

NewCAL Project Update

Newton Design Review Committee

August 26, 2020



Owner's Project Manager



Bargmann Hendrie+ Archetype, Inc.

Architect



Following the Newton Council on Aging vote, the Working Group recommended the proposed NewCAL facility be located at the existing Senior Center at 345 Walnut Street in Newtonville. Newton residents were notified on August 12, 2020 that the Mayor agreed with the recommendation.

NewCAL Vision Statement

The City of Newton's goal, as an age friendly community, is to build a large, well equipped, comfortable Center to meet the unique interests and needs of older adults, both those currently using the Senior Center and many others who are not. The Center will foster a special sense of community and belonging for this growing group. This facility will be designed to optimize the quality of life for Newton's older adults and those who support them, through welcoming, respectful and meaningful opportunities that engage, value, and empower older adults to remain independent and important assets in our community.

When spaces within this facility are not programmed for older adults, the goal is to offer well managed, quality and enriching community and multigenerational experiences for all residents of Newton.

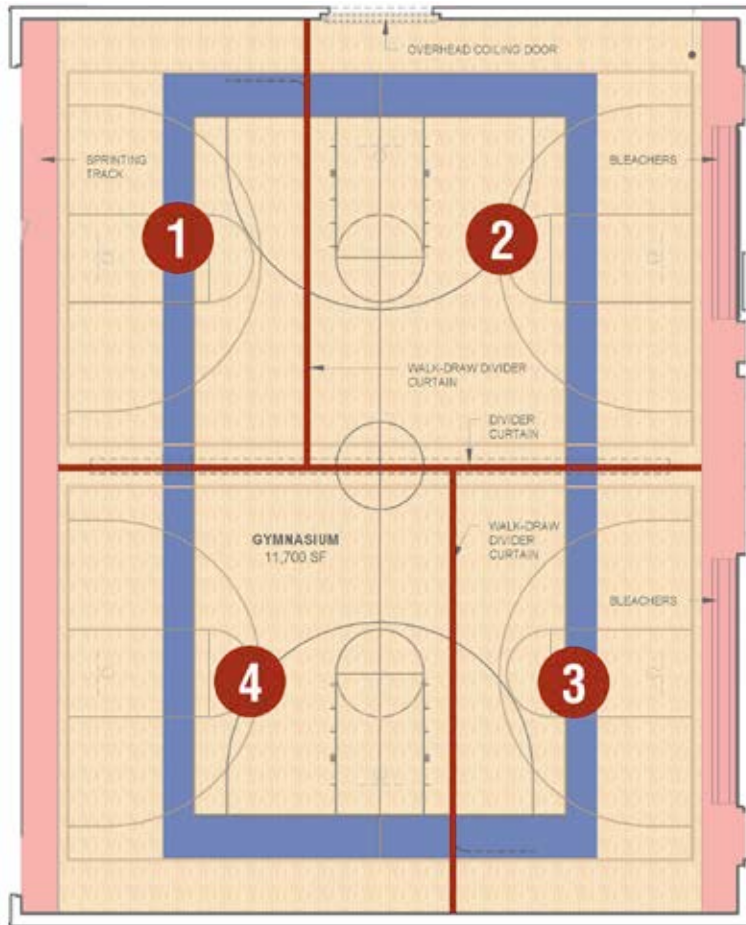
NewCAL Guiding Principles

1. The Center will be designed to promote and support the Mission Statements of the Senior Services and Parks and Recreation Departments.
2. Spaces within this facility will be clustered and programmed to preserve the wonderful sense of community that exists in the current Senior Center.
3. The Center will be age friendly, welcoming to everyone, and will be designed and programmed to meet the unique needs of seniors as well as the broader community.
4. The Center will ensure safety and accessibility both inside and outside the facility through thoughtful design and operation.
5. The Center will promote social equality and maximize access to programs and services to those who are unserved or underserved.
6. The facility will be environmentally conscious, strive to be carbon neutral, and will leave a legacy of responsible design and operation.

Diversity of 31,500sf of Space in NewCAL

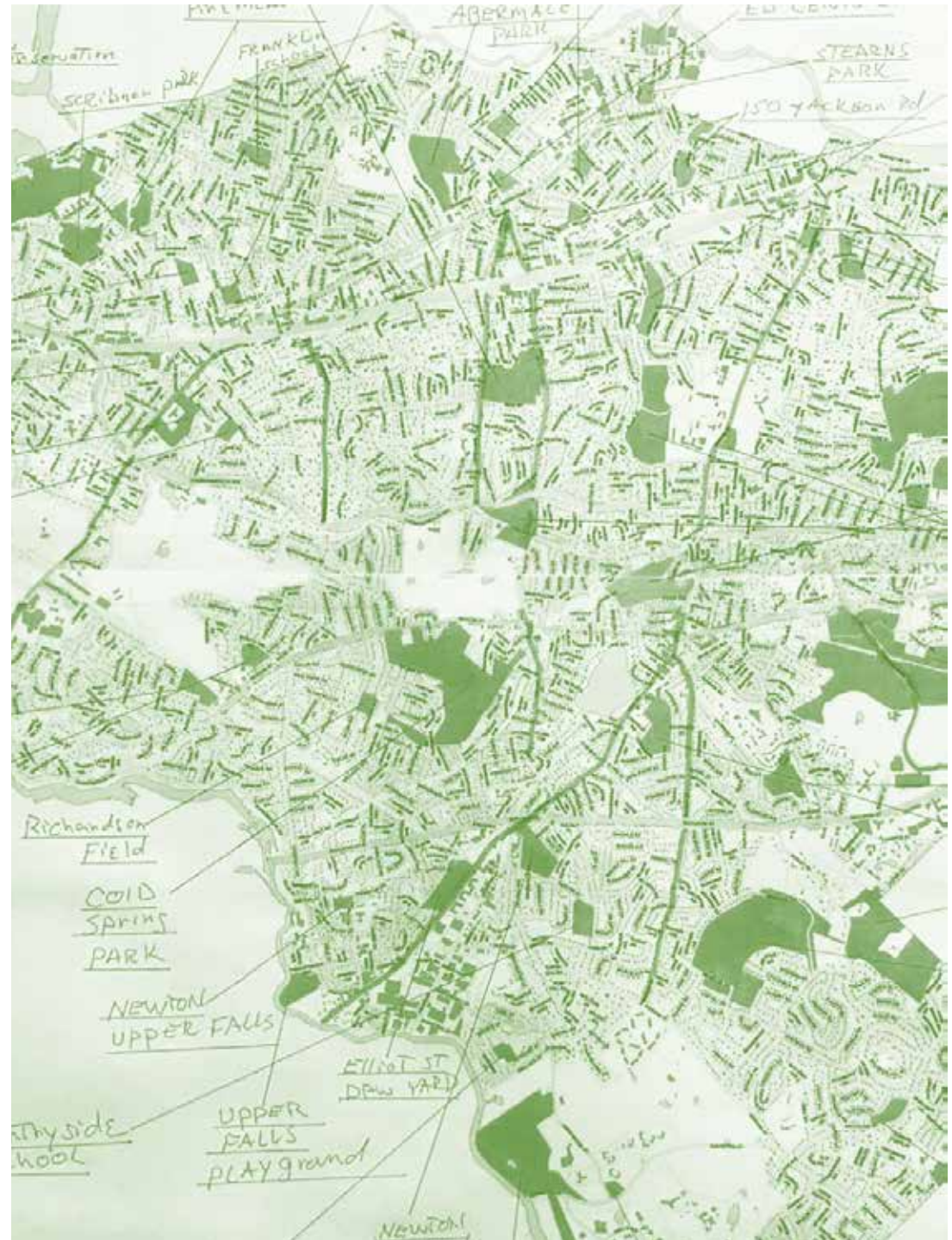


Multi-functional Gym and Track



**PHASE ONE: REVIEW OF ALL CITY OWNED
PROPERTIES AND 6 FINALISTS**

Over 150 Private & Public Sites were reviewed by the City to find a potential new home for NewCAL



6 “Finalist Sites” were rejected by the citizens, who were adamantly opposed to reducing open space in parks, due to a new building.



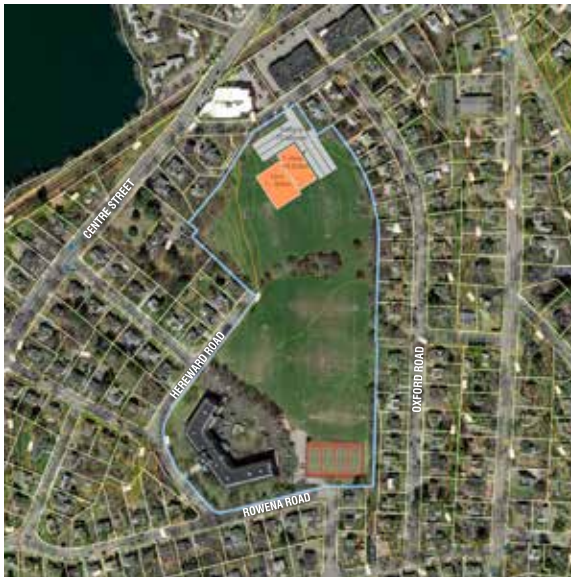
Cabot Park



McGrath Park



Pellegrini Playground



Weeks Park



Tyler Terrace



Albemarle Field

NEWTON CENTRE & NEWTONVILLE FINAL TEST FITS

After regrouping from the “finalist sites”, the ultimate decision came down between two locations, the Walnut Street Senior Center site or the Newton Centre Parking Lot.

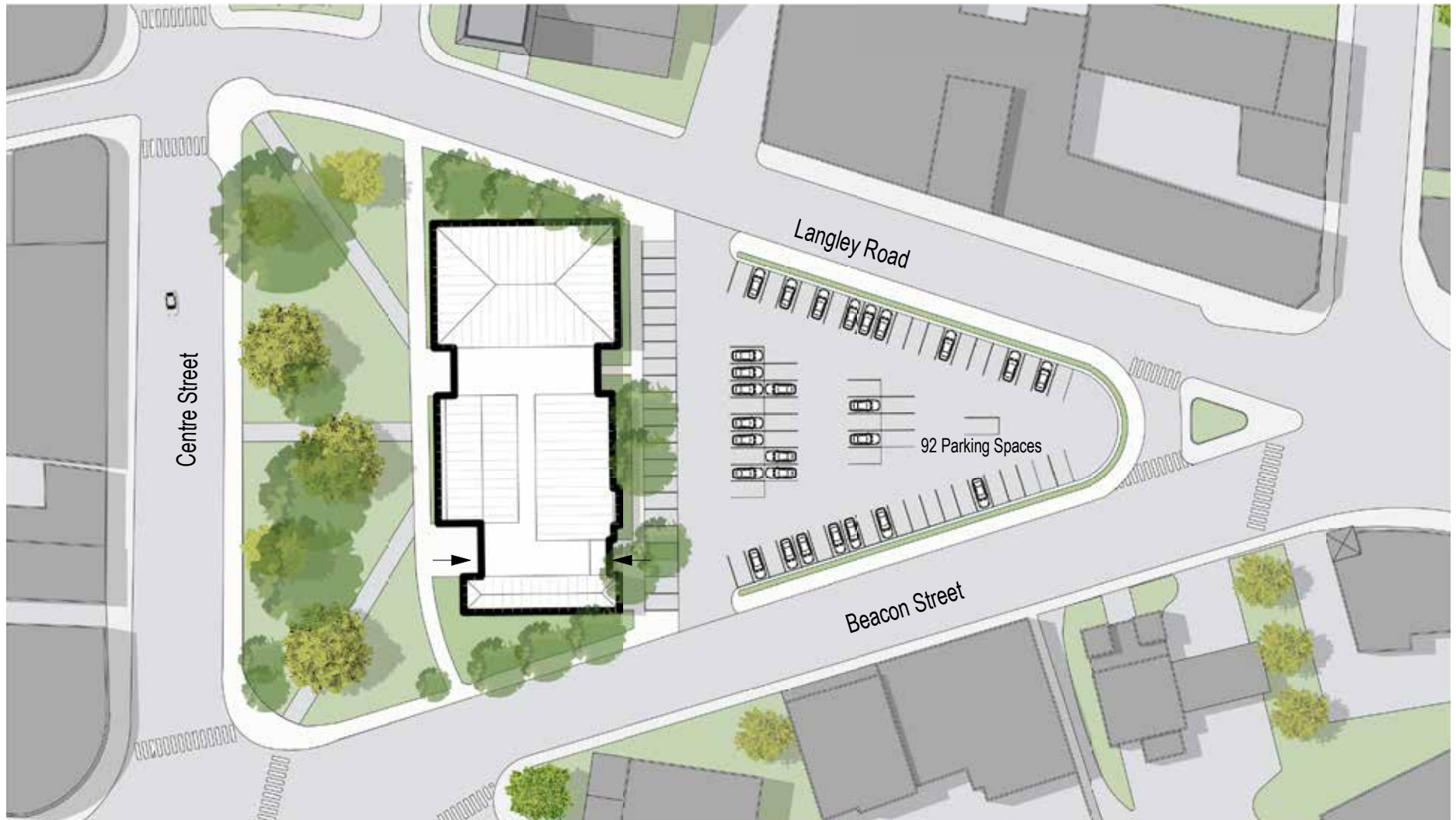


SITE: Newton Centre
Triangle Parking Lot
(152 Spaces)

Newton Centre Triangle



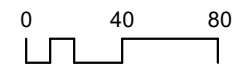
Newton Centre Triangle 2 Story Building



Site Plan: 33,000 sf



Scale: 1" = 80'



Newton Centre Triangle 2 Story Building



Aerial View from Southwest



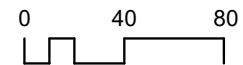
Newton Centre Triangle 3 Story Building with Parking Below



Site Plan: 33,000 sf



Scale: 1" = 80'



Newton Centre Triangle 3 Story Building with Parking Below



Aerial View from Southwest



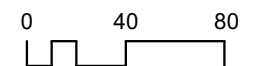
Newton Centre Triangle 4 Story Building with Smaller Footprint



Site Plan



Scale: 1" = 80'



Newton Centre Triangle 4 Story Building with Smaller Footprint



Aerial View from Southwest





SITE
345 Walnut St.

These are three very early program and massing studies. They are not designs. There will be many more studies on how to renovate and add on to the existing building or build a new facility.





The original cross section drawing of the Library showing the raised main floor level 5 feet above outside grade



The outside stairs take you up three feet to a landing



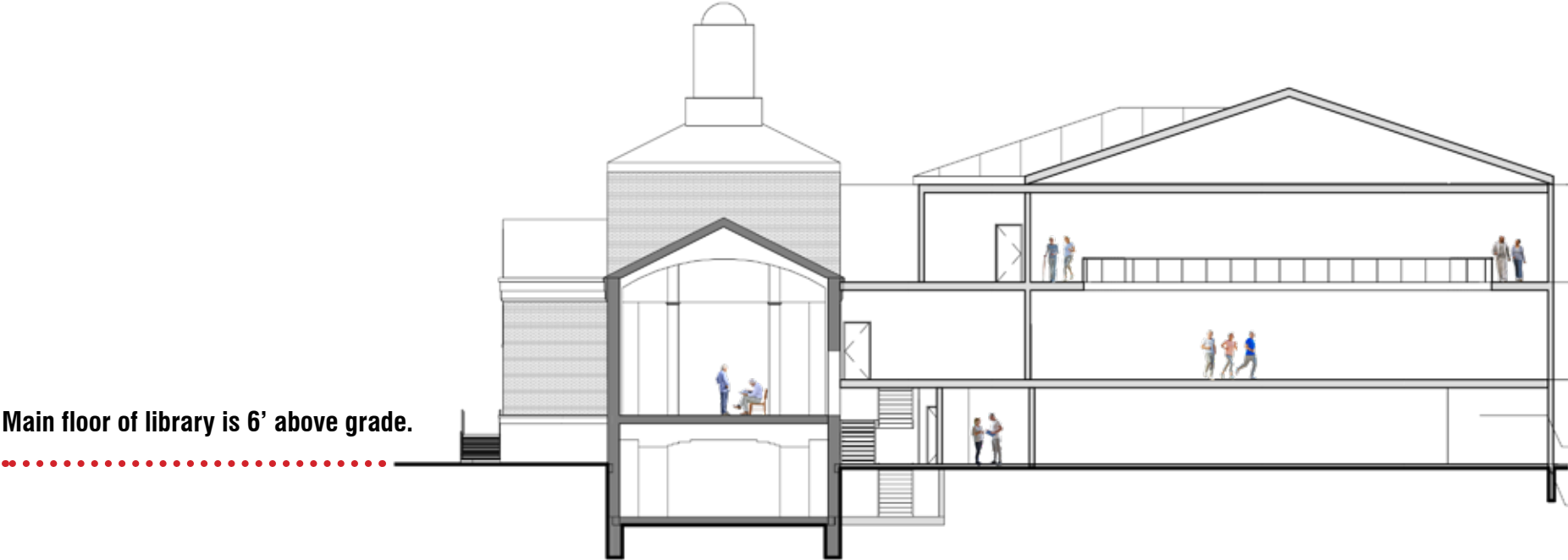
Then, inside stairs take you up the final two feet to the main floor level.



One or both of the basement level wings would retain their windows in the proposed concepts that do not cover the front façade of the existing building. This could be secondary use space assuming that the elevator is brought to this level.



Newtonville Retain Existing Building



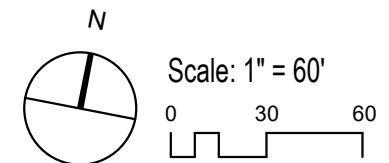
Building Section

Scale: 1" = 20'-0"

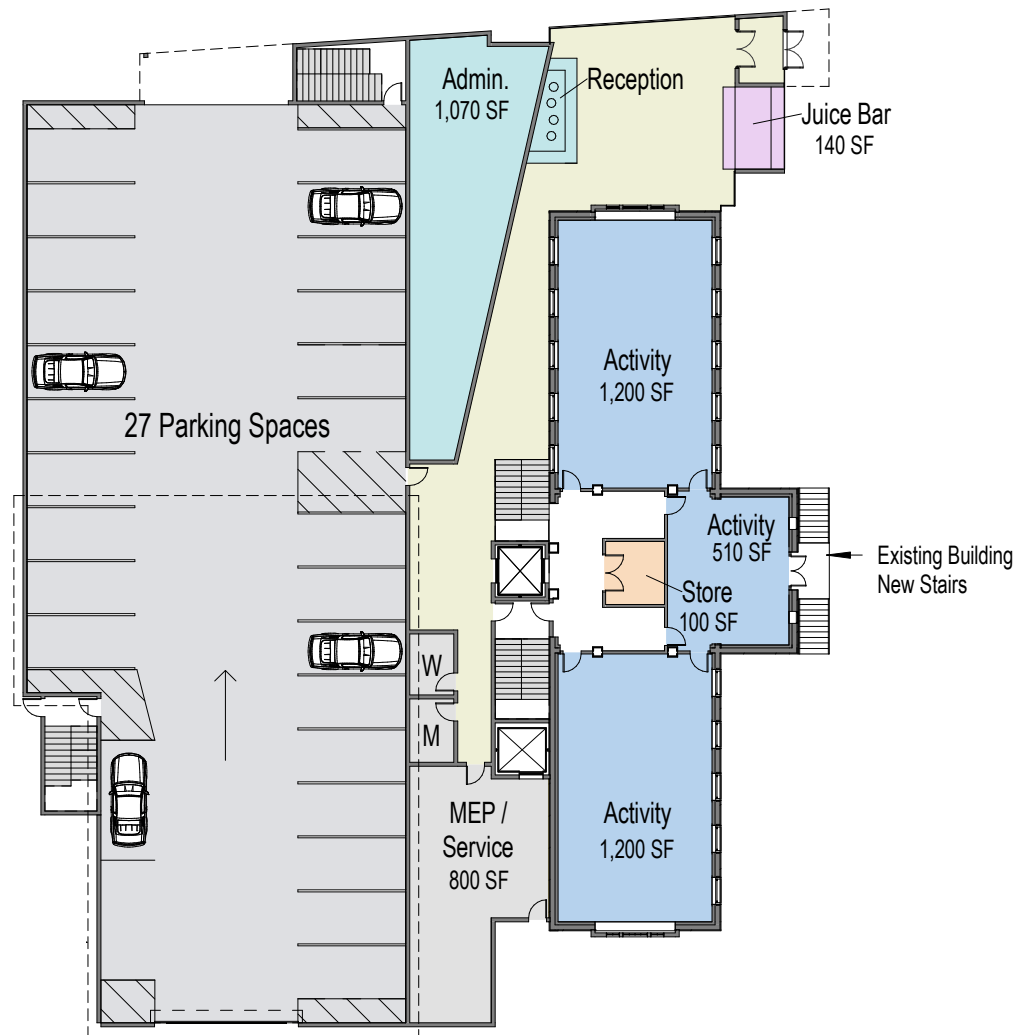
Newtonville Retain Existing Building



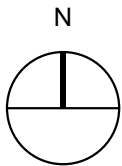
Site Plan: 33,000 sf building



Newtonville Retain Existing Building

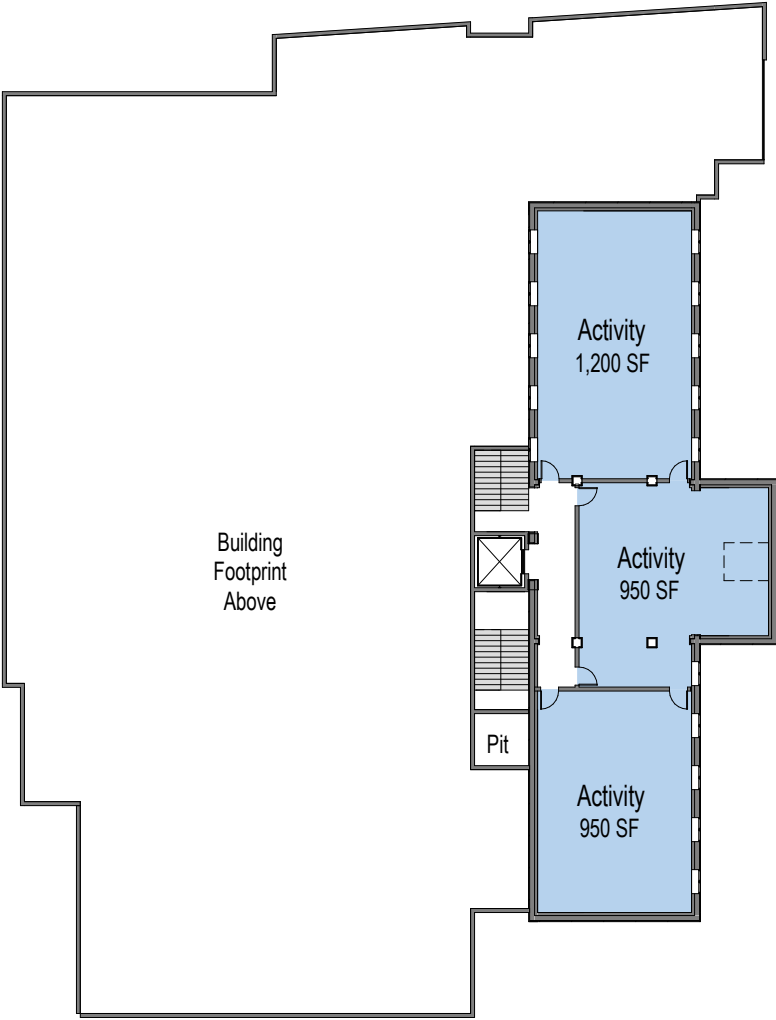


First Floor Plan: 8,000 sf
Garage Area: 9,000 sf

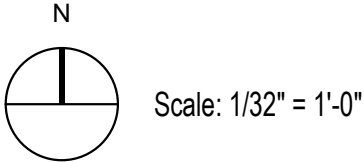


Scale: 1/32" = 1'-0"

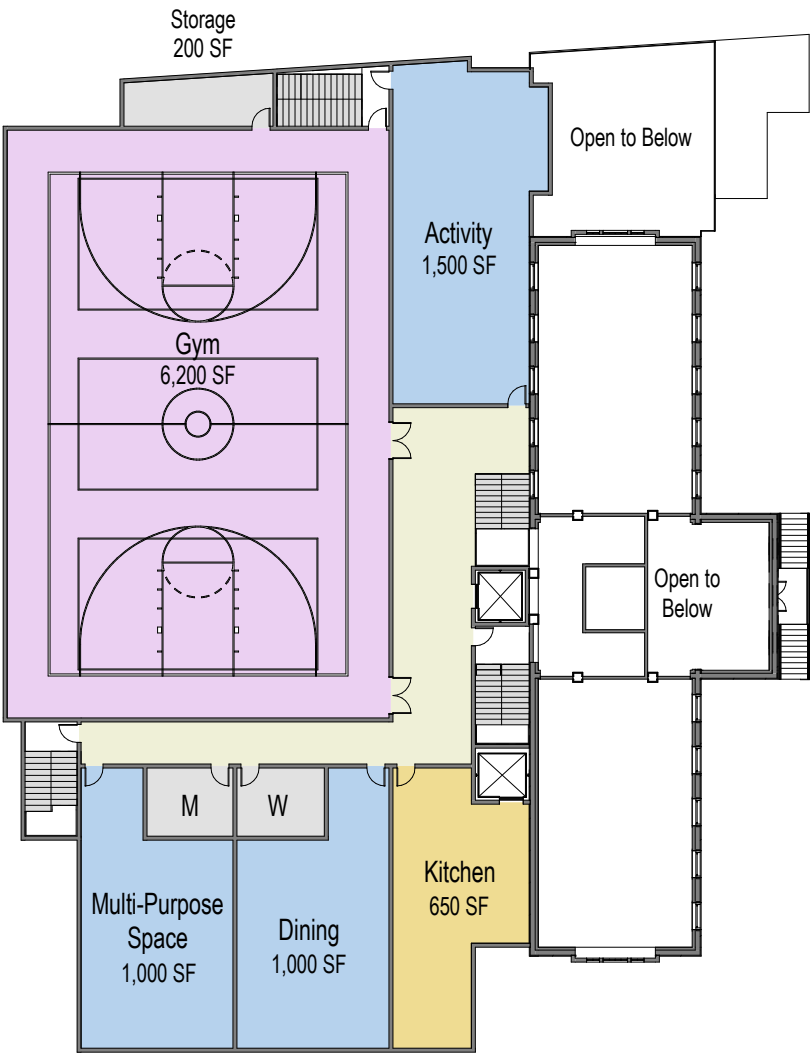
Newtonville Retain Existing Building



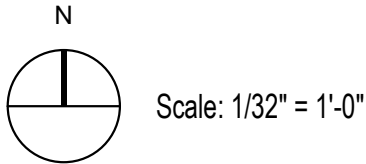
Basement Plan: 4,000 sf



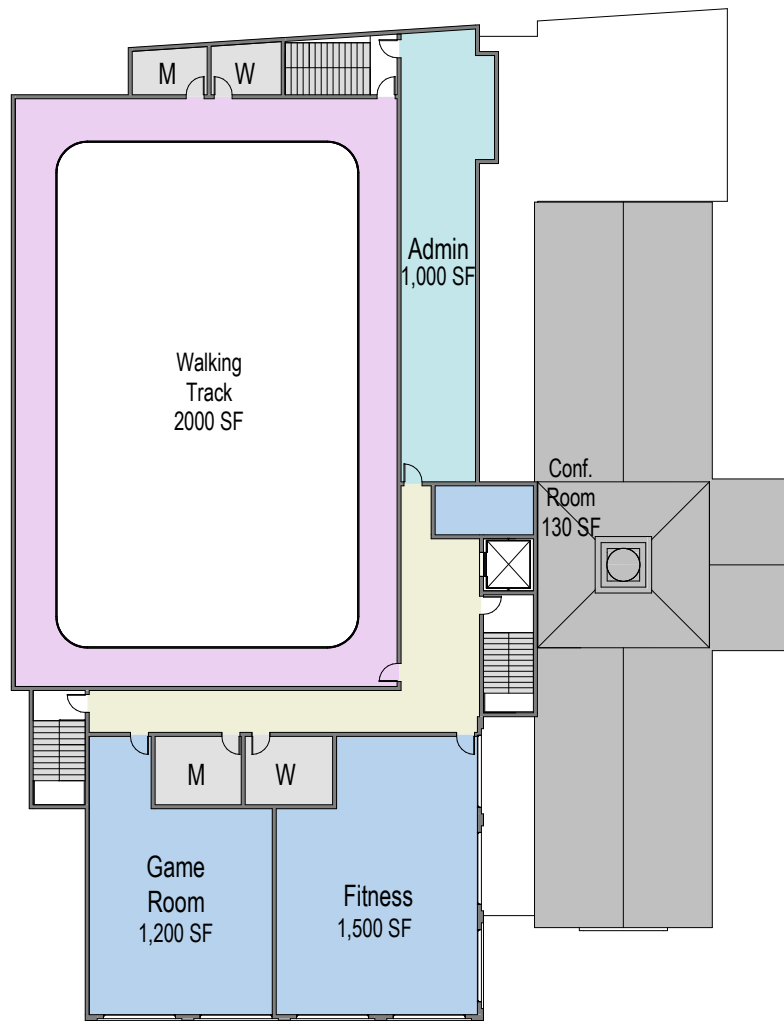
Newtonville Retain Existing Building



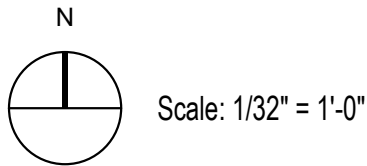
Second Floor Plan: 13,000 sf



Newtonville Retain Existing Building



Third Floor Plan: 8,000 sf



Newtonville Retain Existing Building



Aerial View from Northeast



Newtonville Retain Existing Building



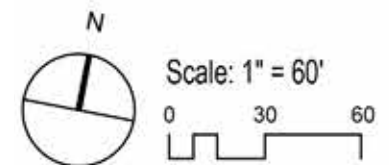
Street View from Southeast



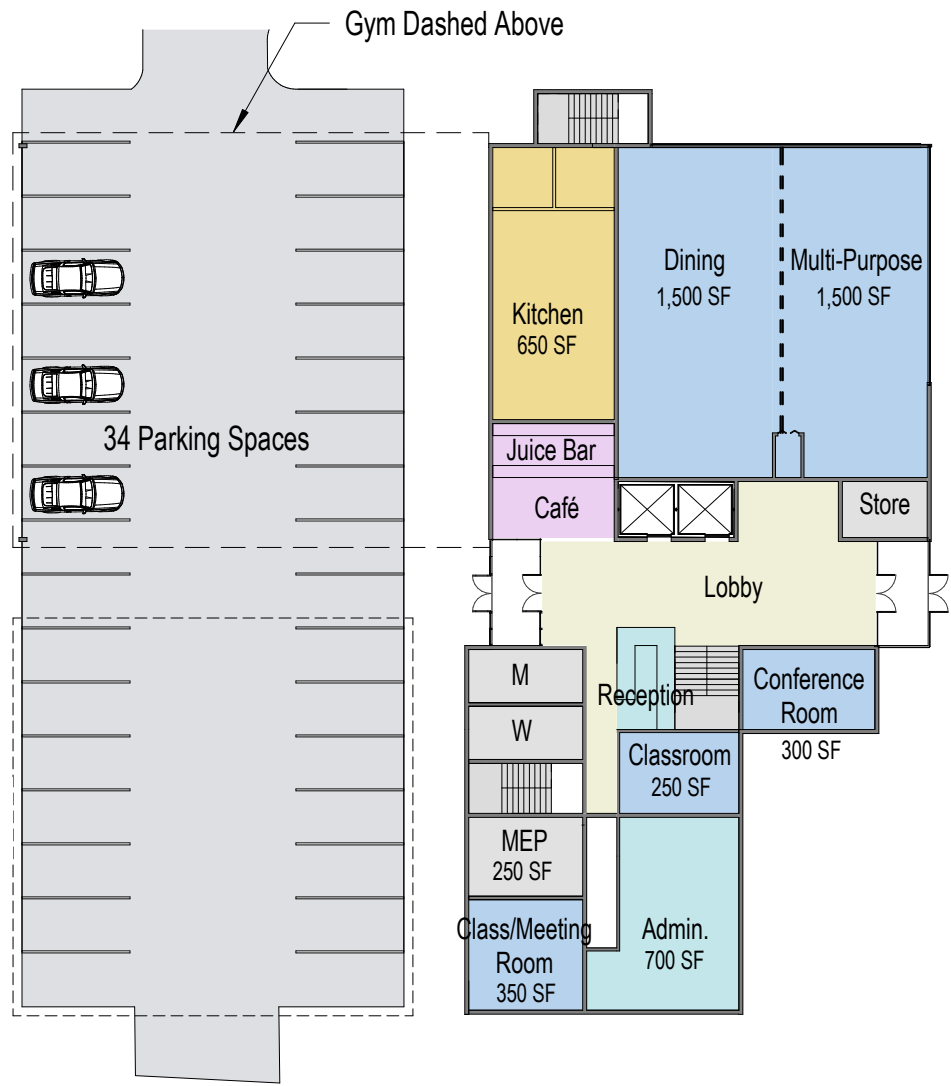
Newtonville New Construction: 3 Stories



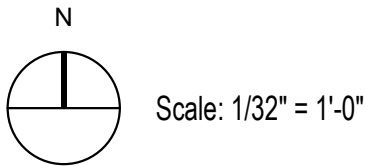
Site Plan: 33,000 sf



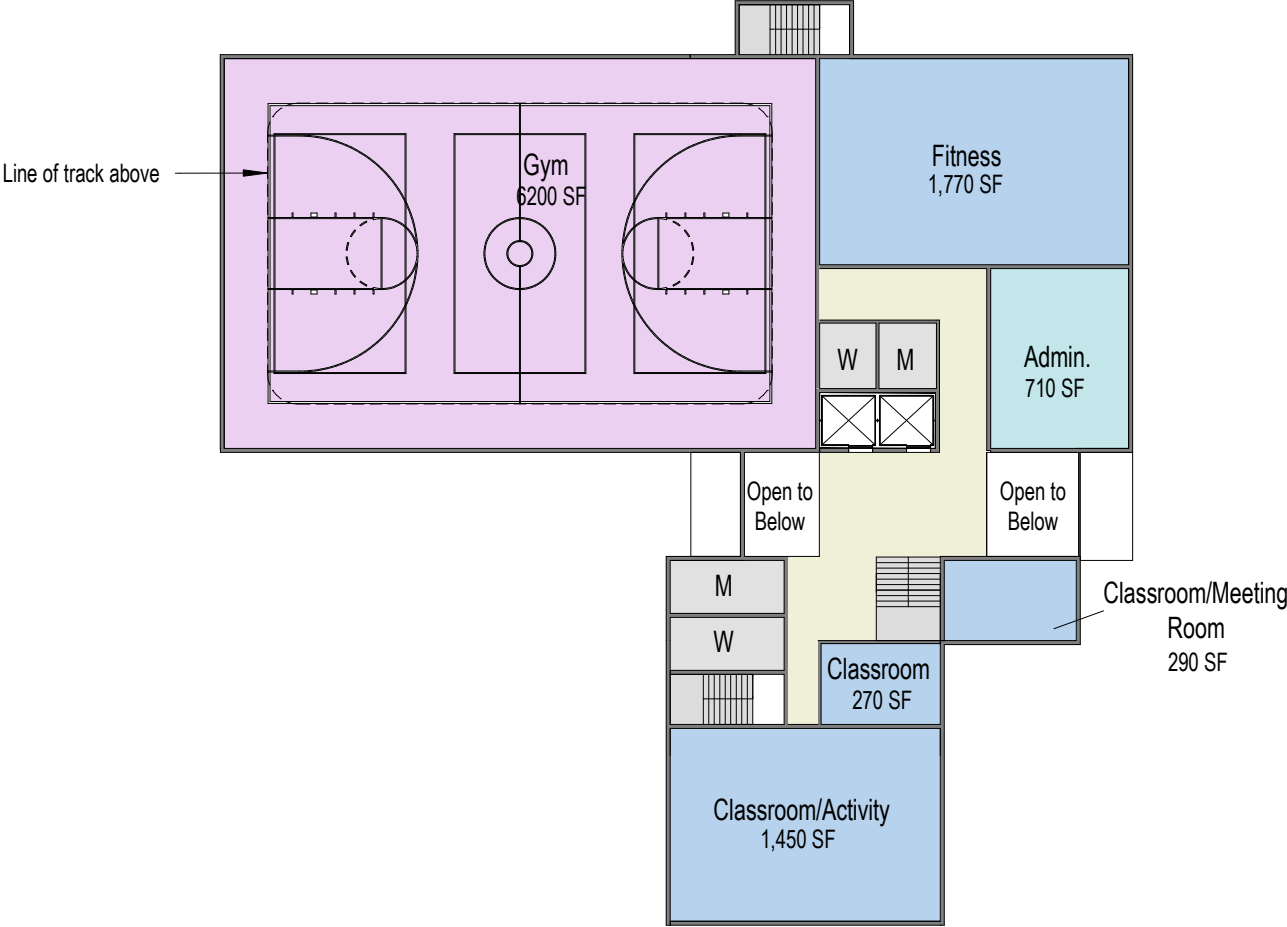
Newtonville New Construction: 3 Stories



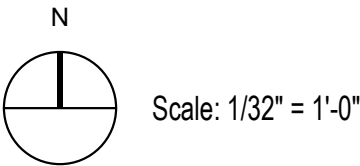
First Floor Plan: 9,000 sf



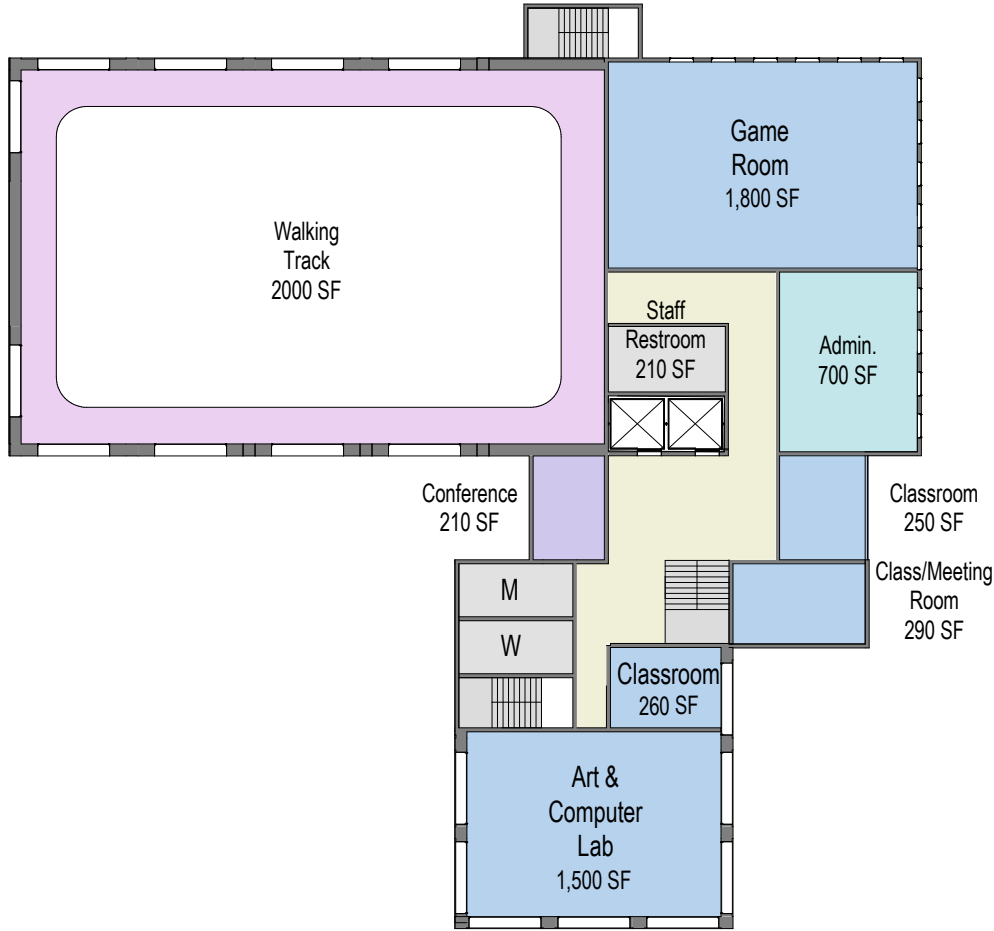
Newtonville New Construction: 3 Stories



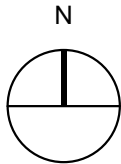
Second Floor Plan: 14,000 sf



Newtonville New Construction: 3 Stories



Third Floor Plan: 10,000 sf



Scale: 1/32" = 1'-0"

Newtonville New Construction: 3 Stories



Aerial View from Northeast



Newtonville New Construction: 3 Stories



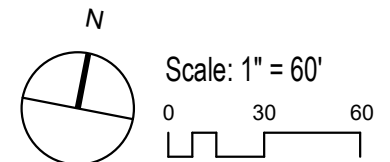
Street View from Southeast



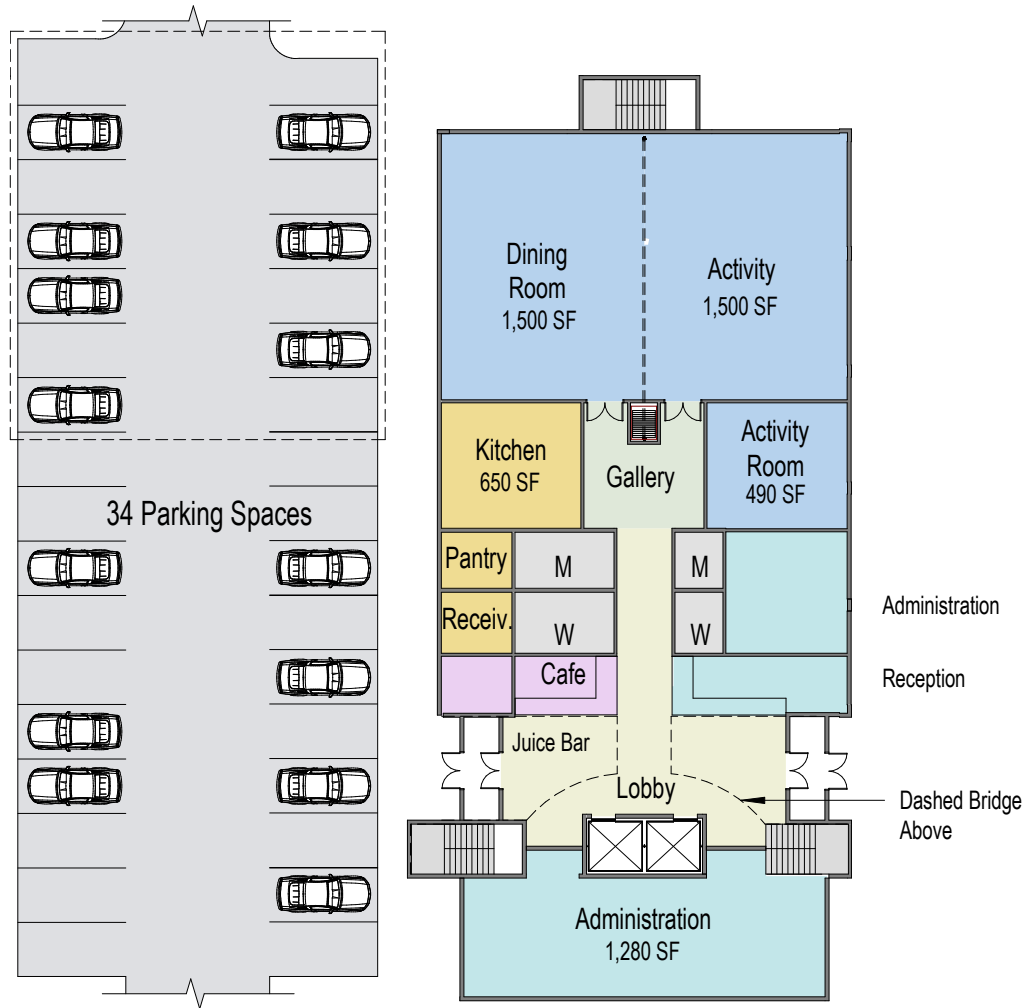
Newtonville New Construction: 4 Stories



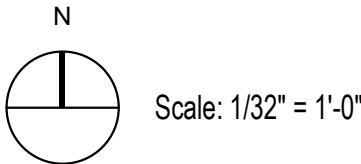
Site Plan: 33,000 sf



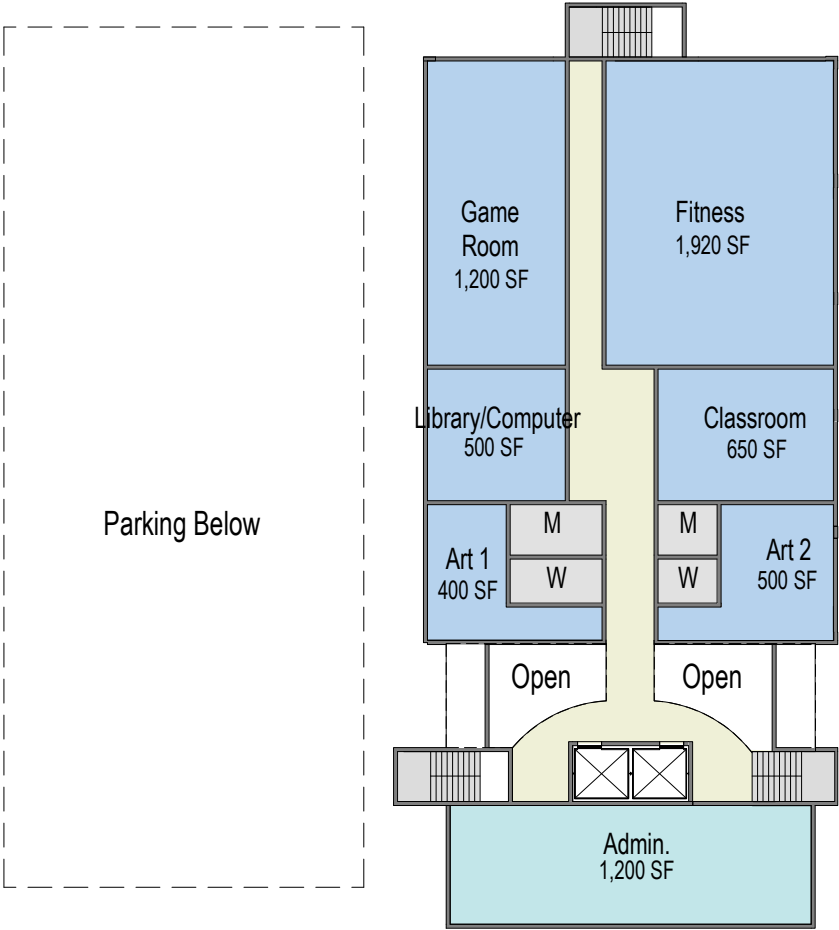
Newtonville New Construction: 4 Stories



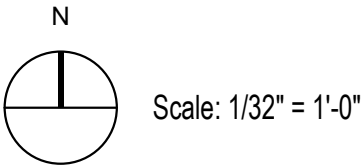
First Floor Plan: 10,000 sf



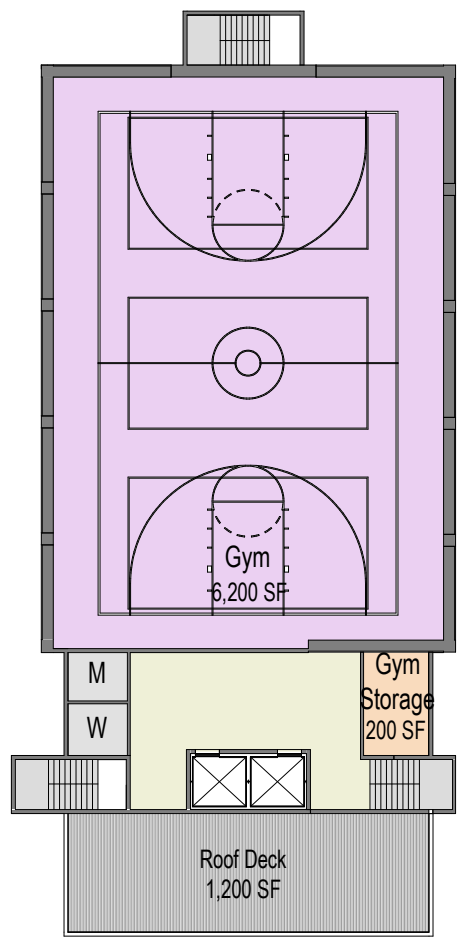
Newtonville New Construction: 4 Stories



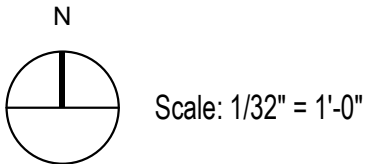
Second Floor Plan: 10,000 sf



Newtonville New Construction: 4 Stories



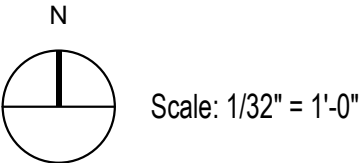
Third Floor Plan: 9,000 sf



Newtonville New Construction: 4 Stories



Fourth Floor Plan: 4,000 sf



Newtonville New Construction: 4 Stories



Aerial View from Northeast



Newtonville New Construction: 4 Stories



Street View from Southeast

Site Option Statistics

	345 Walnut Street, Newtonville			Newton Centre Triangle		
	Option 1 new & existing	Option 2 new 3-story	Option 3 new 4 story	Option 1 new 2 story	Option 2 new 3-story	Option 3 new 4-story
NewCAL Building Area* ¹ (square feet)	31,500	31,500	31,500	31,500	31,500	31,500
Floor Levels	5* ²	3	4	2	3	4
Available Roof Deck Area (square feet)	none	none	1,700	none	2,700	1,700
Current Parking at Walnut Street lot	13					
Proposed Parking Spaces in NewCAL lot	26	34	34			
Increase in Parking Spaces	13	21	21			
Revised Parking as a percent of Current	200%	262%	262%			
Number of covered parking spaces	27	14	0	0	8	0
Area of Coverd Parking (square feet)	9,200	4,200	none	none	6,500	none
Current Parking in Newton Triangle Lot				152		
Revised Parking in Newton Triangle Lot* ³				92	127	127
Decrease in Parking Spaces				-60	-25	-26
Revised Parking as a percent of Current				61%	84%	83%
Number of covered parking spaces	27	14	0	0	8	0
Area of Coverd Parking (square feet)	9,200	4,200	none	none	6,500	none

Note:

1) Building area includes all enclosed program area but not the covered parking

2) The existing building is at half level relationship to grade creating 5 different levels although the highest floor is 3 levels above grade

3) Parking for Newton Centre site reflects parking in entire lot

After considering Newton Centre, the working group voted unanimously for the Newtonville site, due to the time it would take to complete the project, the absence of a village plan, impacts to the neighborhood, community support or opposition, cost, and other factors.

CITY OF NEWTON

IN CITY COUNCIL

November 20, 2017

ORDERED:

That, in accordance with the recommendation of the Public Facilities Committee through its Chair Deborah J. Crossley, the City of Newton Public Buildings Department Building Design and Construction Sustainability Guidelines be and are hereby approved as follows:

**City of Newton – Public Buildings Department
Building Design and Construction Sustainability Guidelines**

A) Introduction and Summary

In its decisions regarding the design and construction of new municipal buildings and the major renovation of existing municipal buildings, the City of Newton strives to reach the best balance among many goals. Key goals include those pertaining to building function, construction budget, operating costs, siting, appearance, maintenance requirements, longevity, and flexibility for future needs. This document is intended to better guide decision-makers who seek to achieve the best balance among these goals. They are recommendations and do not alter the existing jurisdiction or authority of the City Council.

- 1) These guidelines will be reviewed at least every three years by the Public Buildings Commissioner as technology developments and experience warrant.
- 2) Newton is a leader in the pursuit of a sustainable built environment. As it plans the construction and major renovation of buildings, it will look beyond minimum regulatory standards and consider intelligent building strategies that will contribute to substantial long term conservation of natural resources and operational economies. For each building design project, in addition to meeting code requirements, the City will evaluate all cost effective features that reduce energy and other operational costs and minimize environmental impacts through the use of sustainable building materials and other strategies. This document will guide building siting, design, construction, and operations.
- 3) Newton's goal of a sustainable built environment is, to the extent possible, to

- a. minimize the use of energy, water, and other resources
 - b. maximize the use of renewable sources to provide electricity and heat
 - c. maximize building longevity through rigorous design processes and quality-controlled construction
 - d. minimize environmental impacts of construction materials and methods
 - e. institute building operations and maintenance practices to minimize environmental impacts, achieve optimal performance and maximize occupant health and well-being.
- 4) In all new buildings and in the renovation of existing buildings the City strives to minimize building energy use. To attain that goal, the City has a building design and operation approach that will reduce life cycle costs, demonstrate significant improvements over previous designs, help define a path to net zero, and educate the community regarding feasibility and value. The path to net zero includes reducing building energy use as much possible and maximizing the use of on-site renewable power and heat.
- 5) Per Sec 5-54 of the City of Newton Ordinances, a Design Review Committee (DRC) has been established to coordinate the design review process, examine specifications and study the feasibility of any proposed public facility as submitted to it by the Mayor, City Council, or other public agency (e.g., the Public Buildings Department), and shall make recommendations on a range of solutions within realistic budgetary limits. The DRC may recommend that components of these guidelines be relaxed or modified to accommodate projects whose size or inherent nature make the component inapplicable.

B) Guidelines for Design Teams

1) Design Process Requirements

- a. Newton requires its design teams to use an integrated design approach at all phases of the design process, especially in schematics and design development. Because reduction in energy consuming features and HVAC loads may also reduce the size and cost of other parts of the project, and because choice of building materials may impact durability of construction, Newton requires its consultants to identify all building features that can be affected, when making energy efficiency related decisions. (See the attached commentary by Josh Morse, Newton's Buildings Commissioner, regarding "Integrated Design Approach".)
- b. During all phases of design
 - 1. Refer to "lessons learned" list from Public Buildings Department
 - 2. Evaluate Value Engineering options using life cycle cost analysis with full consideration of the impact on other building systems and components.
 - 3. Value Engineering options that increase energy use require recommendation by the DRC
 - 4. Continuously consider, propose and evaluate sustainability options
 - 5. All budget estimates to include air infiltration testing

c. During Conceptual Design Phase

Provide a minimum of three options before completion of Conceptual Development Phase. These options will require creative interactive discussions among the design consultants. These analyses will address onsite alternative energy source options and consider funding sources beyond the established building budget. The City will explore budget sources for Options 2 and 3 before completion of Conceptual Design.

Option 1. Meets all codes and budget

Option 2. Reduces energy use to 30% below code requirements, with any budget implications

Option 3. Reduces energy use to net zero. If net zero is not feasible, show an option that reduces net energy use to the minimum feasible. Estimate budget implications.

d. During Schematic Design Phase

1. At the start of Schematics, the City will direct the design team regarding the major options developed in Conceptual Design.
2. The design team will develop options to improve sustainability within the parameters accepted in Conceptual Design. Evaluate life cycle costs of each option.

e. During Design Development Phase

1. The design team will develop options to improve sustainability within the parameters accepted in Schematic Design. Evaluate life cycle costs of each option.
2. Make provisions that enable future building modifications to improve sustainability.

f. During Completion of Construction Drawings

1. Develop options for commissioning building envelope construction
2. Develop options for air infiltration testing

g. Modeling for Large Projects. For projects of 20,000 square feet or more of gross floor area the design team is responsible for Building Energy Use Modeling using the following approach:

1. Establish expected schedule of building use before completion of schematics
2. As the design progresses, refine the model and complete energy model runs at Schematics, Design Development, and near completion of Construction Drawings. These models will be used to guide designers on how to achieve better energy conservation results and the impact of sustainability options being considered.
3. For schools, evaluate the feasibility of reducing energy use by 5%, 10%, and 15% compared to the models of three recently completed Newton schools.

2) Certification and Ratings system requirements

- a. Design teams are responsible to meet the following requirements. While LEED is presently the preferred benchmarking system the DRC/ Public Buildings Department may consider alternative indices.

- b. Projects of less than 20,000 sf shall meet the requirements of the most current applicable US Green Building Council (USGBC) Leadership in Energy and Environmental Design (LEED) Building Design and Construction (BD+C) building rating system at the level 'Certified' or better.
- c. Projects of 20,000 square feet or more of gross floor area shall meet the requirements of either:
 - 1. The most current applicable LEED BD+C building rating system at the level "Gold" or better. For twelve months from the time of adoption of a new version of LEED projects shall have the option to file under either the old or newly-adopted version.
OR
 - 2. For schools, energy efficiency standards acceptable by the Massachusetts School Building Authority (MSBA) for additional reimbursement.
- d. To further support the design, construction, and operation of a project that meets Newton's requirements for energy, water, indoor environmental quality, and durability, provide for implementing the LEED BD+C Enhanced Commissioning requirements.
- e. The Design Review Committee may recommend any municipal project conform to the certification system without actual participation in the formal process.

C) Guidelines for Designer Selection Committee

Consider the comparative capabilities and experience of design teams, including sub-consultants, to respond to these Guidelines as part of the designer selection criteria. Compare design teams' familiarity with recent sustainability achievements of similar buildings.

D) Guidelines for Public Buildings Department

- 1) Include these Guidelines in RFQs and contracts with Design Teams.
- 2) For all design projects, identify means to fund Life Cycle Cost-effective options that raise the cost higher than the established budget.
- 3) Maintain "lessons learned" list for use by design teams. Update this list after construction of each project and after one year of its occupancy. Semi-annually provide this list to the DRC. Among many other considerations, "lessons learned" shall include:
 - a. Evaluation of high performing windows used on recent projects
 - b. Evaluation of air barrier and insulating wall and roof assemblies used on recent projects
 - c. Evaluation of constructability of thermal break strategies in foundations and structural components on recent projects
 - d. Evaluation of HVAC and lighting approaches used on recent projects

- e. Evaluation of building controls, management, monitoring and display functions
 - f. Evaluation of durability and performance of building materials
 - g. Evaluation of educational opportunities for users and the community
- 4) Two years after completion of projects larger than 20,000 sf, compare actual energy use to the building model, and include reasonable explanations for significant deviations, recommendations for performance improvements, and a plan to implement such improvements. Require re-measurement and review one year after substantial completion of any significant improvements.

Establish a formal “recommissioning” process to be completed by the third year of occupancy of buildings, and repeated every three years as follows:

- a. Projects of at least 10,000 sf of floor area but less than 20,000 sf shall meet the requirements of the most current applicable LEED Operations and Maintenance (O+M) building rating system at the level ‘Certified’ or better.
- b. Projects 20,000 sf or more shall meet the requirements of the most current applicable LEED O+M building rating system at the level ‘Silver’ or better.

Under Suspension of Rules

Readings Waived and Approved by Voice Vote

(SGD) DAVID A. OLSON

City Clerk

(SGD) SETTI D. WARREN

Mayor

Date: _____