topography in impacted areas.
- **Building Department** Like the DPW, the Building Department should be consulted early in the process to understand their review and approval process.
- **Fire Department** The fire department will want to review any proposal that impacts access to a site and their ability to fight fires. Consultation with appropriate officials early in the planning process is advisable.
- **Police Department** The Department will want to review the public safety implications of a proposed new development.
- **School Department** The School Department will want to review the impact of any new family development on public school enrollment.
- **Town Meeting** The NHA should attend and understand Town Meeting votes

that may be required and build support for approval.

- **Select Board** Support from the Needham Select Board is essential in building consensus around major improvements and new construction, and their input on the local "lay-of-the-land" can provide information that is useful in responding to community concerns. They can also facilitate funding from the Town.
- **State and Federal Elected Representatives** Needham's State Representative and State Senators can also promote the allocation of state funding as they advocate for the well being of their constituents. Needham's U.S. representative can help with Federal funding. The form that the engagement with elected officials takes should be carefully considered by the NHA.
- **Department of Housing and Community Development (DHCD)** This state agency funds repairs and improvements through their annual grants. Although they do not currently have programs in place that the NHA can easily access for larger scale improvements or new construction, they have taken an interest in this report and have asked that the NHA stay in contact. Periodic review with DHCD is recommended so that the NHA and DHCD can work together on planning and potentially funding future redevelopment.
- **Housing and Urban Development (HUD).** This federal agency funds repairs and improvements through their annual grants. In initial meetings they have encouraged the NHA to pro-actively pursue HUD RAD conversion funding.

3. Pursue Parallel Paths

Although all five major NHA developments have many years, and perhaps decades of useful life remaining, none meet contemporary affordable housing standards, and slip further behind every year. Assemblies and systems are being replaced as needed, but the money is being invested in buildings that will eventually need to be replaced.

As the need for housing in Needham and the region grows, the relatively low density of the NHA's developments becomes more of a lost opportunity. For these reasons we recommend that the NHA consider modernization to bring existing developments up to contemporary standards, and new development options that will allow the NHA to fulfill its mission.

We recommend that the NHA continue taking preliminary steps, including public and regulatory engagement, so that they understand the costs and benefits, risks and rewards, of modernization and new development. Although these are outlined in this report, more information may be necessary to understand the process required to move towards implementation. By taking these incremental steps the NHA will be in a better position to make decisions on what efforts it wants to expend.

PROACTIVELY USE & BROADEN NHA KNOWLEDGE BASE

1. Seek Professional Planning and Design Expertise

Utilize professional planning, design and engineering consultants. They can provide up-to-date ideas on the most cost effective materials, systems and design that supplement the expertise of maintenance staff and contractors.

At Chambers Street, for example, a team of architects and landscape architects could propose how to utilize excess mechanical room space for a first floor laundry, remove unneeded second entry doors in each apartment to improve kitchen layouts, regrade the site so that ramps are not required to access porches, use paint color more effectively inside and outside, create a system of trash barrel enclosures to improve the appearance of the site and use outdoor open space more effectively as a community asset. DHCD's "house doctor" program is intended to make this expertise easier to access for state developments, facilitating rather than interfering with effective decision making and allocation of money.

Professional planning and design can also help the NHA put smaller scale improvements into the context of larger scale planning so that incremental measures contribute to a larger vision that may not yet be funded.

2. Utilize Building and Site Plans

Maintain printed and digital copies of the existing site and building drawings that were prepared for this study and use them to plan for and document maintenance work and large scale improvements. This has a number of advantages:

- a. In the planning stages it allows the developments to be seen in their totality with relationships between different parts of buildings and sites easy to understand. For example, replacing boilers can free up space that might allow an adjacent space to be expanded, or replacing curbs and repaving might allow a more efficient and accessible layout to be envisioned. This tends to be easier to do on plans than in the field.
- b. Work can be documented on plans as "as-built" information with the scope and dates noted. This is helpful as time goes by and institutional memory fades.
- c. The plans can be a wish list that documents priorities for the years to come as funding becomes available.
- d. Plans indicating work to be done can be helpful in obtaining competitive pricing from contractors as projects are put out to bid.

Note that the plans included in the report, and provided to the NHA in CAD and PDF form, are based on the original drawings for each development provided by the NHA. Their accuracy should be confirmed before work is implemented. In addition, the authors of this report have provided the NHA with digital PDF scans of original drawings for Seabeds Way, Captain Robert Cook, Linden Street and Chambers Street developments. These drawings provide valuable additional information on building construction and systems (accuracy to be verified) that NHA should keep available for reference as needed.

3. Obtain Site Surveys

Many of the ideas noted below and referenced elsewhere in this study will require up-to-date site surveys showing topography, utility and site features in order to be implemented successfully. This is especially important for accessibility features like ramps and regrading where small changes in elevation have an outsized impact on planning and design. Site surveys provide all of the benefits noted above for building plan drawings. Wetland flagging may be necessary for work adjacent to wetlands.

PRIORITIZE AND PLAN SIGNIFICANT IMPROVEMENTS

1. Envelope Improvements at Captain Robert Cook Drive Development

The devastating weather conditions that led to ice damming and water infiltration at Seabeds Way, and over \$1,500,000 in required repairs, was unusual, and led to similar problems in tens of thousands of properties throughout the region. The work that was done not only repaired the damage, but upgraded exterior walls and roofs so that these problems would not reoccur.

A study by envelope consultants Russo Barr Inc. indicates that Captain Robert Cook has similar construction deficiencies and is vulnerable to similar water infiltration problems. We recommend that this work be pursued as soon as possible to prevent similar damage, to replace deteriorated roof and wall assemblies that are at the end of their useful lives, and to conserve energy and improve resident comfort by adding insulation, and air and vapor barriers.

In parallel, other design and engineering issues should be considered. The choice of materials, colors, trim details, and window and door design affect the character of this community, the quality of life for residents, and the long term effectiveness and durability of systems. We recommend that the NHA utilize the services of a qualified architect to insure that the most cost effective materials and assemblies are being utilized, and look at the opportunity to use color and material changes to give individual apartments or buildings their own identity.

2. Develop Comprehensive Plans

Since funding for major modernizations may not be immediately available, less ambitious improvements utilizing annual funding can be planned to incrementally make significant quality of life improvements for residents. For example, replacement of curbs and paving and repair of ramps at Seabeds Way is an ongoing effort. It is conceivable that the site could be regraded to eliminate or reduce the need for ramps, and that the paved areas could be organized more effectively to allow more parking in less space, creating a more pedestrian friendly environment. A landscape architect could explore options for reorganizing the site to insure that even small scale improvements help pave the way for a better outdoor environment, and not just fix the worst of the concrete or asphalt problems.

The major modernization recommendations outlined earlier in the report suggest additional planning efforts that are worth exploring. If pursued at a conceptual/schematic design level with a commitment to long term follow-through they may warrant the modest expenditures for professional design and engineering services that will ensure that construction funding is well spent.

3. Plan for Landscape and Site Design Improvements

All five of the major NHA developments benefit from their sylvan settings and relatively sheltered locations which, along with a good maintenance staff, keep sites relatively attractive. But most recent affordable housing developments are designed to provide richer environments that both create a sense of community and provide resident privacy that is more like what is in surrounding neighborhoods, and looks less like public housing. All five major developments could become better places to live for residents, and more attractive places in the neighborhood with improved site design.

Pedestrian areas at Seabeds Way, outdoor community spaces at Captain Robert Cook Drive, fencing along Linden Street, screening of trash bins at Chambers Street and a playground at High Rock would all be community assets that instill pride and suggest a “good neighbor” attitude in relation to tenants and the surrounding town. Some of this work could be financed through the yearly HUD or DHCD formula funding allocations after critical repairs have been taken care of. This work could also be part of a broader modernization effort that would require additional funding. The NHA may not know where the funding is coming from when it considers this kind of work and puts it on its “wish list”.

The design of clearly articulated pedestrian walks and gathering areas, the creation of outdoor plazas and gathering spaces, screening of trash bins and dumpsters, fencing and hedges to define public, semi-public, semi-private and private outdoor areas, and the use of materials and colors to create a sense of identity for different areas in each development should be investigated by architects, civil engineers, and landscape architects. Community gardens are another asset that more and more affordable housing devel-

opments are including in their plans for housing that support wellness, education and inter-generational activities.

Although repairs and modest upgrades to apartments, buildings and sites absorb most of the funding and staff time available, these kinds of quality-of-life improvements can have a big impact on resident and neighborhood perceptions of NHA properties.

The critical challenge that NHA faces is to make strategic decisions about improvements it wants to prioritize and then pursue funding from whatever sources may be available. This report is the starting point for this kind of planning, decision making, funding applications and making choices on implementation.

4. Designing Playgrounds as Community Assets

Redesign or relocation of the playground at Captain Robert Cook Drive and the design of a new playground at High Rock Homes can create important community assets. Not only do playgrounds provide attractive areas for children within walking distance of their homes, but when they include benches and pleasant paved areas can provide a supportive environment for parents. This work can be part of the quality of life, accessibility and landscape improvements noted above.

5. Reconsider Interior Common Spaces

The NHA has a series of interior common spaces. There are community rooms at Seabeds Way and Chambers Street, offices at Chambers Street and at the entry to the Seabeds Way/Captain Robert Cook development, and small lobby areas at the Seabeds Way and Chambers Street buildings. Even the laundries at Linden Street and Chambers Street can be considered common spaces. These can be merely utilitarian areas, but can also become gathering places where elderly residents and families reach out to each other.

Laundry rooms at Linden Street marked with canopies or colors can become little landmarks with places to sit around which communities can form. Opening up all 8 laundry spaces (only 4 are currently utilized) will provide both convenience and additional community spaces for residents. Small entry areas can be outfitted with window gardens or book swap shelving that encourage engagement with other people and the surrounding world. We recommend that the NHA consider these kinds of improvements, and retain appropriate professionals for design and development.

6. Plan for Accessibility and Aging in Place

The Needham Housing Authority, like many or most housing authorities, lacks sufficient accessible housing as defined by the Americans with Disabilities Act (ADA) and the Massachusetts Architectural Access Board (MAAB), which issues state requirements

enforced by local building departments. (There is no enforcement mechanism for ADA other than through lawsuits). Accessibility becomes increasingly important as residents age or face short or long term mobility challenges. MAAB also sets requirements for those with hearing and visual impairments. The NHA should do a comprehensive accessibility survey of their developments noting MAAB compliance requirements in relation to existing conditions, and then prepare a plan for meeting these requirements. At Captain Robert Cook, where there are larger bathrooms and kitchens, and roll-in first floor apartments, compliance may be relatively easier with larger doors, kitchens with wheelchair knee space, and relocated fixtures in bathrooms bringing them up to current standards.

At the Linden Street and Chambers Street developments, compliance will be very difficult given the small size of the apartments, and kitchens and bathrooms surrounded by other construction on all sides. Although housing authorities should have 5% of apartments accessible in each of their developments, it may be more practical to work towards this percentage portfolio wide.

An accessibility professional should be retained to do this work. Site accessibility should be reconsidered as well. In addition to ensuring that walks and curb cuts meet MAAB requirements, the NHA should consider regrading sites to eliminate the need for ramps (Seabeds Way, Chambers Street) or eliminate the need for steps that prevent access (Linden Street). This will require creative thinking concerning grading, drainage and landscape, and should be pursued by landscape architects with experience in housing planning and design. This effort can be part of the quality-of-life investigations noted above.

7. Plan for Sustainability and Energy Conservation Improvements

The entire portfolio of NHA buildings were designed and built in an era of cheap energy. Linden Street and Chambers Street boilers and water heaters were replaced in 2018, and plans are in place for replacement at Linden Street, Chambers Street and High Rock Estates. This will significantly improve performance. All developments have air conditioning via individual units provided by tenants in windows or through-wall sleeves. Building envelopes have been improved at Seabeds Way but not at other developments. Bathroom ventilation is provided by fans.

Building code and best practices require that all of these systems be engineered as a comprehensive heating/ventilation/air conditioning system that protects resident health and building durability. We recommend that the NHA pursue a comprehensive energy audit by mechanical engineers working with New Ecology Inc. (NEI) or another sustainability consultant. NEI is a non-profit based in Boston whose mission is to provide sustainability and energy conservation consulting to affordable housing owners. They provide a variety of metrics for measuring efficiency and recommendations on system design and performance - to be engineered for implementation by an engineering and architectural firm. They can advise on adding insulation and weatherstripping and ongoing monitoring of building performance.

8. Plan for Renewable Energy

Geothermal, wind, combined heat and power and solar photovoltaics are coming down in price as performance goes up, and many housing authorities are considering adding or have already added these systems. Solar PV is probably the most practical and mature technology for the NHA to consider. Given the number of buildings and the amount of land the NHA owns, the installation of panels could significantly reduce energy costs. Some housing authorities own their panels and reap 100% of the benefits; others contract with a third party and share in the benefits with the panel installer/owner.

Which alternative might be appropriate for the NHA depends on costs, subsidies and grants available, and the terms offered by a third party. NEI could review opportunities and make recommendations on how to proceed if the NHA chooses to pursue renewable energy. A consultant such as New Ecology Inc. can provide related consulting services.

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TABLE OF ACRONYMS

ABCD	Action for Boston Community Development
AIA	American Institute of Architects
ADA	Americans with Disabilities Act
AC	Air Conditioning
CEDAC	Community Economic Development Assistance Corporation
CHAP	Commitment to enter into a HAP agreement
CHAPA	Citizens Housing and Planning Association
CPA	Community Preservation Act
CPC	Community Preservation Committee
DHCD	Department of Housing and Community Development
DPW	Department of Public Works
EOEA	Executive of Elder Affairs
FCI	Facility Condition Index
FMR	Fair Market Rent
GPF	Gallons per Flush
HAP	Housing Assistance Payment
HILAPP	High Leverage Asset Preservation Program
HUD	Housing and Urban Development
HVAC	Heating, Ventilation and Air Conditioning
LED	Light Emitting Diode
LHA	Local Housing Authority
LIHTC	Low Income Housing Tax Credit
MAAB	Massachusetts Architectural Access Board
NHA	Needham Housing Authority
NOFA	Notice of Funding Availability
OCAF	Operating Cost Adjustment Factors
PEHO	Partnership to Expand Housing Opportunities
PHA	Public Housing Agency
PV	Photovoltaic
RAD	Rental Assistance Demonstration Program
RFP	Request for Proposal
RFQ	Request for Qualifications
VCT	Vinyl Composite Tile

TABLE OF REFERENCE DOCUMENTS

Copies of all documents may be found at the NHA Office, 28 Captain Robert Cook Drive, Needham, MA 02494

A. FLOOR PLAN DRAWINGS (In CAD and PDF formats traced from original drawings)

Captain Robert Cook Drive A1.1

Captain Robert Cook Drive A1.2

Captain Robert Cook Drive A1.3

Seabeds Way A2.1

Seabeds Way A2.2

Linden Street A3.1

Chambers Street A4.1

B. ORIGINAL CONSTRUCTION DOCUMENTS (in PDF format scanned from original drawings)

Seabeds Way/Captain Robert Cook: Assessors Plan No. 83

Seabeds Way/Captain Robert Cook: Grading Plan C2

Seabeds Way Floor Plans: Sheets A1, A2 and A3

Captain Robert Cook Elevations & Sections: A5, A6, A7, A14, A16

Captain Robert Cook Floor Plans: A13, A15, A17, A20, A21, A22

Captain Robert Cook Renovation Floor Plans: A1, A2, D1, D2

Linden Street Assessors Plan No. 133

Linden Street Site Plan: X1, X2

Linden Street Floor Plans A1, A2

Linden Street Elevations: A3

Chambers Street Site Plan (no plan designation)

Chamber Street Floor Plans: A2

High Rock Assessors Plan No. 135

TABLE OF REFERENCE DOCUMENTS (CONTINUED)

C. OTHER REFERENCE DOCUMENTS

1. Alignment Plan --- High Rock Estates – 1949
2. Article 62 – Establishment of the Needham Affordable Housing Trust Fund – Needham Town Meeting – May 2017
3. Community Development Plan – Needham MA – 2004
4. Community Housing Plan – Needham MA – 2004
5. Condition assessment of Multiple Structures to Determine extent and effect of Suspected Design & Construction Deficiencies 00 High Rock Homes – Commercial Construction Consulting Inc. – 2012
6. Deed - Linden Land by Eminent Domain -- Minutes of 1959-3-24 NHA Board Meeting
7. Deed – Chambers Land Acquisition – 1961-10-16
8. Deeds – Linden/Chambers and High Rock Estates -- 1957
9. Existing Condition Land Survey – Linden/Chambers -2-13 – VHB Inc.
10. High Rock Homes Development Plan – Oxbow Partners – 2006-7-7
11. Housing Institute Training Binder, Mass Housing Partnership – 2012
12. Housing Programs & Services Brochure - Needham MA --
13. Housing Resource Report – Needham MA – 2004
14. Linden/Chambers Vision Workshop Documents – 2014-3-5
15. Master Deed - High Rock Homes Condominium --- 2008-9-23
16. Master Deed Amendment – High Rock Homes Condominium -- 2014
17. Modernization to Independence (MTI) Program for Stat Public Housing -- NOFA – PHN 2017-26
18. NHA Housing Needs Assessment – Sunnaborg – Feb 2013
19. NHA Options and Opportunities for Modernization and Development – Susan Connelly, MHP – April 2017
20. NHA Organization Chart 2018

21. NHA RFP for Plan to Achieve Modernization and/or Redevelopment & Obtain the Required Funding – 2017-8-22
22. NHA Strategic Off-site I Summary & Minutes – 2017-1-28
23. NHA Strategic Off-site II Summary & Minutes – 2017-4-22
24. NHA Strategic Off-site Retreat Report – 2010-12-18
25. Oxbow Partners Response to NHA RFP - 2011-3-4
26. Property Development Plan for NHA – H&H Associates – 2013 2-18
27. RCAT Needs Assessment – Linden/Chambers – 2016-19-9
28. RFP for Conceptual Planning and Design Services – Linden/Chambers/High Rock Properties – 2011-2-9
29. Russo-Barr Associates - Building Envelope Condition Assessment – Capt Robert Cook Drive – 2017-7-7
30. Russo-Barr Associates - Condition Assessment Estimated Construction Cost, Captain Robert Cook Drive- 2018-14-18
31. Site Grading Plan --- Seabeds Way and Cooks Bridge Topography – 1981-9-15
32. Site Plan – Linden/Chambers – 1960
33. Town Owned Lands – Needham MA -- 2010
34. Summaries of meetings conducted during the course of this Facilities Master Plan process