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Mayor

City of Newton, Massachusetts
Department of Planning and Development
1000 Commonwealth Avenue Newton, Massachusetts 02459

Petition: #07-25

Barney S. Heath
Director

PUBLIC HEARING/WORKING SESSION MEMORANDUM

DATE: March 20, 2025
MEETING DATE: March 25, 2025
TO: Land Use Committee of the City Council
FROM: Barney S. Heath, Director of Planning and Development
Jennifer Caira, Deputy Director of Planning and Development
Katie Whewell, Chief Planner for Current Planning
CC: Petitioner

Application Materials: <https://newtonma.viewpointcloud.com/records/851691>

In response to questions raised at the City Council public hearing, the Planning Department is providing the following information for the upcoming public hearing/working session. This information is supplemental to staff analysis previously provided at the Land Use Committee public hearing.

This memo will contain references to titled attachments that can be found at the link above under the "Files" tab.

PETITION #7-25

400 Main Street

Petition #7-25 Request to amend Special Permit #426-18 to eliminate five buildings, convert Building 1 from office space to residential use, increase the number of residential units by 22 units, modify building designs of certain proposed buildings, and alter surface and structured parking at 55 Tower Road, also known as 400 Main Street, Ward 5, Newton Upper Falls, on land known as Section 51 Block 28 Lot 05, containing approximately 22.6 acres of land in a district zoned BUSINESS4. Ref: Secs. 7.3.3, 5.13, and 5.13.7 of Chapter 30 of the City of Newton Rev Zoning Ord, 2017.

Background

The petitioner, Northland Pattern District LLC, is seeking to amend a previously approved special permit which would introduce changes to land uses within the site as well as minor modifications to buildings and the overall site plan.

At the time of the initial public hearing, the Planning Department engaged with a team of on-call consultants for the following areas of review: transportation, stormwater system, and site design with the portions of the project that are changing. After further discussion at the public hearing and the submission of a market analysis by the Petitioner, Planning engaged the services of an on-call consultant, Camoin Associates, in the area of market analysis and viability of the Greater Boston office market. All consultants will give presentations on their areas of review and be available for questions from committee members and council members at the hearing.

February 4, 2025 Public Hearing

The public hearing for this petition opened on February 4, 2025 and was held open for further analysis and review. Members of the committee raised questions regarding the viability of the region's office market, details around the proposed shuttle, surface parking, Greenway buffering, and the residential breakdown of the project. The petitioner submitted a list of responses to Councilor questions which can be found in the project materials titled "Response-Questions LUC Hearing w attachments".

In the response, the Petitioner explains that due to the proposed change in the programming of the site, the proposed shuttle schedule has shifted to accommodate a primarily residential commuter schedule. The shuttle will operate on a "commuter" schedule running 3.5 hours for each of the morning and evening peak commuter periods Monday through Friday using a 14-passenger minibus. Headways between trips will be approximately 20 to 25 minutes. The Petitioner's materials indicate that Newton residents will be able to take the shuttle for free, the Petitioner should clarify if any users will have a cost associated or if it is free to everyone.

In response to questions about parking, the Petitioner states that the new surface parking is intended for retail users. There is still below-grade retail parking but ultimately the Petitioner believes that the surface parking will be more convenient for retail users.

The Petitioner also provided an affordable unit breakdown, which is subject to the Inclusionary Zoning provisions in place at the time of the initial approval. 123 units will be made available to those earning between 50%-80% of the area median income (AMI) and 21 units will be made available to those earning up to 110% AMI. This represents a total of 144 affordable units of the

822 total units proposed for the project. The Petitioner states that the average size of a mill building unit is 1,273 square feet.

A committee member asked about the height of the buildings within the project and wind studies. The project overall reduces the number of buildings on site from sixteen to eleven buildings, for a reduction of five buildings. There are no major changes to the buildings, and the approved special permit findings describe the compatibility with adjacent buildings which consist of six stories. The approved findings also describe the project's height as focused at the center of the site and stepping down toward the edges. As there are no major changes to the height and the overall shape and design of the buildings are not changing and the overall open space on the site is increasing, there is no concern of the proposed changes creating wind tunnels nor impacts on abutting properties due to wind.

The responses from the Petitioner expand on other areas of interest such as queuing maps, pervious area, Oak Street access, the viability of office space and more.

Market Analysis

Members of the committee expressed concern with the sizable elimination of the approved office space. Since the February 4 hearing, the petitioner submitted a market and fiscal analysis prepared by Landwise Advisors. In response to this analysis submitted by the Petitioner and councilors' questions, the city has engaged Camoin Associates to provide an independent study on the state of the office market in Newton as well as within the Massachusetts Route 128 corridor.

Camoin's analysis (**Attachment A**) presents nine key findings from their analysis of two geographic areas (Boston Regional Market and Local Market Area): weak office demand, high vacancy rates for office, limited new office development, slow absorption of office space, flight to quality, oversupply of lab space and its impact on the office market, tenant concessions increasing, significant local competition, and lower tax revenue potential as residential.

Reduced Demand for Office

The Petitioners stated that the weakened office market has directly impacted their decision in revisiting the overall programming of the project. Camoin's analysis confirms the current environment of the weakened demand for office space and points to several factors influencing this largely stemming from the 2020 global pandemic which resulted in a rise in remote and hybrid working conditions for employees who typically commuted to work. As more employers opted for hybrid work, it resulted in a reduced need for large office footprints which caused many companies to downsize or reassess long-term space requirements. In addition to adopting hybrid or remote working models, companies are looking to reduce costs and are opting for smaller footprints, higher quality spaces in transit-rich, mixed-use districts, and flexible leasing models, all to maximize cost savings and profitability.

Camoin notes that suburbs such as Waltham, Watertown, and Burlington have seen strong leasing activity as they all have concentrations of newer or more recently updated office stock close to retail and restaurant amenities. Camoin's report offers a thorough review of the current office climate and offers further analysis on these trends as well as the state of the lab market, which was found to be overbuilt across the region with an availability rate of 30%.

High Availability

The reduced demand for office stock leaves much of the existing office space vacant, resulting in high availability. The Boston Regional Market currently has an availability rate of 18%, where it stood at 11% in 2019. When looking at the differential between pre pandemic and current trends Camoin notes, "Prior to the onset of the pandemic, the Local Market Area (area within a five-mile radius of the site) had an office availability rate that was consistently 4 to 6 percentage points lower than the region as a whole, pointing to relatively strong local demand. This differential has disappeared in the years since 2020; the availability rate for the Local Market Area is now on par with regional levels, suggesting that localized demand drivers that once attracted tenants have weakened" (p.5). Camoin also notes that since 2020, over 14 million square feet of new office space has been delivered in the Boston Regional Market which accounts for projects in the pipeline prior to the pandemic which further increases the amount of office space available. Much of this space is considered "Class A" and represents the newest, state of the art office space and typically have high end quality construction with amenities as well as favorable locations. Due to the high availability of office space, there has been a regional downward trend in the construction of office space since 2021.

As a result of the sequence of events that resulted in a weakened office market, other externalities exist such as weak rents, high interest rates in the cost of borrowing to finance new construction of office space, risk averse lending, shift in investment towards uses with more stable returns such as residential and industrial uses, investment in renovations of existing office properties, and conversion to residential in older building stock (which the Petitioner is proposing for the historic mill building).

Office Viability within the Sacco-Petee Mill

As the historic Sacco-Petee Mill was approved to contain 193,200 square feet of office space, Camoin contemplates it was likely to draw tenants in the 10,000 - 20,000 square foot range with an appreciation for historic character, lending itself to creative and design firms, tech and innovation, and lifestyle and wellness companies. The site's close proximity to the highway and mix of approved uses would likely put it in the Class A/A- category, however lack of direct transit access and minor inconveniences with the building configuration would be taken into consideration and likely result in a discounted space.

When looking at the surrounding area, there is considerable competition with Class A office space within a two-mile radius of the site. Across six sites in Needham and Wellesley there are 23 total spaces available representing approximately 610,000 square feet ranging from properties built

from 1976-2015. When expanding to five miles of the site, there are 71 available office spaces of all classes totaling 1.7 million square feet. In comparison with the historic mill on site, there are at least six additional sites (four in Newton) also in the brick-mill style largely consisting of Class B office space (functional, may once have been Class A, visible signs of age, often found in the suburbs, fewer amenities than Class A.) These comparable sites consisting of brick-mill buildings offer approximately 263,000 square feet of available space.

Absorption Analysis

Absorption refers to the change in occupancy of space over a given time period, measured in square feet. Lease renewals are not factored into absorption unless the renewal includes the occupancy of additional space. Pre-leasing of space in non-existing buildings is not counted until the actual move-in date. Camoin notes that availability rates are leveling off and rents seem to be holding. Camoin also notes that “Absorption of vacant space will continue to be uneven throughout the region. Demand is expected to be increasingly concentrated in the highest-quality buildings in mixed-use environments. This could result in a situation where some submarkets continue to struggle with high vacancies for the long term, while others, particularly those in the urban core, show demand for new construction over a shorter time horizon. The Route 128 West corridor is likely to fall toward the upper middle of the pack, with desirability exceeding most suburban submarkets.” (p.12)

Camoin modeled future office absorption under a highly optimistic scenario, which assumes net absorption turns positive immediately, average absorption returns to 5-year pre-pandemic averages, and lab space is not repositioned as office space on a meaningful scale, and it would take a minimum of 6.4 years to reach 2019 vacancy rates in Local Market Area and 9.6 years in the Boston Regional Market Area as a whole. This is highly optimistic and Camoin states that a more realistic timeframe is that it will likely 10+ years in the local market area for the market to absorb the available office space and return to pre-pandemic vacancy rates. (p.13)

Fiscal Analysis

Camoin reviewed the fiscal analysis submitted by the Petitioner and found that the scenarios set forth by Landwise were appropriate, but Camoin notes that due to changing market conditions, the actual values would be different in the scenarios. In their table below, Camoin reviewed just the mill building’s tax revenue under three conditions, existing, entirely office, and entirely residential.

**Annual Tax Revenue from Sacco-Pettee Mill Building,
 by Use Scenario**

Use Scenario	Existing		
	Condition	Office	Residential
FY25 Average Assessed			
Value (per sf or per unit)	--	\$192	\$474,148
Size (sf or units)	--	180,000	100
Assessed Value	\$4,791,000	\$34,560,000	\$47,414,800
Applicable Tax Rate	9.80	18.34	9.80
Annual Tax Revenue	\$46,952	\$633,830	\$464,665

Source: City of Newton Assessor; Competitive Set of Properties from Landwise Advisors

Camoin’s analysis reinforces the declining office market and the view that this is an opportune moment to rethink the programming of the site before any vertical construction is underway that would leave office space underutilized or vacant. It is reasonable to draw from Camoin’s report that the high availability of premium Class A office space is a signal of a challenging office market. Due to the increased availability of Class A office space within two miles of the site, and comparable brick-mill style space available for lease, introducing an additional 180,000 square feet to that existing available inventory of 610,000 sq. ft. is likely to face challenges in leasing, further exacerbating the issue of high availability of office space. When reviewing the annual tax revenue, an entirely office conversion for the mill building would bring \$633,830 annually, with an all-residential scenario (currently proposed) that would bring in \$464,665. Both scenarios of conversion of the mill building are significant improvements in the existing condition of the mill building which currently offers an annual tax revenue of \$46,952. As Camoin demonstrates, the existing challenges in the office market of high availability of Class A office space, significant competition within five miles of the site of office space all point to a residential conversion of the mill building as the more stable option in today’s market.

In the Fiscal Analysis submitted by the Petitioner, Landwise estimates an overall net positive revenue to the City of \$1.8 million annually when taking in the total revenue from the project (property tax, motor vehicle excise tax, meals tax, and personal property tax) against the expenses (schools, fire and emergency medical services, police, health and human services and other) to the City. Further, in the Petitioner’s response document, response #7 estimates \$14 million in building permit fee revenue from the proposed project. At the time the project was originally approved the Petitioner was estimating a building permit fee of \$10 million. While the size of the project has been reduced, the cost has increased, resulting in higher permit fees.

Transportation

Trip Generation/Traffic Volumes

The submitted Traffic Impact and Access Study (TIAS) indicates that the new program is expected to result in significantly less traffic generated by the site due to the new mix of uses and the significant reduction in office use. Beta Group, Inc. reviewed the submitted TIAS and site plans and issued a memorandum on March 7, 2025 (**Attachment B**) with further analysis and comments requesting additional information or clarification of the Petitioner.

The analysis compared the previously approved project and the proposed project showing a 13%-31% reduction in trip generation depending on the day of the week and time of day. Beta's review noted that the Petitioner did not include Saturday peak hour demand (it was included in the prior project analysis). The Petitioner has since provided a memo addressing Saturday traffic volumes, which is currently under review by Beta.

Crash History

Beta notes that the intersection of Needham Street and Charlemont Street has a higher-than-average crash rate (.81 per million entering vehicles, where .52 is the average for the area). The Needham Street and Tower Road intersection had a crash rate of .54. Beta notes that this data was collected prior to the [MassDOT Needham Street improvements](#). As noted in the link to the project webpage, the improvements include creating exclusive turn lanes, installing all new traffic signal equipment, adding lanes west of interchanges, and realigning the intersection at Needham and Charlemont Streets. The improvements also add 5-foot-wide raised bike lanes and shared use paths, bus stops, continuous designated sidewalks, and improvements to stormwater infrastructure. The improvements are intended to improve traffic safety and operations and multimodal accommodation (transit, bicycle, and pedestrians) extending from the intersection of Highland Avenue and Webster Street in Needham to the intersection of Winchester Street and Route 9 in Newton.

Transportation Demand Management and Shuttle

As part of the Transportation Demand Management/shuttle proposal for this project which aims to reduce single occupancy vehicle trips to and from the site, the petitioner is maintaining the public shuttle service but with a reduced schedule. The shuttle service will phase in until full occupancy and is proposed to operate Monday through Friday during the peak morning and evening periods with a frequency of approximately every 20 minutes.

On March 17, the petitioner submitted a response to Beta titled “VHB Northland Response to BETA Peer Review 2025 03 07 Final with attachments” as well as a memorandum on Saturday traffic volumes. The response is currently under review by Beta.

Staff anticipate further discussion on this topic at the next meeting.

Urban Design

NBBJ, an architecture and design firm, reviewed the newly proposed open space where Building 14 was contemplated, and the portion of Building 8 that will be eliminated to allow for additional open space (**Attachment C**). Their scope of work also includes reviewing the project’s transition to the Upper Falls Greenway with particular attention to proposed surface parking and its lighting levels and landscaping.

Regarding the replacement of previously approved buildings 9-12 with a proposed 124-stall surface parking facility, NBBJ questions whether additional surface parking and the reduction in below grade parking impacts site circulation, as well as pedestrian and bike access. The proposed surface parking also raises questions about the screening from the adjacent Upper Falls Greenway. Concerns about lighting levels and duration should also be addressed by the Petitioner.

One of the key points of approval in the approved project is that it proposed transforming an underutilized heat island into much needed housing and retail space with public amenities. While the proposed project still offers and achieves those objectives, and the amount of impervious areas has been reduced from the approved design, there should be careful consideration of the proposed concentrated paved area. The petitioner should address NBBJ’s questions about the proposed parking and minimization of heat island effects and whether that can be addressed with tree plantings, lighter colored paving, porous pavers or a combination of these measures. It is unclear whether there will be an access point from the Upper Falls Greenway to the site near the surface parking, however, Condition 51 of the Approved Special Permit requires the site to be open to the Greenway without fencing or screening, with the exception of fencing if necessary to enclose the splash park and low hedges behind the townhouse units. As the petitioner is now proposing a landscape buffer, only three connection points to and from the Greenway and the townhouse units are no longer part of the proposed project, this condition will need to be updated, should the revised project be approved.

With attention to the new open space proposed for the site due to the elimination of buildings (Building 14) or portions of buildings (Building 8), NBBJ asks whether the proposed open space has any proposed programming or use. With twice as much open space along Oak Street, what are the possibilities for the areas to relate to each other or continuity? NBBJ identifies the pathway from the Upper Falls Greenway to the Village Green (between buildings 3 and 4) is not

direct and runs close to Building 4's service areas. NBBJ questions the decisions to place the path here and whether there is a more suitable, safer location for this path.

Building 8 is located to the rear/northern portion of the site. It appears the Petitioner has contemplated some type of programming there with structures on the site plan that appear to be a raised garden or similar function. NBBJ questions what type of uses could be accommodated in this larger space and whether the grading could be modified to improve physical or visual access to South Meadow Brook.

With the conversion of Building 1, the historic mill, to residential, careful consideration should be given to the change of use and expectations associated with a more residential program on nearby open space.

On March 17, 2025, the Petitioner submitted a response to NBBJ titled "2025-03-17_NBBJ NND Memo_STANTEC_RESPONSE_final w attachments.pdf." Alan Mountjoy, Principal at NBBJ, believes the response addresses the comments raised by NBBJ, but can provide additional background or information to members of the Council on urban design pertaining to the portions of the project that are changing.

Stormwater

Horsley Witten reviewed the project's stormwater management with attention to the portions of the site that are changing (**Attachment D**). Horsley Witten has consulted with the City's Engineering Division with any questions about site work that has been done thus far and what was approved at each stage following the special permit approval to lay the ground for vertical construction.

As Horsley Witten served as peer reviewer for the project at the initial approval, they are familiar with the site and the approved systems. With the project change, the petitioner should respond to clarifications requested to ensure the systems installed are consistent with what was approved in 2020. The Petitioner submitted a response on March 13, 2025, titled "2025.03.11 VHB Response to HWG Comments Letter COMPILED_.pdf" which is currently under review by Horsley Witten.

Sustainability

Due to the change in programming for Building 1, the Petitioner is also seeking relief from the sustainability section of the Zoning Ordinance where it applies to Building 1 (the historic mill building). As an office use, the building was able to achieve LEED v3 Core & Shell Silver Certification, however with the conversion to residential, stricter codes apply. Since the approval

of the original iteration of the project, Passive House is now a requirement for buildings of this size. Building 1 is also on the National Register and is required to be maintained and is subject to a Memorandum of Understanding with Massachusetts Historical Commission. While not being able to meet the exact specifications of the sustainability provisions in the Zoning Ordinance, the stretch energy code allows for exemptions for adaptive reuse. Building code, energy code, and the Zoning Ordinance all govern the construction of this site.

More information on this can be found in the attachment submitted by the Petitioner titled “NND B1 Sustainability Narrative_12-3-24_F.pdf” in the permitting portal. In their response they review each option in the Zoning Ordinance and the reasons why those standards may not be a great fit for the mill building as they conflict with the historic rehabilitation. Staff have conferred with Inspectional Services to confirm the understanding that compliance with local zoning as it pertains to sustainability would be impractical for the adaptive reuse building and that an exception is allowed within the energy code.

Next Steps

City staff, its consultants, as well as the development team will be available at the March 25 hearing to expand on any areas identified in their reviews and answer any questions from the Committee or members of the City Council.

City staff and the Petitioner are working on identifying conditions of the prior order that need to be updated as well as any new conditions that reflect the change in program. Staff anticipate having draft conditions for the Committee to consider in advance of the next hearing.

ATTACHMENT A : Market Analysis, Prepared by Camoin Associates, March 18, 2025

ATTACHMENT B: Transportation Peer Review, Prepared by Beta Group, Inc, March 7, 2025

ATTACHMENT C: Urban Design Review, Prepared by NBBJ, March 5, 2025

ATTACHMENT D: Stormwater Review, Prepared by Horsley Witten Group, March 4, 2025



Memo

DATE: March 18, 2025
TO: City of Newton, MA
FROM: Camoin Associates
RE: Economic Review of Northland Newton Development Amended Project

Northland has submitted an application to the City of Newton to amend its previously approved development plan for the Northland Newton Development (NND) project. The proposed change includes altering the adaptive reuse concept for the existing Sacco-Petree Mill building, which would eliminate 180,000 gross square feet (sf) of office space that was originally proposed and replace it with 100 multifamily rental apartments. This would result in a net addition of 22 units for NND, for a total of 822 units on-site. The previously proposed retail and restaurant component totaling approximately 96,000 sf would remain as part of the new concept.

This memo provides an economic analysis of demand for commercial office space in the Boston regional market and the localized Route 128 submarket, which the City of Newton will use as context as it considers the NND application amendment.

Key findings from the analysis are as follows:

- **Weak Office Demand:** The office market in Newton, like the broader Boston region, is experiencing a significant decline in demand due to hybrid work models, cost-cutting efforts by companies, and a decelerating economic growth. Leasing activity in the region remains sluggish, with renewals dominating over relocations and expansions. There is uncertainty about when demand for office space will rebound, making new office projects risky.
- **High Vacancy Rates:** Office availability in the Boston Regional Market has surged to 18% from 11% in 2019, with the Local Market Area (LMA) now matching regional trends, reflecting a weakening of localized demand.
- **Limited New Office Development:** No new pure office space construction has started in the LMA since 2020, and only minimal medical office development has broken ground. Rising interest rates, tight lending conditions, and shifting investor priorities have discouraged speculative office projects. Lenders demand higher pre-leasing commitments, and investors are shifting capital toward more stable asset classes like residential and industrial properties.
- **Slow Absorption of Office Space:** The Boston region has 41 million square feet of vacant office space, doubling from 22 million sf in the last 5 years. While there is no expert consensus on how long it could take for vacancies to stabilize, modeling shows that recovery could last 6-10 years at minimum, particularly as more pre-pandemic leases expire.

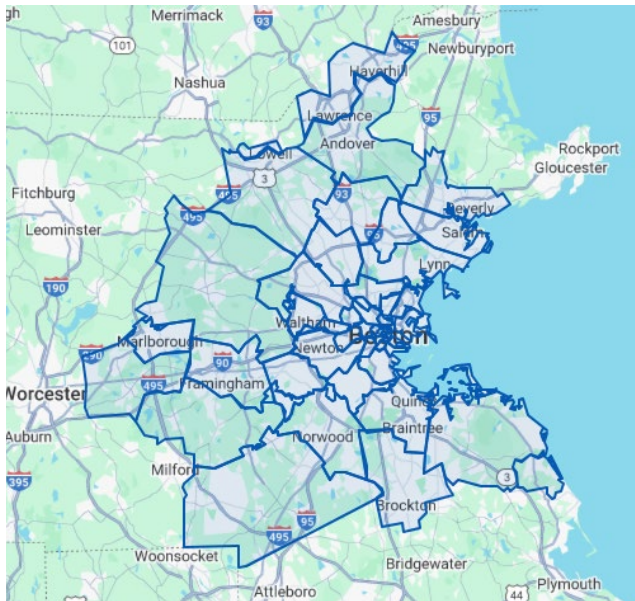
- **Flight to Quality:** While overall office demand is down, businesses looking for space prefer high-end, amenity-rich, transit-accessible locations. This trend has driven leasing in prime urban areas like Downtown Boston and Seaport while limiting new suburban office development.
- **Oversupply of Lab Space Hurting Office Market:** The Boston region has an excess of lab space, with availability exceeding 30%. Some landlords are marketing underutilized lab properties as office space at lower rents, intensifying competition and further weakening office demand.
- **Tenant Concessions Increasing:** Landlords are offering aggressive incentives—such as rent abatements and tenant improvement allowances—to attract tenants. Net effective rents have declined, making new office developments even less viable.
- **Significant Local Competition:** The proposed Sacco-Pettee Mill redevelopment in Newton faces substantial competition, with over 600,000 square feet of available Class A office space within two miles and 1.7 million square feet within five miles, including similar adaptive-reuse properties.
- **Lower Tax Revenue Potential as Residential:** If developed as residential space instead of office space, the Sacco-Pettee Mill would generate approximately 27% less in annual property tax revenue for the City of Newton.

Geographic Definitions

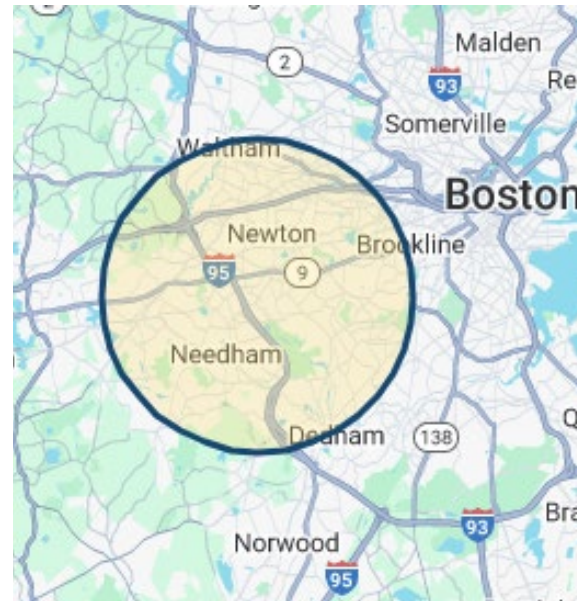
Data presented throughout this analysis is presented for two geographic areas, the Boston Regional Market (RMA) and the Local Market Area (LMA).

- **Boston Regional Market Area (RMA):** Office submarkets roughly contained by the I-495 ring around Boston, and extending from Brockton in the south to Haverhill in the north.
- **Local Market Area (LMA):** Area within a 5-mile radius of the NND site, including all of Newton and Needham, and significant portions of Wellesley, Weston, Waltham, Watertown, Brighton, Brookline, West Roxbury, and Dedham.

Boston Regional Market Area (RMA)



Local Market Area (LMA)



Key Terms

Definitions for terms used throughout the analysis are presented as follows:

- **Deliveries:** New leasable space added to the total inventory of space in a given market. Deliveries may result from new ground-up construction or conversion of space from one use type to another.
- **Absorption:** Change in occupancy of space over a given time period, measured in square feet. Lease renewals are not factored into absorption unless the renewal includes the occupancy of additional space. Pre-leasing of space in non-existing buildings is not counted until the actual move-in date. May be quantified as "gross absorption" or "net absorption."
- **Gross Absorption:** Measure of total square feet occupied over a given period of time with no consideration for space vacated during the same time period.
- **Net Absorption:** Measure of total square feet occupied less the total space vacated (move-outs) over a given time period.
- **Construction Starts:** New space that has broken ground during a given time period. Construction starts typically precede deliveries by 12-18 months.

- **Available Space:** The total amount of space currently being marketed as available for lease or sale. Available space may be vacant, occupied, available for sublease, or available at a future date.
- **Vacant Space:** All space not currently occupied by a tenant, regardless of any lease obligation that may be on the space. Vacant space could be space that is either available or not available. For example, sublease space that is currently being paid for by a tenant but not occupied by that tenant, would be considered vacant space.

State of the Office Market

The office market in Newton, like much of the Greater Boston region, has been undergoing significant shifts since the onset of the covid-19 pandemic, largely influenced by changing work patterns and broader economic conditions. The viability of office space is increasingly being questioned as demand for traditional office space softens in favor of residential and mixed-use developments. High availability rates for office space highlight the increasing challenges for office landlords in Newton and the broader suburban and regional markets. Lease rates have also softened, with landlords offering concessions such as rent abatement and tenant improvement allowances to attract tenants. These regional trends are mirrored in the local market area.

Weakened Demand for Office Space

The decline in demand for traditional office space has had a direct impact on the feasibility of new office construction, including adaptive reuse conversion to office space. Several key factors are influencing the outlook for office demand:

- **Hybrid Work and Space Utilization:** The adoption of hybrid work models has reduced the need for large office footprints, leading many companies to downsize or reassess their long-term space requirements. This has dampened overall demand for space, as tenants prioritize flexibility over expansion. According to the Avison Young's "Office Busyness Index," which uses geofencing¹ and anonymized mobility data to track office attendance in metros around the country, office visitation in the Boston metro in January 2025 registered at just 63.7% of where it was in 2019, compared 66.9% nationally.² The rate has barely budged over the past year.
- **Cost Reduction:** Amid ongoing economic uncertainty that has continued in the wake of the pandemic, companies are looking to optimize costs, and office rent is a major expense. Downsizing to a smaller footprint helps firms improve profitability. In some cases, users are trading larger, lower-quality spaces for smaller, higher-quality spaces. Some businesses are adopting flexible leasing models, such as co-working spaces, instead of committing to long-term leases.
- **Flight to Quality:** While overall demand for office space has declined, businesses that are in the market for new space are favoring high-end, amenity-rich properties in prime locations. This trend has concentrated new office development in transit-served mixed-use districts in the urban core, including Downtown Boston, Seaport, Boston Landing in Allston, Back Bay/Fenway, Assembly Row in Somerville, and Cambridge Crossing in East Cambridge. In the suburban market, new office development has been more limited. Existing office buildings have been renovated and upgraded to appeal to prospective users.

¹ Geofencing is a location-based technology that uses GPS, Wi-Fi, or cellular data to create virtual boundaries around a geographic location and determine when a device user has entered or left the defined virtual boundary.

² <https://www.avisonyoung.us/office-busyness-index>

The strongest suburban leasing activity has been in Waltham, Watertown, and Burlington, which all have concentrations of newer or more recently updated office stock in proximity to retail and restaurant amenities. Leasing in the Boston region has been muted compared to pre-pandemic levels and appears to be reaching a trough in terms of total square feet of leasing activity. Renewal activity has grown as a share of all leasing, while relocation and expansion activity has declined. For relocations and expansions to increase, landlords will need to continue investing in building amenities and lower net rents, to entice occupiers to incur costs associated with moving.

Since the start of 2023, there have been fewer than 20 office lease signings in the LMA for Class A spaces over 5,000 sf. Only 3 were for spaces over 50,000 sf, and 9 were for mid-sized spaces between 10,000 and 50,000 sf. It should be noted that the largest signed lease of just over 100,000 sf of space by Global Partners at 275 Grove Street in Newton reflects a relocation from a 72,000-sf space in Waltham, reflecting net absorption of 28,000 sf.

Lease Signings since 2023, at least 5K SF, within 5 miles of Northland Site, Class A Office Properties

Sign Date	Address	City	SF Leased	Lease Type	Tenant	Tenant Industry	Deal Type
Feb-25	275 Grove St	Newton	100,419	Direct	Global Partners, LP	Wholesaler	New Lease
Mar-25	400 First Ave	Needham	83,516	Sublease	Advisor 360	Finance and Insur..	New Lease
Mar-23	64 Pleasant St	Watertown	50,699	Direct	Via Separations	Professional, Scie.	New Lease
Jun-24	51 Sawyer Rd	Waltham	37,404	Direct	Brandeis University	Educational Services	New Lease
Apr-23	480 Pleasant St	Watertown	36,295	Direct	Markforged	Manufacturing	New Lease
Feb-25	112 Worcester St	Wellesley	23,966	Direct			New Lease
Dec-23	480 Pleasant St	Watertown	19,437	Direct	Hyperice/Normatec	Wholesaler	Renewal
Jul-23	93 Worcester St	Wellesley	17,515	Direct			New Lease
Aug-24	3 Kingsbury Ave	Watertown	16,000	Direct	Rubix LS	Professional, Scie.	New Lease
Feb-23	480 Pleasant St	Watertown	14,230	Sublease	Monotony.ai	Professional, Scie.	New Lease
Jul-24	200 Arsenal Yards	Watertown	10,819	Sublease			New Lease
Sep-23	130 Turner St	Waltham	10,000	Sublease	Allego	Professional, Scie.	New Lease
Jun-23	300 First Ave	Needham	7,771	Direct	TopAir Systems	Manufacturing	New Lease
Feb-23	130 Turner St	Waltham	6,947	Direct	Opinion Dynamics	Professional, Scie.	New Lease
Jan-25	800 South St	Waltham	6,926	Direct			New Lease
Sep-24	64 Pleasant St	Watertown	6,500	Direct	Culture Pop	Manufacturing	New Lease
Jun-24	51 Sawyer Rd	Waltham	6,000	Direct	Ipsos	Professional, Scie.	New Lease
Jun-23	93 Worcester St	Wellesley	5,841	Direct			New Lease
Jul-23	93 Worcester St	Wellesley	5,100	Direct	Northwestern Mutual	Finance and Insur.	New Lease

Source: CoStar

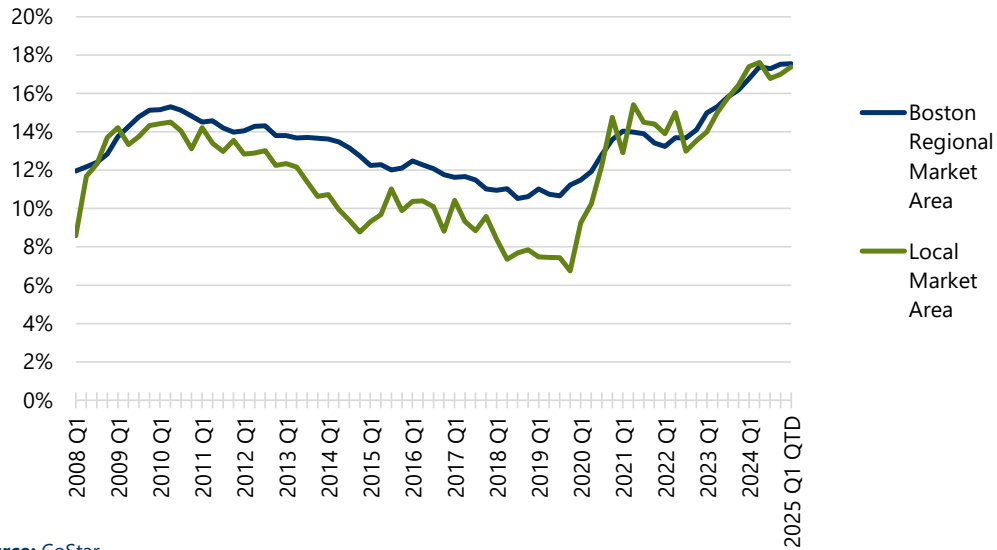
High Availability

The availability rate for office space in the Boston Regional Market stands at 18%, up considerably from its most recent low of 11% in 2019. Prior to the onset of the pandemic, the Local Market Area had an office availability rate that was consistently 4 to 6 percentage points lower than the region as a whole, pointing to relatively strong local demand. This differential has disappeared in the years since 2020; the availability rate for the LMA is now on par with regional levels, suggesting that localized demand drivers that once attracted tenants have weakened.

Availability for Class A properties is higher than average, as new deliveries that were in the pipeline prior to the pandemic have come online over the last few years. Since 2020, over 14 million sf of new office space has been delivered in the RMA, the vast majority of which is Class A. These recent deliveries account for about 12% of total regional Class A office space inventory. The availability rate for these high-quality properties is expected to begin leveling off as the rate at which new space is delivered to the market continues to decelerate. Regionally, the amount of office space under construction has trended downward since 2021. Currently, there are 13 properties

totaling about 3.4 million sf of space under construction that will deliver in the next few years. New construction starts for office space have all but ground to a halt in the last 2 years, with no pure office space breaking ground since the start of 2023, and just 91,000 SF of medical office space in two properties across the entire Boston Regional Market Area.

Office Market Availability Rate, 2008-2025



Source: CoStar

Compared to the start of 2020, office users in the Boston region are occupying 9 million fewer square feet of office space (i.e., negative cumulative absorption), while the total inventory of space has expanded by 11 million square feet. As a result, the amount of space sitting vacant has nearly doubled from 22 million sf to 41 million sf in 5 years.

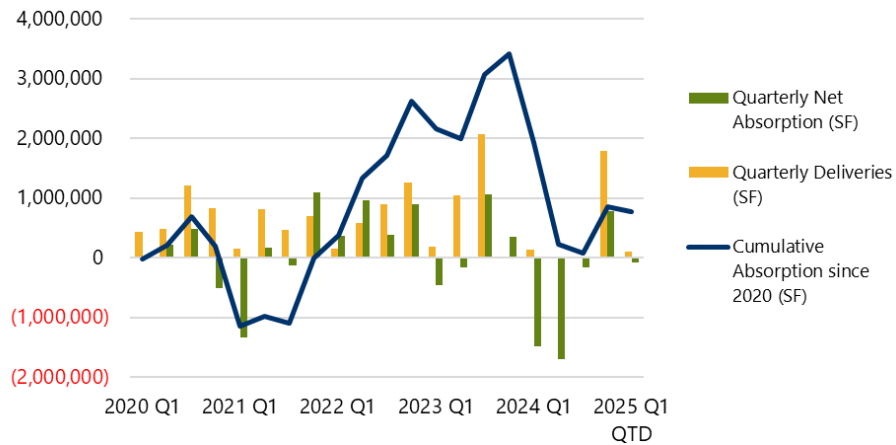
All Classes: Boston RMA, Office Space Absorption (SF), 2019-2025



Source: CoStar

The long-standing “flight-to-quality” trend for office space is evidenced when examining cumulative absorption for Class A space. At the start of 2024, Class A net absorption was up over 3 million sf compared to the beginning of 2020. This trend reversed through 2024, with the market giving back over 2.5 million sf of Class A space, as leases continued to come due and office tenants reevaluated their space needs. Still, Class A occupancy is up by nearly 800,000 sf compared to the beginning of 2021, despite occupancy across all class types being down by 9 million sf.

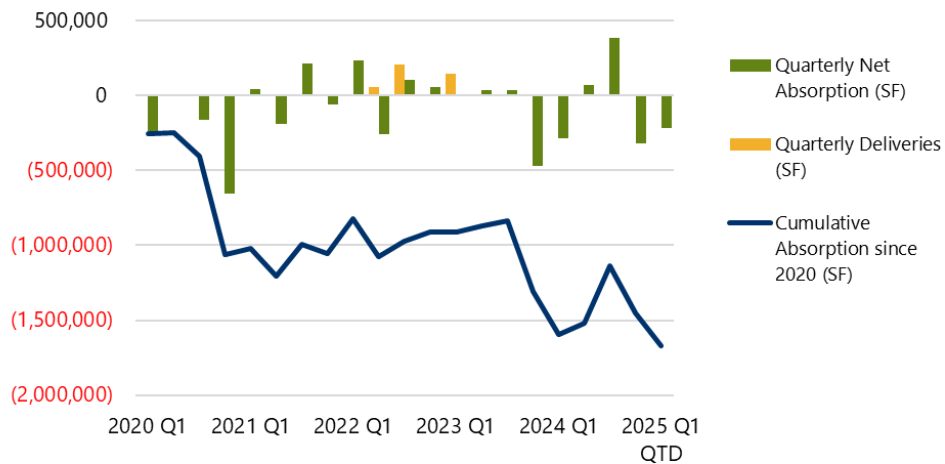
Class A: Boston RMA, Office Space Absorption (SF), 2019-2025



Source: CoStar

Within the LMA, net absorption is down nearly 1.7 million sf compared to pre-pandemic, while Class A space is down 700,000 sf as a result of recent space additions to the market. In the last two quarters, several large blocks of office space have been added to the Local Market Area. Over 370,000 sf of space is now for lease at 311 Arsenal Street at the Arsenal on the Charles development in Watertown. Another 43,000 sf is available at 20 Guest Street in Brighton.

All Classes: LMA, Office Absorption (SF), 2019-2025



Source: CoStar

There has been no new pure office construction in the LMA since 2020. Boston Children's Hospital has expanded into a new 210,000 sf medical office facility in Needham Crossing. Another site for medical office development has been approved at 629-661 Highland Avenue in Needham. Several office developments have been proposed in the vicinity of NND but remain dormant, presumably until market conditions improve. These include 557 Highland Avenue in Needham (former Muzi site) and 333 Grove Street in Newton (Riverside). An expansion approved for 60,000 sf at 180 Wells Avenue in Newton has not been advanced.

Considerations for New Office Construction

Soft demand, rising interest rates, construction costs, and economic uncertainty have made developers more cautious about investing in new office projects. Many investors are waiting for clearer market signals before committing to new developments, leading to a freeze in speculative office construction. In fact, there have been no office construction starts region-wide in the last two years, indicating no willingness to undertake such projects.

- **Weak Rents:** Office base rents are flat to declining across submarkets, and concession packages offered by landlords to entice tenants are further eating into net effective rent, defined as the amount of rent that landlords collect after accounting for concessions. According to Avison Young, the average net effective rent for office space in Greater Boston is now 18% lower than the average base rent (or advertised asking rent) and continues to trend upward. Landlords are offering an average of 8.9 months of free rent to tenants.³
- **Higher Interest Rates:** Rising interest rates have increased the cost of borrowing for developers, making it more difficult to secure favorable financing terms for new office projects. Lenders are demanding higher pre-leasing commitments and stronger financial guarantees before extending credit.
- **Tightened Lending Standards:** Banks and institutional lenders have become more risk-averse, particularly for office developments, due to concerns over long-term demand and occupancy trends. This has led to fewer financing options for developers looking to build new office space.
- **Shift in Capital Allocation:** Investors are increasingly shifting their focus toward sectors with more stable returns, such as residential and industrial properties. This has resulted in reduced capital availability for office projects, further discouraging speculative development.
- **Selective Investment in Office Renovations:** Rather than pursuing new office construction, some developers are investing in renovations and repositioning strategies for existing office properties. Upgrading buildings with modern amenities, energy-efficient systems, and flexible floor plans can help attract and retain tenants in a competitive market.
- **Conversion Pressures:** With persistent vacancy rates in older office properties, many landlords and developers are opting to convert underutilized office buildings into residential or mixed-use developments instead of pursuing new office construction. The Conversion Feasibility Index developed by CommercialEdge Research/Yardi estimates that only about 1.9% of office space in the Greater Boston market qualifies as prime for conversion, with another 9.9% qualifying as Tier II.⁴ This means that the vast majority of existing vacant office space cannot be easily converted and is likely to remain on the market for the foreseeable future, a limiting factor for new office construction potential.

³ Avison Young. Greater Boston Office Market Report. Q4 2024.

⁴ <https://www.commercialedge.com/blog/national-office-report-august-2024/>

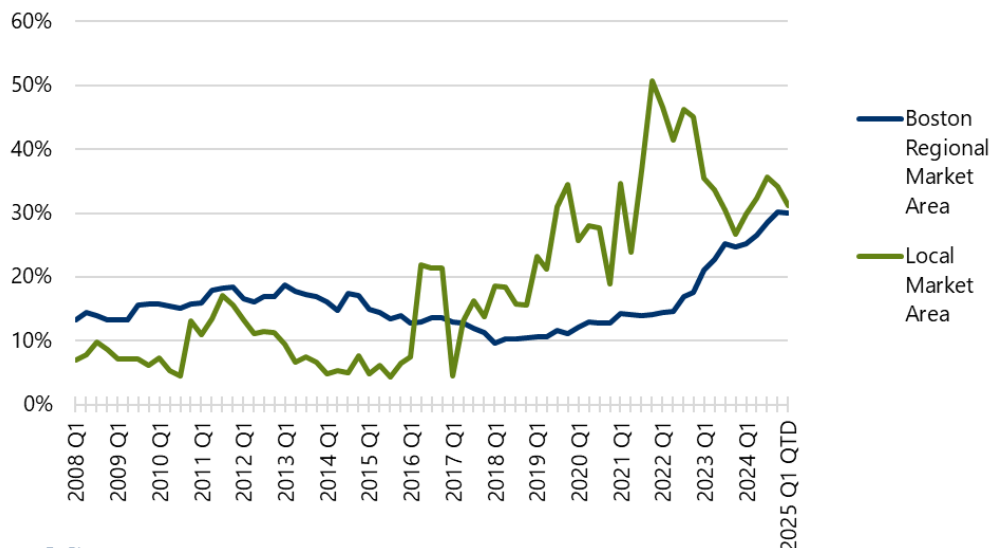
State of the Lab Market in Newton and the Route 128 Corridor

The lab space market plays an important role in the Boston metro due to the region’s high concentration of life sciences and biotechnology industries. Lab space is designed specifically for scientific research, testing, and development activities. Unique features of lab buildings may include advanced ventilation and HVAC systems, chemical fume hoods and safety features, specialized plumbing and waste disposal, reinforced flooring for heavy equipment, capacity for high-power electrical loads, and office areas. The lab market, which has historically been a strong driver of real estate demand both along the Route 128 corridor and in the urban core, is also experiencing shifts. While Greater Boston remains a global hub for life sciences, recent economic pressures and overbuilding have led to rising vacancies in lab space.

Lab space is highly overbuilt across the region. As demand for life sciences space among biotechnology companies ramped up prior to the pandemic and then surged as covid-19 hit, developers responded with a wave of new lab development projects to meet the need. In recent years, life sciences companies have drastically slowed expansion plans as a result of high interest rates and weak venture capital financing. Consequently, demand for lab space has fallen sharply while supply continues to grow as new projects already in the development pipeline come online. Some lab developers have opted to pause construction indefinitely as the market is expected to remain soft for the foreseeable future.

Lab availability rates in the Boston Regional Market continue to climb, topping 30% by the end of 2024. Over 17 million sf of lab space is currently listed as available, with another 5.3 million sf under construction and due for delivery over the next few years. The availability rate in the Local Market Area briefly spiked as high as 50% as new projects were delivered, but have since declined to 31%, on par with the regional rate. Since 2021, 760,000 sf of new space has been absorbed on net locally, but this has considerably lagged the pace of new deliveries, which have exceeded 1.3 million sf.

Lab Market Availability Rate, 2008-2025



Source: CoStar

The high inventory of available lab space is dampening developer and investor interest in new office construction. With limited demand from life sciences tenants, some property owners are marketing purpose-built lab space as office space to attract a broader range of users—though at significantly lower rents than lab space would typically

command. In some cases, lab building owners may be forced to sell at reduced prices, creating opportunities for buyers seeking discounted, high-quality properties in desirable office locations. This shift could intensify competition for office tenants and weaken demand for less desirable office properties.

A key question for the regional and local office market is whether landlords with vacant lab properties will pivot to offering them as traditional office space. While lab spaces are highly specialized and costly to convert, some owners may attempt to repurpose underperforming properties to reduce vacancies. If this transition happens at scale, it could further strain the already challenged office market, prolonging absorption and recovery.

Since 2023, Boston region developers have broken ground on nearly 4.3 million sf of space that has a lab component, while there were no construction starts for pure office space. 91% of this space is located in or near Boston’s urban core, including Cambridge, Somerville, Allston, and Fenway.

Office and Lab Construction Starts since 2023, Boston Regional Office Market

Property Address	City	RBA	Type	Construction Start Year
609 Pleasant St	Brockton	20,014	Medical Office	2025
20-22 Drydock Ave	Boston	319,000	Lab	2024
250 Western Ave	Allston	280,992	Lab/Office	2024
71 Border Rd	Waltham	71,000	Medical Office	2024
3 Dean Rd	Natick	34,500	Lab	2024
725 Beacon St	Boston	960,000	Lab	2023
290 Binney St	Cambridge	566,000	Lab	2023
1 Milestone St	Boston	510,000	Lab	2023
495 Columbia St	Somerville	342,000	Lab	2023
109 Brookline Ave	Boston	310,000	Lab	2023
305 Western Ave	Allston	267,565	Lab	2023
3 Alewife Park	Cambridge	191,000	Lab/Office	2023
2 Alewife Park	Cambridge	122,000	Lab/Office	2023
420-438 Rutherford Ave	Boston	108,600	Lab/Office	2023
1175 Boston Providence Tpke	Norwood	30,000	Lab/Office	2023
4 Kingsbury Ave	Watertown	250,000	Lab	2023
Total		4,382,671		

Source: CoStar; Camoin Associates

In the Local Market Area alone, over 1.6 million sf of lab space has been delivered since 2020, primarily concentrated in Watertown. Of this space, 56% is listed as available.

Lab Properties Delivered since 2020, Local Market Area

Property Address	City	Rentable Building Area (SF)	Total Available Space (SF)	Availability Rate	Year Built
60 Guest St	Brighton	320,000	320,000	100%	2024
4 Kingsbury Ave	Watertown	127,564	37,913	30%	2024
500 N Beacon St	Watertown	120,454	19,700	16%	2023
66 Galen St	Watertown	224,288	106,849	48%	2023
64 Pleasant St	Watertown	105,000	58,403	56%	2023
500 Forge Rd	Watertown	158,683	41,094	26%	2023
250 Arsenal Pl	Watertown	254,406	186,897	73%	2023
313 Pleasant St	Watertown	53,000	20,820	39%	2023
580 Pleasant St	Watertown	147,000	132,619	90%	2023
100 Forge St	Watertown	165,600	19,500	12%	2022
Total		1,675,995	943,795	56%	2022

Source: CoStar

Office Space Viability at the NND Sacco-Pettee Mill Site

As initially conceived, the Sacco-Pettee Mill building would likely target office space occupiers primarily in the 10,000 to 20,000 sf range, in industries that tend to be attracted to a brick-mill-building, adaptive-reuse aesthetic. These are typically space users that value historic character, authenticity, and a unique workspace, such as creative and design firms, tech and innovation companies, and lifestyle and wellness companies.

The building is a 2-minute drive from highway ramps at Highland Avenue and Route 128, offering optimal highway access. The retail and restaurant amenities planned for NND further strengthen the appeal of the site for office users, offering the type of mixed-use, amenity-rich environment that is most in-demand. The property would likely rate as Class A/A- space due to these strengths, with a slight discount due to minor inconveniences in building configuration that can result from adaptive reuse properties, as well as a lack of direct MBTA rail access.

Despite the appeal of this property for office space, there is considerable existing competition within a short distance. Within two miles of NND, prospective offer space tenants currently have 23 available Class A spaces from which to choose, totaling over 609,000 sf. This well exceeds the 180,000 sf of space that could be offered at the Sacco-Pettee Mill by a factor of more than three. These spaces are spread across 6 different buildings in Needham Crossing in Needham and along Route 9 in Wellesley.

Currently Available Class A Office Spaces, at least 5,000 SF, within 2 miles of Northland Newton Development

Property Address	City	Total Spaces	Total Available Space (SF)	Year Built
400 First Ave	Needham	1	52,857	2015
160 Gould St	Needham	1	22,276	1987
117 Kendrick St	Needham	3	55,178	1999
140 Kendrick St	Needham	6	203,908	2000
45 William St	Wellesley	5	123,779	1976
93 Worcester St	Wellesley	7	151,685	2000
Total		23	609,683	

Source: CoStar

Within five miles of NND, there are 71 available office spaces (all classes) across 15 properties totaling 1.7 million sf. Many of these properties have potential for upgrades that could make them competitive with existing Class A properties.

While an adaptive reuse building of this type would be relatively unique in the Local Market Area, there are some comparable properties currently existing and available. One of these competitors is Telegraph at Upper Falls, located at 1234 Chestnut Street, just a quarter mile away from the Sacco-Pette mill. This is a 200,000-sf Class B property with approximately 53,000 sf currently available.

Watertown also offers three Class A adaptive reuse properties with 510,000+ sf of available space being marketed for office and lab, located within 5 miles of NND. These include 311 Arsenal Street, 64 Pleasant St, and 480 Pleasant Street (Riverworks).

There are at least 6 additional brick mill-style buildings of Class B quality in Nonantum, Watertown, and Waltham offering a combined 263,000+ sf of available space, including:

- 260 Charles St (Howard Clock Building) – Waltham
- 320 Nevada St (Nonantum Office Park) – Newton
- 150-154 California St – Newton
- 55 Chapel St (Chapel Business Center) – Newton
- 59-85 Chapel St (Chapel Business Center) – Newton
- 100 Talcott Ave (The Arsenal on the Charles) – Watertown

Absorption Analysis

The office market is showing signs of stabilization and may be close to its post-pandemic trough. Availability rates are leveling off and rents seem to be holding, despite large concessions and tenant improvements. New deliveries have slowed, and functionally obsolete office space will be removed from the market, decreasing inventory and helping to level availability rates. Still, there is 41 million sf of vacant office space regionwide, of which 2.9 million is located within the Local Market Area. On top of that, there is another 13.3 million sf of vacant lab space in the region and 800,000 sf in the local market area.

The absorption of excess office space in the market will depend on several factors, including economic conditions, employment trends, and shifts in corporate real estate strategies. In 14 of the past 20 quarters, office users in Greater Boston have vacated more space than they have leased up, including all 4 quarters of 2024. Industry experts are only now beginning to speculate that the market is leveling off and approaching a bottom, suggesting that substantial absorption of current vacant office space could take many years.

Annual leasing activity in the Boston region has trended downward since 2021 and has not yet bottomed out. For leases signed prior to the pandemic, longer-term leases of 5, 7, or 10 years were common. This means that many of these pre-pandemic leases uses have yet to come due. These businesses will evaluate their leasing needs and may choose to downsize, following in the path of other companies whose leases have expired in recent years. Consequently, there is still potential for further net negative absorption in the market before it turns positive.

Absorption of vacant space will continue to be uneven throughout the region. Demand is expected to be increasingly concentrated in the highest-quality buildings in mixed-use environments. This could result in a situation where some submarkets continue to struggle with high vacancies for the long term, while others, particularly those in the urban core, show demand for new construction over a shorter time horizon. The Route 128 West corridor is likely to fall toward the upper middle of the pack, with desirability exceeding most suburban submarkets.

There is no expert consensus as to when the market will be able to digest the glut of available space and return to pre-pandemic vacancy rates of approximately 8%. Under an extremely optimistic scenario where we assume that (1) net absorption for office space turns positive immediately, (2) average absorption returns to 5-year pre-pandemic averages, and (3) lab space is not repositioned as office space on a meaningful scale, it would take a minimum of 6.4 years to reach 2019 vacancy rates in the LMA and 9.6 years in the Boston RMA as a whole.

More realistically, office absorption may not turn positive for another few quarters. The rate of absorption may not match pre-pandemic levels if economic growth slows, and space needs per worker remain depressed. New-build lab space is likely to capture some Class A office demand. In this case, a 10-year timeframe or longer is a real possibility.

Modeling Future Absorption, Highly Optimistic Scenario

	Office Space		Lab Space		Total Office + Lab	
	Boston RMA	LMA	Boston RMA	LMA	Boston RMA	LMA
Current Inventory	309,553,283	21,414,270	56,765,600	2,733,480	366,318,883	24,147,750
Current Vacant	41,156,543	2,875,990	13,302,073	802,497	54,458,616	3,678,487
Vacancy Rate	13.3%	13.4%	23.4%	29.4%	14.9%	15.2%
Target Vacancy Rate	8%	8%	8%	8%	8%	8%
Inventory under Construction	3,439,394	-	5,322,069	-	8,761,463	-
Net Absorption Needed to Achieve Target Vacancy	19,556,523	1,162,848	13,657,128	583,819	33,213,651	1,746,667
2015-2019 Quarterly Average Absorption	514,654	45,324	290,250	14,564	804,905	59,889
2015-2019 Annual Average Absorption	2,058,617	181,297	1,161,001	58,257	3,219,618	239,554
Years to Achieve Target Vacancy Rate	9.5	6.4	11.8	10.0	10.3	7.3

Source: CoStar; modeling by Camoin Associates

Fiscal Analysis

This fiscal analysis compares potential property tax revenue generation for the Sacco-Pettee mill portion of the NND under existing conditions, an all-office scenario, and an all-residential scenario.

In their memo dated 3/6/2025, Landwise Advisors developed two competitive sets of properties for the purposes of estimating the assessed value of residential and office uses in the NND. Camoin Associates vetted these properties and determined that they are appropriate comparisons for analysis purposes. Using the assessed values of these properties, Landwise Advisors calculates an average assessed value of \$192 per square foot for office space and an average assessed value of \$474,148 per apartment unit for residential space, based on FY 2025 assessments. This would result in a value of approximately \$34.6 million for 180,000 sf of office space and a value of \$47.4 million for 100 rental units. These values can be compared to a current value for the mill building of approximately \$4.8 million.

Note that actual values would be different if either scenario were built out in the future due to changing market conditions.

The City of Newton has a split property tax rate, meaning that different tax rates are applied to residential and commercial properties. As of FY 2025, the tax rate for residential properties is 9.80 per \$1,000 of assessed value, and the tax rate for commercial properties is 18.34 per \$1,000. Applying these differential tax rates to estimated assessed values for the Sacco-Pettee mill under the different development scenarios yields an estimated annual property tax revenue of \$633,830 for the mill as office space, compared to \$464,665 as residential space. In other words, while the residential scenario would have an assessed value that is 37% higher than the office scenario, annual tax revenue would be 27% lower due to the split tax rate. This is a difference in City revenue of about \$169,000 per year.

Annual Tax Revenue from Sacco-Pettee Mill Building, by Use Scenario

Use Scenario	Existing Condition	Office	Residential
FY25 Average Assessed Value (per sf or per unit)	--	\$192	\$474,148
Size (sf or units)	--	180,000	100
Assessed Value	\$4,791,000	\$34,560,000	\$47,414,800
Applicable Tax Rate	9.80	18.34	9.80
Annual Tax Revenue	\$46,952	\$633,830	\$464,665

Source: City of Newton Assessor; Competitive Set of Properties from Landwise Advisors

March 7, 2025

Katie Whewell
Chief Planner for Current Planning
Department of Planning & Development
1000 Commonwealth Avenue
Newton Centre, Massachusetts 02459

**Re: The Northland Newton Development
Transportation Peer Review**

Dear Ms. Whewell:

BETA Group, Inc. (BETA), in accordance with our scope of services, has conducted a transportation engineering peer review for the revised proposed Northland Newton Development located between Charlemont Street and Christina Street along Needham Street in Newton, Massachusetts. The updated proposed project includes 822 residential units, 96,061 square feet of retail, 5,000 square feet of which will be medical office use, and 1,070 parking spaces.

This letter has been prepared by BETA to outline our findings, comments, and recommendations in the review of the materials provided.

BASIS OF REVIEW

The following documents were received by BETA and formed the basis of the review:

- ***Transportation Impact and Access Study (TIAS), The Northland Newton Development, Newton, Massachusetts, dated December 2024, prepared by Vanasse Hangen Brustlin, Inc. (VHB)***
- ***The Northland Newton Development, Site Plans, dated November 26, 2025, prepared by VHB***

TRANSPORTATION IMPACT AND ACCESS STUDY

The originally proposed project, which was approved in December of 2019 included approximately 1.5 million gross square feet of development and consisted of 193,200 square feet of office space (retained in the historic mill building), 800 residential units, 115,114 square feet of retail/restaurant space, and approximately 1,350 parking spaces. The proponent has proposed a revised development program due to the substantially diminished office market since the time of the approval. The revised program increases the number of residential units from 800 units to 822 units, reduces the parking spaces from 1,350 to 1,070 spaces, and reduces the retail component from 115,144 square feet to 96,061 square feet with approximately 5,000 square feet anticipated for medical office use.

A full updated TIAS was prepared to demonstrate the anticipated traffic impact changes associated with the revised program. The updated project is expected to generate 947 fewer average weekday trips than the previously approved project. A comparison of the trip generation estimates between the updated program and the previously approved 2019 plan, as presented in Table ES1 of the TIAS is summarized below.

Table ES1 Total Site-Generated Trip Comparison to Previous Approved Project

	Previously Approved Project ¹	Current Project ²	Difference
Weekday Daily			
Enter	3,581	3,145	-12%
<u>Exit</u>	<u>3,667</u>	<u>3,156</u>	<u>-14%</u>
Total	7,248	6,301	-13%
Weekday Morning			
Enter	282	142	-50%
<u>Exit</u>	<u>213</u>	<u>245</u>	<u>+15%</u>
Total	495	387	-22%
Weekday Evening			
Enter	238	212	-11%
<u>Exit</u>	<u>326</u>	<u>179</u>	<u>-45%</u>
Total	564	391	-31%
Saturday Daily			
Enter	3,767	3,273	-13%
<u>Exit</u>	<u>3,776</u>	<u>3,283</u>	<u>-13%</u>
Total	7,543	6,556	-13%
Saturday Midday			
Enter	318	254	-20%
<u>Exit</u>	<u>299</u>	<u>230</u>	<u>-23%</u>
Total	617	484	-22%

The proposed access driveways and internal roadway circulation is unchanged from the previously approved project. The vehicle access to the site will be provided by four full access driveways at the following locations:

- Oak Street directly across from Saco Street,
- Needham Street 380 feet north of the Christina Street/Oak Street intersection,
- Needham Street directly across from the recently realigned Charlemont Street, and
- Tower Road, which will be extended into the new site.

The Oak Street, southern Needham Street, and Tower Road access points will be unsignalized, and the Charlemont driveway will be under traffic signal control, as part of the signal system recently installed under the Needham Street reconstruction project.

A free shuttle for residents, retail customers, and employees will be provided. The proposed schedule for the shuttle is Monday through Friday during the peak morning and evening peak periods. The shuttle will operate with an approximate 20-minute headway and provide direct service to the Newton Highlands MBTA Station.

The project will include a network of sidewalks, paths, crosswalks, and connections, as well as raised crossings at critical locations. Several connections will be provided to the Upper Falls Greenway through the site. Parks and open spaces will also be installed within the project.

The adjacent roadway network study area includes the following 11 intersections in Newton and Needham:

Newton:

- Winchester Street at Needham Street/Dedham Street
- Needham Street at Columbia Avenue/Avalon Driveway
- Needham Street at Tower Road/Industrial Place
- Needham Street at Claremont Street
- Needham Street at South Site Driveway/Marshalls Driveway
- Needham Street at Oak Street/Christina Street (signalized)
- Oak Street at Saco Street/Site Driveway
- Oak Street at Chestnut Street

Needham:

- Highland Avenue at 2nd Avenue/Staple Driveway
- Highland Avenue at 1st Avenue/Riverside Community Health Driveway
- Highland Avenue at I-95 Northbound Ramps (unsignalized)

EXISTING CONDITIONS

STUDY AREA

- 1. Clarify why the study area and number of intersections was significantly reduced from the previous approved project's study area; 27 intersections versus 11.**

EXISTING TRAFFIC VOLUMES

Existing traffic volumes were collected on Wednesday June 5, 2024, and Thursday June 6, 2024 for the study area roadways and intersections. Daily volumes were collected for Needham Street and Oak Street and Turning Movement Counts (TMC) were obtained/collected for the study intersections from 7:00AM to 9:00AM and 4:00PM to 6:00PM. Traffic volumes were adjusted based upon seasonality and annual growth based upon factors provided by MassDOT and recently completed studies.

The June 2024 peak hour volumes were compared to previously collected 2017 to understand how traffic patterns and volumes have changed, particularly as a result of the COVID-19 pandemic. Overall, the 2024 peak hour volumes are slightly less than those collected in 2017; 2 to 3 percent.

- 2. Saturday traffic volume data was provided as part of the previous project. This data revealed that the Saturday peak hour demand is comparable to the AM and PM weekday peak hours. Please clarify why this was not included in the updated TIAS.**

CRASH HISTORY

Crash data was updated and obtained from the MassDOT database for the years 2016 through 2021. Data from 2020 was not included due to the impacts to traffic patterns that year as a result of the COVID-19 pandemic. The highest crash rate, quantified as crashes per million entering vehicles, occurred at the intersection of Needham Street and Charlemont Street with a crash rate of 0.81, which is higher than the MassDOT average crash rate for unsignalized intersections in District 6 of 0.52. The Needham Street and Tower Road intersection was the only other location to have a crash rate (0.54) above the MassDOT average crash rate (0.52). This intersection also had the highest number of crashes involving pedestrians or bicycles, with two crashes occurring during the time period analyzed. However, it is noted that the

crash data was collected prior to any of the improvements associated with the Needham Street project being implemented.

No study area intersections were identified as a MassDOT Highway Safety Improvement Program (HSIP) crash cluster based on recent data.

3. The crash summary calculations and results are accurate.

FUTURE CONDITIONS

The TIAS evaluated impacts over a seven-year period to 2031 from the initial traffic data collection in 2024, for both the No-Build and Build conditions.

BACKGROUND GROWTH

An annual growth rate of 0.5% was applied to the raw volumes at study intersections based on the growth rate used in other studies within the city.

4. BETA finds this growth rate to be reasonable.

In addition to utilizing a historical growth rate, traffic generated by other planned developments near the site was considered in developing the 2031 No-Build traffic volumes. The TIAS identified seven other developments that were considered to add traffic to the project study roadways and intersections. The developments are located at 160 Charlemont Street, 557 Highland Avenue, 1149-1151 Walnut Street, 777 Winchester Street, 1114 Winchester Street, 1158 Beacon Street and Boston Children’s Hospital.

5. The other developments assumed for the 2031 No-Build scenario are reasonable.

BUILD CONDITIONS

Trip generation for the project was estimated using the Institute of Transportation Engineers, *Trip Generation, 11th Edition* Land Use Code 221 (Mid-Rise Residential), Land Use Code 812 (Shopping Plaza with No Supermarket, 40 – 150 ksf), and Land Use Code 720 (Medical-Dental Office). Mode share of site trips was stated to be 79% vehicle, 13% transit and 8% walk/bike for residential and 93% vehicle, 2% transit and 5% walk/bike for the retail/medical office. The trip generation estimates also included internal capture rates and pass-by trips for the retail land use.

6. The project trip generation estimates provided are reasonable.

7. Provide additional information regarding the anticipated use of the retail component.

Trip distribution of traffic for the residential component of the project was based U.S. Census Bureau Journey-to-Work data for the City of Newton 2012 - 2016. For the retail and medical office components, the trip distribution was based on historical traffic patterns.

8. Clarify why was 2020 US Census data not used for distribution.

SIGHT ACCESS AND PARKING

The project will provide 1,070 parking spaces, 822 of which are designated for the residential units, and 248 for the other uses included in the project. An average of one parking space is proposed for each residential dwelling unit.

9. Provide additional detail regarding the determination of parking spaces required for the retail component of the project.



10. Clarify how visitor parking will be accommodated and is supply enough to accommodate visitor demand? Is shared parking between residential and commercial uses proposed?
11. Based on the parking data for other Newton properties that is summarized in Table 16, the parking demand per unit for the nearby residential development at 99 Needham Street is 1.12. Clarify why the average of one parking space per unit for this project will be appropriate given the measured demand for 99 Needham Street, which is located less than a half mile from this project.

TRANSPORTATION MITIGATION

TRANSPORTATION DEMAND MANAGEMENT

Consistent with the previously approved project, the Proponent proposes to implement several Transportation Demand Management (TDM) measures on site in an effort to minimize the project's impact on the surrounding roadways. The measures include:

- Mobility hub that will serve as a central space for all modes of transportation.
 - Free shuttle service that will provide service to the Newton Highlands MBTA Station for residents, customers, and employees.
 - Dedicated parking for shared vehicles such as Zipcars based on demand.
 - Designated curbside pick-up/drop-off locations for rideshares.
 - BlueBikes station installation.
 - Separate parking space charges for residents except for affordable units.
 - Proposed 1,100 bicycle parking spaces, with at least 1 secured space per residential unit and the remaining 278 spaces for visitors, employees, and customers.
 - Designated TDM Coordinator to oversee TDM programs.
 - Provide a small-scale shuttle van for residents and employees between site and MBTA Newton Highland Station.
 - Indoor/secure bicycle parking for residents and outdoor parking for customers and visitors.
 - Bicycle repair/maintenance station will be provided on site.
12. BETA agrees that these measures should be implemented, and has the following comments:
 - Provide weatherproof and secure outdoor bike parking in front of the buildings and at the retail locations.
 - In addition to electric vehicle charging stations, provide station for electric bicycle charging.

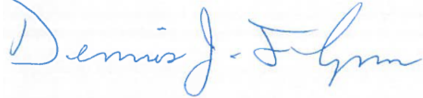
SITE PLANS

The applicant proposes to construct 854 garage parking spaces on-site and 216 surface spaces.

13. Indicate the total number of accessible parking spaces that are being provided.
14. Identify the location of the proposed bicycle parking.
15. Provide vehicle turning diagrams for the largest vehicle type expected to circulate the site to demonstrate they can be accommodated.
16. Confirm that coordination with the Newton Fire Department regarding access and circulation of fire trucks at the site has taken place.
17. Site Plans shall include the location and details of all proposed signage and pavement markings.
18. Provide additional information regarding aisle and lane widths for the internal roadway network.

If we can be of any further assistance regarding this matter, please contact us at our office.

Very truly yours,
BETA Group, Inc.

A handwritten signature in blue ink that reads "Dennis J. Flynn". The signature is written in a cursive style with a large initial 'D'.

Dennis Flynn, PE, PTOE
Associate

Project No: 11587



www.nbbj.com

March 5, 2025

Ms. Katie Whewell
City of Newton
1000 Commonwealth Ave
Newton, MA 02459

Subject: Northland Newton Development Special Permit Amendment 1

Dear Ms. Whewell,

NBBJ is pleased to provide the following peer review

Scope of Work

NBBJ is contracted to provide design (peer) review services to the Newton City Council and Design Review Board for The Northland Newton Development Special Permit Amendment 1.

Geographic limits on this review:

We have limited our review to the areas that have been changed as part of the Amendment 1 to the Special Permit. These are listed below:

- Proposed surface parking with the elimination of Buildings 9-12
 - Transition to Upper Falls Greenway with particular attention to proposed adjacent surface parking and lighting levels
 - Landscaping proposed around proposed surface parking
- Design review of the proposed open space along Oak Street with the elimination of Building 14.
- Design review of additional proposed open space with the reduction of Building 8.
- In addition, we have looked at the implications of change of use of Building 1 from office to residential use and impacts of adjacent public uses

We have focused our review on the following subject areas as outlined in our scope of work:

- Pedestrian connectivity through project for residents, patrons and at-large community (diagram)
- Safety and convenience of pedestrians and cyclists
- Aesthetics of landscape improvements to abutting properties and public ways
- Use and programming of open spaces and publicly accessible areas of the site
- Resiliency and Sustainable site strategies

Removal of Buildings 9-12 and replacement with surface parking

The project proposes to replace three smaller residential buildings with surface parking dedicated primarily for retail uses.

Accessibility:

- Does the addition of retail surface parking at the rear of the site change on-site traffic patterns from the prior plan, where more parking was below grade and traffic was intercepted closer to Needham Street on Charlemont Street? Please describe how modified traffic patterns may improve (or at least not reduce) pedestrian safety and potential conflict points.
- Pedestrian (and bike) access from Upper Falls Greenway to the project is proposed at two points: at the terminus of Main Street at the spray pool park and the Bike Path crossing Lattice Road (Tower Road Extension) north of Building 5B. Would an additional access points (such as through the parking area and between building 5B and 5A) provide value for pedestrians wanting a more direct route to retailers on Lattice Road?
- How have bike storage and parking areas changed as a result of plan changes?

Landscape buffer and lighting

- Please verify that a 40 foot landscape buffer exists and will provide sufficient screening from Upper Falls Greenway and will be landscaped to provide visual separation and protection from lighting in the parking areas. Please verify that all parking lot fixtures will be cutoff fixtures that will not spill into adjacent parcels. Will the parking areas be lit 24 hours or only during commercial operating hours?
- Will the proposed planting species provide year-round blocking of lighting such as with evergreen landscape species?

Resiliency and Sustainable Site Strategies

- Does the addition of surface parking create more concerns for heat island than the previous plans? Given the additional of surface parking, will the tree plan provide shade to mitigate heat buildup on the paved surfaces? Could the parking surfaces be designed to minimize heat island with paving choices such as lighter colored paving or porous pavers?

Removal of Building 14 on Oak Street

Residential Building 14 on Oak Street will be removed and replaced with additional open space and publicly accessible areas adjacent to Oak Street.

- Does the proposed open space have any sort of programming or use? What types or uses could be added that were not possible previously and in accordance with prior community input? Now that there is twice as much open space along Oak Street, should the two areas of green have more of a relationship or continuity? Could the pathway systems in either side of the Oak Street driveway be more integrated?
- The proposed pathway to the Village Green from the Upper Falls Greenway parallel to Oak Street does not appear to be particularly direct and it runs close to the service areas of Building 4. Was this to solve grading issues? Would a more direct path, or one integrated with the former Building 14 parcel provide the grade changes needed from Oak Street to the Village Green? Would relocating a pedestrian crossing of the driveway further away from Oak Street be safer?
- Screening of Building 4 service and loading areas needs to be visualized or pathway could be relocated to enhance experience of arrival at Village Green.

Modifications to Building 8 and South Meadow Brook

Building 8 has been reduced in size and pulled away from South Meadow Brook creating more open space.

- What types of uses could be accommodated in this larger space?
- Could the existing or planned grading be modified to improve physical or visual access to South Meadow Brook?

Change of use in Building 1 from office to residential

The proposed change of use will have minimal impact to the historic structure but sets up different expectations on use of adjacent open spaces.

- Village Green programmatic uses (concerts, fairs, etc.) may adversely impact residents with ground level views to public open space. What, if any, types of screening might now be contemplated to protect residents?
- What sorts of use restrictions on Village Green might be anticipated as a result of Building 1 becoming residential rather than office use?
- How might the Mill Park and the waterfall feature uses be changed as a result of new residents' access and/or concerns about privacy, screening or desired uses of open space (dog park, playground, etc...)
- Since Building 1 is now residential use, will public access to the proposed waterfall feature be more restricted? Should the waterfall feature be more visible and accessible with a pedestrian site entrance from Needham Street?

We truly appreciate the opportunity to offer design review service to the City of Newton.

Sincerely,

A handwritten signature in black ink, appearing to read "Alan Mountjoy". The signature is fluid and cursive, with a large initial "A" and a long, sweeping underline.

Alan Mountjoy, Principal, NBBJ

Horsley Witten Group

Sustainable Environmental Solutions

112 Water Street • 6th Floor • Boston, MA 02109
857-263-8193 • horsleywitten.com



March 4, 2025

Katie Whewell
Chief Planner for Current Planning
City of Newton
Planning and Development Department
1000 Commonwealth Avenue
Newton, MA 02459-1449

Re: Peer Review regarding Infrastructure Modifications
Northland Special Permit #426-18
Amendment Request
400 Main Street, Newton, MA

Dear Ms. Whewell:

The Horsley Witten Group, Inc. (HW) is pleased to submit this peer review regarding the Amendment to the site plans presented for the Northland Newton Development located on Oak Street, Needham Street, and Tower Road in Newton, MA. The City granted the initial Special Permit/Site Plan Approval on December 2, 2019 for the construction of 800 residential units, 308,314 square feet (sf) of office, retail and restaurant space, and 4,000 sf of community space in 13 buildings on 22.6 acres of land. The site included a total of 1,350 underground and surface parking spaces. HW provided the Newton City Council with a peer review regarding the initial schematic design proposed for the water, sewer, and stormwater infrastructure in May 2019.

The Applicant has filed an amendment to eliminate five buildings, reduce office space, increase the residential units to 822, modify some of the building sizes and configurations, and increase the surface parking areas by 111 spaces while reducing the underground spaces by 387 spaces for an amended total of 1,070 spaces.

Per your request, HW has reviewed the amended drainage plans, stormwater analyses, and flood storage analyses, as well as the stormwater phosphorus removal calculations. HW has also reviewed the Applicant's amended utility and grading plans.

HW conducted a site visit with the project team and City staff on January 27, 2025 and reviewed the following documents and plans:

- Email received from Genevieve Burke of VHB with photographs of the installed infiltration systems, dated January 30, 2025;
- Memorandum from City of Newton Engineering Division to Curtis Quitzau, VHB, regarding Special Permit – Northland Development, dated January 23, 2025 (2 pages);
- Progress As-Built, dated 12/13/2024, Northland Newton Development, prepared by W.L. French Excavating Corp. (1 Sheet);

- Zoning Review Memorandum from City of Newton Department of Planning and Development to Anthony Ciccariello regarding Request to amend Special Permit #426-18, dated December 17, 2024 (4 pages);
- Northland Newton Development Description of Proposed Changes to Special Permit (3 pages);
- Description of Site and Utility Work Completed as of December 13, 2024 (1 page);
- Supplemental Stormwater Memorandum, prepared by VHB, dated November 26, 2024 (71 pages);
- Order of Conditions, DEP File No. 239-921, issued August 12, 2022 (17 pages);
- Special Permit/Site Plan Approval, City of Newton, dated December 2, 2019 (46 pages);
- Final Engineering, Utility and Drainage Plans, for The Northland Newton Development, Needham Street/Oak Street, Newton, Massachusetts, latest Issue date July 27, 2022, approved by the Associate City Engineer John Daghlia on 7/29/2022, which includes:
 - Cover Sheet
 - Legend and General Notes C-1
 - Survey Control and Baseline C-2
 - Roadway Layout and materials Plan C-3
 - Plan and Profile 1 – Main Street C-4.1
 - Plan and Profile 2 – Charlemont Street C-4.2
 - Plan and Profile 3 – Carden Lane C-4.3
 - Plan and Profile 4 – Lattice Road C-4.4
 - Plan and Profile 5 – Foundry Way C-4.5
 - Stormwater Management Systems Plan 1 C-5.1
 - Stormwater Management Systems Plan 2 C-5.2
 - Overall Site Utility Plan C-6.0
 - Soil Erosion and Sediment Control 1 – General Notes and legend SESC-1
 - Soil Erosion and Sediment Control 2 – Details SESC-2
 - Soil Erosion and Sediment Control 3 – Site Plan SESC-3

 - Existing Conditions Plan of Land Sv-1
 - Existing Conditions Plan of Land Sv-2
 - Existing Conditions Plan of Land Sv-3
- Site Plans for The Northland Newton Development, Needham Street/Oak Street, Newton, Massachusetts, Amendment 1 November 26, 2024, which includes:
 - Cover Sheet
 - Approved Overall Site Plan C-4
 - Current Overall Site Plan C-4.1
 - Zoning Assessment Plan (Building 5a & 5b) C-5.4
 - Zoning Assessment Plan (Building 8) C-5.6
 - Layout and Materials Plan (12/13/24) C-6.4

- Grading and Drainage Plan C-7.4
- Layout and Materials Plan Enlargement 1 L-1.1
- Layout and Materials Plan Enlargement 2 L-1.2
- Layout and Materials Plan Enlargement 3 L-1.3
- Grading Plan Enlargement 1 L-2.1
- Grading Plan Enlargement 2 L-2.2
- Grading Plan Enlargement 3 L-2.3
- Planting Plan Enlargement 1 L-3.1
- Planting Plan Enlargement 2 L-3.2
- Planting Plan Enlargement 3 L-3.3
- Building 1 (1, 2, 3 Floor Plans) A-1.01
- Building 1 (4, 5 Floor Plans) A-1.02
- B% Parking Photometric Plan AL-1.2

Infrastructure Review

HW compared the design plans approved by the Newton Engineering Department in 2022 with the Progress As-Built 12/13/2024, the amended plans dated November 26, 2024, and the HydroCAD analysis printed November 25, 2024. We have the following comments:

1. There are four subsurface infiltration systems originally designed and installed.
 - Pond 1P: Tower Road Cul-de-sac Infiltration system has 16 Stormtech SC-740 chambers set at elevation 107.00, with a 15-inch outlet pipe. Plans approved by City, As-built plan, and HydroCAD model dated November 2024 are consistent. Photographs provided by VHB are also consistent with the approved size.
 - Pond 2P: Upper Falls Greenway Infiltration system has 11 StormTech MC-7200 chambers on the plans approved by the City. The HydroCAD model dated November 2024 uses 20 StormTech MC-4500 chambers set at elevation 111.75, with a 15-inch outlet pipe. HW notes that the depth and width of the MC-4500 and the MC-7200 are the same at 60-inches and 100 inches respectively, the length of the MC-4500 is shorter than the MC-7200 so more chambers are needed. The storage volumes are comparable. The As-built plan does not call out the number of chambers installed, the inverts, or the sizes. However, the configuration is consistent with the approved design. The photographs provided by VHB indicate that the larger chambers have been installed. HW recommends that the As-built plan includes the additional information.
 - Pond 4P: Linear Park Infiltration system has 40 StormTech MC-7200 chambers on the plans approved by the City. The HydroCAD model dated November 2024 uses 96 StormTech MC-4500 chambers set at elevation 104.25, with two 30-inch outlet pipes. The storage volumes are comparable. The As-built plan does not call out the number of chambers installed, inverts, or sizes. However, the configuration is similar to the approved design. HW was not able to confirm the size of these chambers from the photographs provided. HW recommends that

the As-built plan includes additional information, especially to document the size of the chambers in the absence of photographic evidence.

- Pond 6P: Main Street Infiltration system has 28 StormTech MC-7200 chambers on the plans approved by the City. The HydroCAD model dated November 2024 uses 60 StormTech MC-4500 chambers set at elevation 103.25, with a 42-inch outlet pipe. The storage volumes are comparable. The system had not been installed yet at the time to be included in the December 2024 As-built plan. VHB has sent photos of the installation, which indicate that the larger chambers were being installed. HW observed the system being installed during the January 2025 site visit. HW recommends that the As-built plan includes the additional information for the Main Street Infiltration system.
2. There are two bioretention basins that were originally designed and not intended to be reduced in size.
 - Pond 3P: South Meadow Brook Bio basin has a bottom area of 1,402 sf at elevation 116.0 with two 6-inch outlet pipes. The November 2024 HydroCAD model does not appear to be consistent with Sheet C-5.1 of the approved plan set. HW recommends that the Applicant justify the inconsistency and/or update the plans documentation.
 - Pond 7P: The Oak Street Park Bio Basin. The updated HydroCAD model analyzes this bioretention basin with a bottom area of 2,295 sf at elevation 116.00 and a 12-inch outlet pipe. The approved plan set and updated HydroCAD model are consistent.
 3. The Applicant has also proposed:
 - Pond 5P: Irrigation Cistern – the HydroCAD model is not taking credit for the cistern, which is appropriate. The As-built plan indicates that three rows of tanks were installed in a similar configuration to the approved plans.
 - Porous pavement is proposed for the parking spaces along the proposed roadways – the HydroCAD model is not taking credit for the porous pavement, which can be considered a conservative design. HW recommends that the As-built plan callout areas of porous pavement once installed.
 4. HW compared the water, sewer, electrical, and drainage infrastructure proposed on Sheet C-6.0 of the 2022 Plan set approved by the City with the As-built plan from December 2024 and found the infrastructure installed to be substantial consistent. There are a few missing manhole structures, and some structures have been shifted. However, in general the utilities have been installed per the approved design plans. HW recommends that a list of structures with rims and inverts is provided with the next Progress As-built.
 5. HW reviewed the Proposed Drainage Conditions figures from the original application and the 2024 Supplemental Stormwater memo. HW notes that the existing catchment area EX1B and the original proposed catchment area PR1B include approximately a third of

Existing Building 1. The Proposed Drainage Conditions, Figure 3.1 dated November 2024 does not include any of the existing building. HW recommends that the Applicant clarify where the roof runoff from the Existing Building is being directed with the 2024 design.

6. The 2022 approved stormwater design directed the roof runoff from Buildings 9, 10, and 11 into the Upper Falls Greenway Infiltration System with the overflow directed towards the cistern. The adjacent landscaped area and driveway between Building 11 and Building 12 was directed into the South Meadow Brook Bioretention Basin. The amended 2024 design directs half of the proposed parking lot into the Upper Falls Greenway Infiltration System and the Applicant is proposing to plug the inlet of the installed water quality unit (504-D) to eliminate the connection to the cistern. The stormwater from the southern half of the proposed parking area that is replacing Building 12 is directed into the South Meadow Brook Bioretention Basin similar to the prior approved design.
7. A CDS 2015-4 has been proposed for the new water quality unit (504-D). The calculation from ConTech lists an area of 0.48 acres. However, this is not consistent with the area for Subcatchment Area 9: Parking Area listed as 0.86 acres. HW recommends that the Applicant confirm that the proposed Contech unit is adequately sized for the amended catchment area. Furthermore, HW recommends that the Applicant provides the third-party documentation that concurs with a TSS removal credit of 80% as indicated on the TSS worksheet dated 11.18.2024.
8. The Applicant has included a 5% TSS removal credit for street sweeping on the TSS worksheet dated 11.18.2024. To receive the 5% credit the street sweeping program must be consistent with the schedule described in Volume 2, Chapter 1, page 9 of the Massachusetts Stormwater Handbook. HW recommends that the Applicant includes street sweeping consistent with (or more robust than) Massachusetts Stormwater Handbook reference in the Operations & Maintenance Plan.
9. The amended Subcatchment Area 30: Int Charlemont & Lattice & Parking Area has a total area of 2.15 acres, 1.44 acres are listed as impervious. The Water Quality calculations list the impervious area to the South Meadow Brook Biofiltration as 0.72 acres. HW recommends that the Applicant clarify the total impervious area to the South Meadow Brook biofiltration system.
10. The Applicant provided revised recharge volume calculations in the Supplemental Stormwater Memo. The calculations use the Rawls Recharge Rates to estimate the drawdown times. The HydroCAD model for the subsurface infiltration systems divides the Rawls Rates in half except for the Linear Park system. HW recommends that the Applicant clarify why three of the systems use reduced exfiltration rates while the Linear Park system does not.
11. HW recommends that the Applicant provides the Stage-Area-Storage print out for each of the stormwater practices to confirm the recharge volume listed.

12. HW requests that the Applicant provide the Phosphorus Removal calculations for the entire site with the applicable reference tables.
13. The Applicant provided a revised Stormwater Management Operations and Maintenance manual, revision date November 26, 2024. HW recommends that the Applicant include street sweeping as a quarterly maintenance requirement. Furthermore, HW recommends that the Applicant includes maintenance information in the manual for landscape areas and hardscape areas, including but not limited to areas that may provide stormwater treatment, including South Meadow Brook Park.
14. HW recommends that the Applicant confirm that the Location Plan has been updated to match the amended plan set. It appears that the structure labeled WQU-3 is not correctly labeled.

HW recommends that the Applicant confirm that we have correctly described the amended design and provide a written response for the outstanding comments. Please contact Janet Bernardo at 857-263-8193 or at jbernardo@horsleywitten.com if you have any questions regarding these comments.

Sincerely,

Horsley Witten Group, Inc.



Janet Carter Bernardo, P.E.
Principal