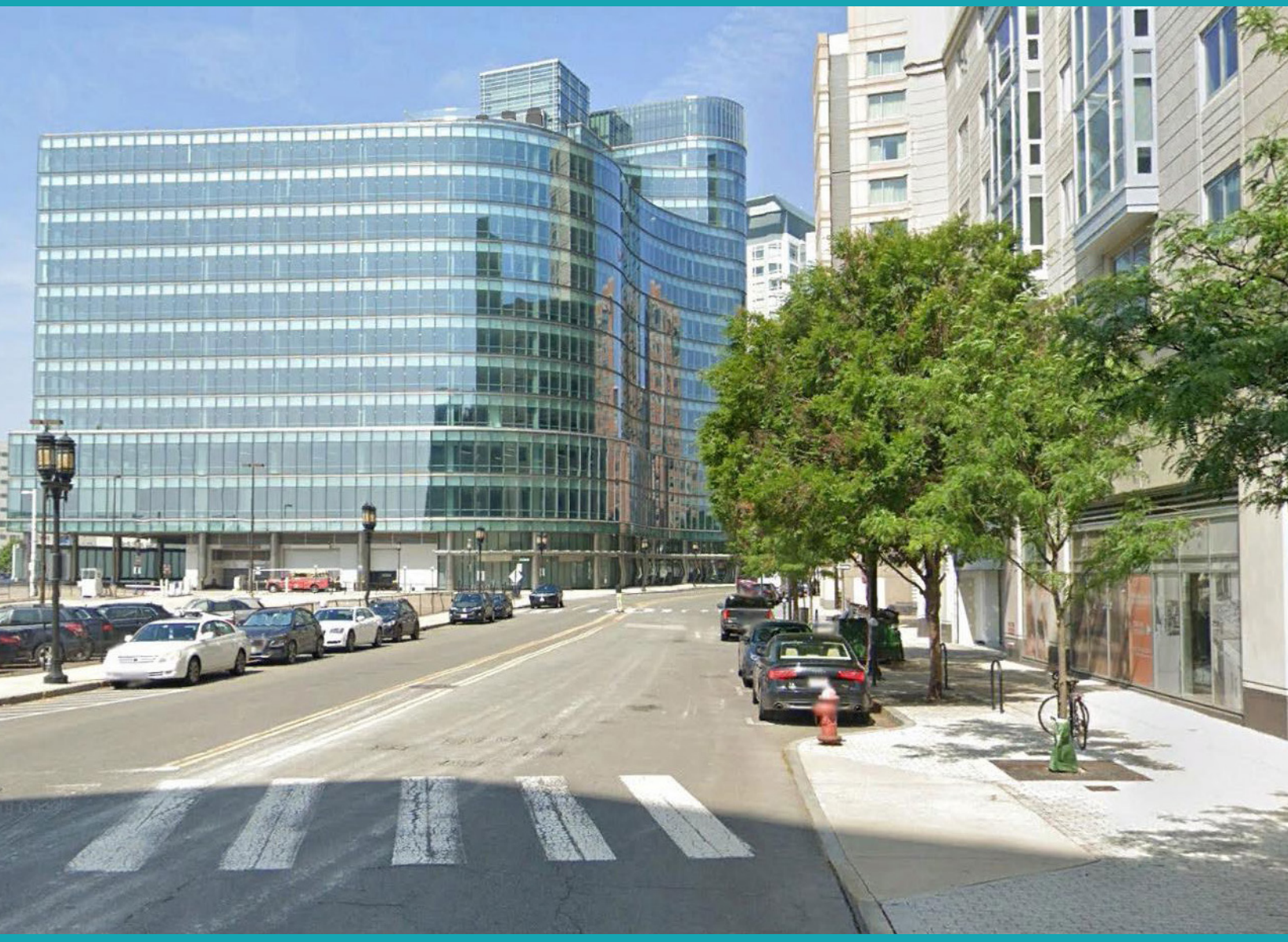
Life Sciences Action Agenda

November 2022



bpda

Executive Summary

Boston is home to a booming life sciences industry. The Boston Planning & Development Agency (BPDA) welcomes continued growth and encourages developers and companies to set their roots in Boston.

The *Life Sciences Action Agenda* aims to provide transparency around steps the BPDA will take to create clear avenues for development and predictability in the city's urban fabric. While encouraging this growth, the BPDA will continue to make decisions about the future of Boston that prioritize the safety of residents and make Boston more resilient, affordable, and equitable.

Specifically, the *Action Agenda* explains the BPDA's plans to: develop design guidelines to ensure life sciences buildings fit within the fabric of the city and ensure that life sciences buildings align with City climate and resilience goals; update the zoning code to create predictable regulations for both life sciences proponents and the communities in which they are built; integrate planning for life sciences within ongoing community-based planning initiatives; and reinforce health and safety standards set by other City, State, and federal agencies. Once these action items are complete, the future of life sciences development will be more predictable, contribute to Boston's urban fabric, and advance the City's goals.

What are we referring to when we say "life sciences"?

Although there are variations in the definition, the "life sciences" generally refers to organizations and firms dedicated to improving human, animal, and plant life. It includes private, non-profit, and public institutions and organizations specializing in a wide set of interdisciplinary fields, including biopharmaceuticals, biotechnology, medical devices, medical testing laboratories, and other related disciplines. It is distinct from, although closely tied to, the healthcare industry, where medical care is directly provided in clinical settings.

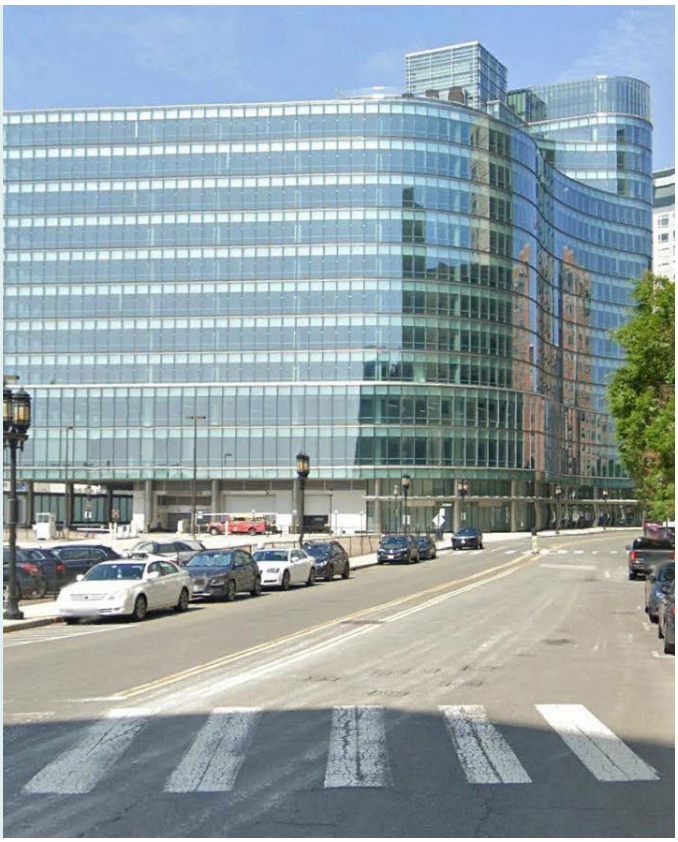


Photo: Manulife Office-to-Lab Conversion

Opportunities & Challenges

Life sciences development is critical to Boston's economy and public services.

The Greater Boston metropolitan area is among the nation's leaders in the concentration and growth of jobs, facilities, and both public and venture capital investment in the life sciences industry.[1] A mix of factors, including the State's $1 billion investment through the Massachusetts Life Sciences Initiative (2008), the City of Boston's Innovation District in the South Boston Waterfront (2010), the region's world class institutions, as well as the market benefits of firms clustering near each other have contributed to the industry's success.

This growth is expected to continue. In the first half of 2022, a record amount of venture capital was invested in Massachusetts life sciences companies, while lab vacancy rates in Suffolk County averaged around 1%.[2] The growth of the life sciences sector promises future life-saving breakthroughs, as well as direct benefits to the people of Boston:

- **Affordable housing and job training:** New commercial developments such as life sciences buildings pay linkage fees that fund the City of Boston's affordable housing and job training programs.

- **Schools and City services:** New development is necessary to bolster the City's budget for critical public services, such as schools and utility infrastructure.

- **New jobs:** Life sciences employment in Boston has grown to an estimated 18,000 jobs in 2021, an increase of more than 1,300 since 2020 alone and an increase of 6,000 jobs (nearly +50%) in the ten years since 2011.[3]

- **Indirect job growth:** The BPDA Research Division estimates that life sciences employment in Boston has a 1.8 local multiplier, meaning that on average for every 1,000 new life sciences jobs, 800 jobs are created in other parts of the economy.

- **Neighborhood improvements:** High quality, well-designed life sciences development helps improve the streetscape and activate neighborhoods with new uses.

Members of the public and elected officials have also raised appropriate concerns about the potential impacts of life sciences development in Boston. Related to planning and urban design, there are questions about:

- Larger building sizes and closed off ground floors
- Housing affordability
- Climate sustainability and resiliency
- Safe and convenient mobility
- Noise and environmental impacts

The Boston Planning and Development Agency (BPDA) is committed to addressing these concerns through thoughtful planning and adoption of new design guidelines and zoning amendments.

In addition, the BPDA has also heard concerns from residents about health and safety impacts to residential neighborhoods. We will work more closely with and support our sister agencies in public health, fire, and inspections responsible for regulating these considerations, and the BPDA will ensure the built environment and any other aspects within our jurisdiction do not contribute to these concerns.

Similarly, we will coordinate with partners across the city to improve equity and access to jobs and continue to work towards increasing housing opportunities to support the growing workforce at all income levels.

[1]CBRE, Leading Life Science Clusters: The Bio-Boom Intensifies, October 2020. https://www.cbre.com/insights/reports/us-life-sciences-report-2020
[2]Mass Biotechnology Council, 2022 Industry Snapshot. https://readymag.com/MassBio/2022IndustrySnapshot/
[3]BPDA Research Division

Regulations

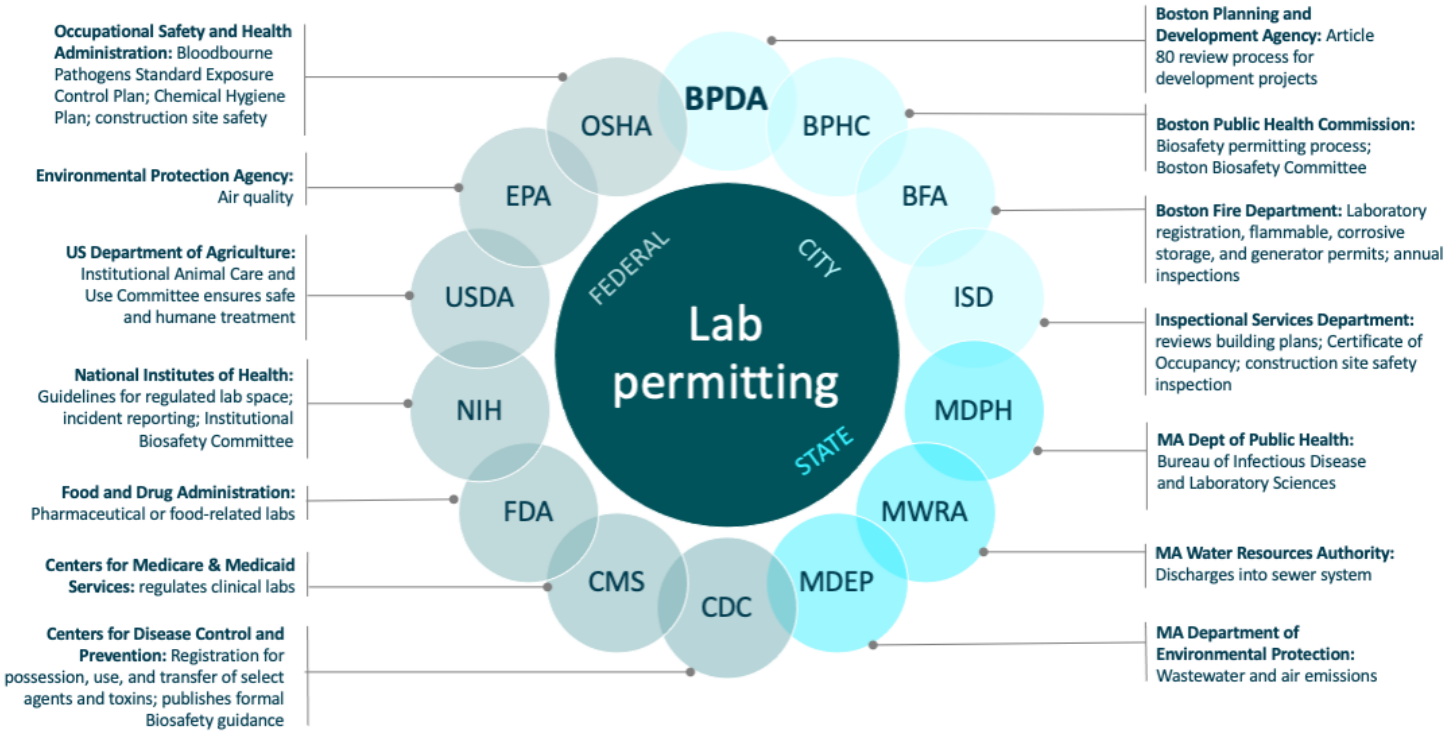
The BPDA's review and permitting is only one part of a comprehensive set of rigorous federal, State, and City regulations for life sciences development.

Biological laboratory research is classified by the U.S. Centers for Disease Control and Prevention (CDC) in four levels ranging from Biosafety Level 1 to Level 4 corresponding to the level of risk associated with the organisms that are being studied, and the safety protocols under which they are required to operate. Most labs in Boston are classified at Biosafety Level 1 or 2 for work involving known agents that pose minimal to moderate risk to the laboratory personnel, public, and the environment.

Biological laboratories seeking to conduct research at Biosafety Levels 3 and 4 as well as those using recombinant DNA materials at Biosafety Level 2 in Boston are required by local health regulations to be permitted by the Boston Public Health Commission (BPHC). BPHC's permitting requirements are aligned with the relative level of risk associated with each class of laboratory type and help to ensure compliance with state and federal standards and guidelines.

In addition, at the City level, the Boston Fire Department registers each laboratory and monitors use and storage of hazardous materials, and the Boston Inspection Services Department (ISD) reviews building plans and construction site safety and administers Certificates of Occupancy.

For questions specific to individual development projects in Boston, please contact the project's BPDA Project Manager listed on the BPDA website: www.bostonplans.org/projects/development-projects or call (617) 722-4300.



BPDA Action Agenda

In light of these opportunities and challenges, this Action Agenda outlines the BPDA's multi-pronged approach to guiding life sciences development and the current status or expected timeline for that action.

In partnership with the public, sister agencies, and the development community, the BPDA will shape the impact of life sciences development to encourage a resilient economy and job creation while maintaining Boston's unique character with four main strategies: Planning, Design, Zoning, and Public Health and Safety.

In addition to these strategies, the BPDA will continue to prioritize more housing options to support the job growth and coordinate closely with partners to leverage new investment in this industry to support equitable economic opportunities and a jobs pipeline for Boston residents.

Photo: Rendering of Boston University's Rajen Kilach and Center for Integrated Life Sciences & Engineering

1. Shape life sciences development through new Design Guidelines

The Life Sciences Design Guidelines will inform property owners, business owners, developers, and the public about the desired form and character of life sciences development in Boston. The Design Guidelines will provide principles, guidelines, and case studies promoting life sciences development that contributes to the urban fabric of the City, advances citywide planning goals of climate sustainability and resilience, and supports flexibility in building design and use.

Action Items

- Continue to assess development projects in Boston, policies in other cities, and feedback from stakeholders, including architects, mechanical engineers, and commercial real estate professionals, to refine Life Sciences Design Guidelines. This item is currently underway.
- Release draft Design Guidelines and collect community input through public meetings and written comment. The BPDA expects to release these guidelines and begin community engagement in the next 3 months.
- BCDC and BPDA Board review Life Sciences Design Guidelines for adoption following the public review process.

2. Guide life sciences development with new zoning language

Life sciences are currently part of a broad set of industrial uses, including research and manufacturing. Amendments to the Boston Zoning Code to define life sciences research and development uses will help the BPDA target them specifically in current and future land use planning. Regulations will provide certainty for the development community, members of the public, and the City.

Action Items

- Release draft Zoning Code amendments, including "laboratory" use definitions, and collect community input through public meetings and written comment. The BPDA expects to complete this draft and begin community engagement in the next 8 months.
- BPDA Board review Zoning Code amendments and

Photo: Rendering of Landmark Center Redevelopment Project - Phase III Lab / Office Building

recommend for approval by the Zoning Commission, following a public review process.

3. Plan for the future of life sciences development based on each neighborhood's unique context

BPDA staff will continue to integrate planning for life sciences in neighborhood planning and zoning processes, such as the recently adopted Western Avenue Corridor Rezoning Study. The neighborhood plans and zoning will set parameters for the dimensions and location of life sciences development, as well as assess and address the cumulative impacts of life sciences development within each neighborhood.

Action Items

- Continue to integrate planning for life sciences in existing and new planning processes, such as PLAN: Charlestown and PLAN: Newmarket, and codify the plans into zoning. Each planning process will include robust community engagement. This action item is ongoing.

4. Partner with sister agencies to ensure public health and safety

The BPDA's Article 80 review process ensures robust review of each major development in Boston. Members of the public and electeds have raised important considerations about recently proposed projects, particularly about the location of life sciences uses adjacent to housing. Based on the expertise of the Boston Public Health Commission, Boston Fire Department, and the Inspectional Services Department, the BPDA is confident in the health and safety of well-designed life sciences developments locating BSL-1 and BSL-2 labs next to other uses, including residential, educational, and retail. BPDA will continue to coordinate with our peers who are experts in and responsible for health and safety to reinforce existing standards, as well as to identify, consider, and address any health and safety concerns related to the location and design of labs. In addition, BPDA will work with sister agencies to proactively communicate to the public the regulatory framework that ensures public health and safety, including the BPHC's Biosafety permitting process.

Action Items

- Release a publicly accessible, easy-to-use, interactive map of life sciences development in Boston. The BPDA expects to complete this map in the next 8 months.
- Research and pursue best practices for interdisciplinary coordination to support health and safety of life sciences development. This action item is currently underway.
- Work with the Mayor's Office, Boston Fire Department, Inspectional Services Department, and the Boston Public Health Commission to improve communications, release educational materials, and provide community engagement opportunities. including a series of public meetings on life sciences This action item is currently underway.

The BPDA looks forward to working alongside the people of Boston, the development community, and our partners to ensure the continued success of the life sciences industry with new development that benefits our great city, its people, and the environment.