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Collaboration and Innovation at Harvard's Enterprise Research Campus

PLENARY 1: URBAN DEVELOPMENT: CITY, INDUSTRY AND PEOPLE

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EXECUTIVE SUMMARY

In a once-overlooked corner of Boston, new buildings are rising, shaping the city's next innovation district. A decade ago, Harvard's Enterprise Research Campus (ERC) was little more than empty parking lots and half-abandoned railyards. Today it is being redefined as an urban destination that embodies culture, creativity, and collaboration. The Harvard Allston Land Company (HALC) is focused on creating a place that simultaneously attracts and convenes talent, researchers, and industry across a wide breadth of cutting-edge fields. To develop such a world-class urban ecosystem, we are equally focused on residential affordability, small local businesses, and premier public open spaces. Our guiding principles of collaboration and innovation support Harvard's mission to transform an underutilized brown-field site into a vibrant, sustainable, and inclusive community.

DESCRIPTION OF PROJECT

The Enterprise Research Campus will be a vibrant and exciting district focused on research and innovation situated in a welcoming residential and cultural hub designed with open space and sustainability at its heart. The ERC will be a center for collaboration and entrepreneurship by bringing together partners from the local neighborhood of Allston, Harvard University, and from across greater Boston and beyond.

Image 1 – Aerial rendering of Phase A of the ERC, with the Boston skyline beyond

PRE-DEVELOPMENT HISTORY

The roughly 50-acre project site, located adjacent to the Harvard Business School (HBS) and the John A. Paulson School of Engineering and Applied Sciences (SEAS), was historically used for transportation-related industrial purposes. In the 1960s, the Massachusetts Turnpike Authority (MTA) acquired land through eminent domain to build a turnpike extension and associated ramps. Harvard University purchased the land from the MTA in 2000. CSX Transportation, a rail management company, continued to control the area until it relinquished its rights in 2015. In 2018, Harvard applied for and received city approval for an initial master plan for 14 acres of the district.

To facilitate the development of the 14-acre site, Harvard University created a subsidiary, the Harvard Allston Land Company (HALC), to manage the process: select development partners, establish design standards, provide oversight of project plans approved by the City of Boston, and manage the construction of enabling infrastructure projects on-site. HALC issued an RFP in 2019 to develop the first phase of the district, eventually selecting private developer, Tishman Speyer, to ground lease and develop the first phase.

KEY PROJECT INFORMATION

The first phase of the ERC will open in late 2025, comprising over 900,000 square feet of development on approximately 9 acres of land. The project includes 343 total residential units, including 86 affordable units, over 400,000 square feet of lab space, 60,000 square feet of retail, 250 hotel rooms, 60,000 square feet of conference center space, and 1.5 acres of publicly accessible open space at the center.

The project delivers considerable public benefits including a $25M donation to the Neighborhood Housing Trust to fund affordable housing, 25% of Phase A residential units income-restricted affordable, donation of a site in Allston to be used for affordable homeownership, $1M for workforce education programs, $1M for City-led planning processes proximate to the project site, $1M for the City-led Allston-Bright Community Needs Assessment, increased free shuttle service in the area, 2 miles of new bike lanes, 5 acres of roadway, and 2 miles of utility infrastructure. These benefits ensure the project will be accessible to a wider audience. The breadth of that audience will bring fresh ideas and help support collaboration and innovation in all parts of the project.

COLLABORATING TO PROVIDE AFFORDABLE HOUSING

Delivering this complex program complete with a comprehensive range of community benefits required the input and coordination between a host of stakeholders, professionals, and public officials. Key collaborators were the City of Boston Planning Department, Allston community groups, Tishman Speyer, and multiple departments within Harvard University.

Affordable Housing was identified as a crucial need of the Allston and Boston community, and as a result Harvard collaborated with the City of Boston and Tishman Speyer to deliver an unprecedented level of affordability in and around the project. Working with multiple City agencies, Harvard donated $25M to support affordable housing developments within the City of Boston over a 10-year period and donated a plot of land near the ERC to house an affordable homeownership project. In response to community feedback, Tishman Speyer increased their commitment of affordable units to 25%, which required a sitewide financial structure wherein the life science lab space subsidizes the residential affordable units. HALC worked closely with Tishman Speyer to ensure the economic viability of the project considering this expanded commitment.

Achieving Harvard's vision of the ERC as a place that is inclusive and welcoming to all involves balancing pursuit of its many ambitious goals. HALC strives to deliver world-class spaces while maintaining affordability for future residents. Affordable Housing provides a mechanism by which the ERC can be a home to a population that is representative of the demographics of the City of Boston, and addresses an issue identified as a priority by City leadership.

COLLABORATING TO CREATE A WORLD-CLASS CONFERENCE CENTER

The David Rubenstein Treehouse (the Treehouse or Conference Center) serves as another example of disparate interests working together to create something special that benefits all.

As Harvard examined its institutional goals for the ERC, a new conference center space was identified as a campus wide need that could be fulfilled while contributing to the innovative culture of this new district. Harvard University determined that a conference center would be most efficiently delivered with a hotel alongside it and so included the conference center and a hotel as a requirement in the RFP for development of the first phase of the ERC. Harvard funds the construction of, and retains

ownership of the Treehouse, but benefits from Tishman Speyer's deep mixed-use development expertise.
This arrangement allowed the Treehouse to be included in Tishman Speyer's comprehensive design of the site and to be approved as part of their proposal to the City of Boston Planning Department, despite being an institutional use which would typically go through a different city of Boston permitting process than a commercial project. Given the overlapping scope from the Conference Center and the rest of the Phase A development and the often-conflicting needs of the institutional and commercial efforts, HALC plays an intermediary role ensuring effective coordination between stakeholders throughout development.
The outcome of this collaborative effort is an iconic mass-timber structure that provides an inspiring environment for the sharing of impactful ideas, sparking innovation by convening people with myriad interests. The Treehouse enhances the value of the rest of the project for Tishman Speyer by providing a unique amenity for companies that need to hold large events but don't want to build a large conference center of their own. The City of Boston similarly recognizes added value for its constituents in the creation of a public destination that will host educational, business and cultural events. Harvard both satisfied an existing institutional need, while furthering its broader goals for the ERC.

INNOVATING DEVELOPMENT LOGISTICS

Much of Boston is built on urban fill and so development of the ERC required the removal of soils prior to redevelopment. When local landfill facility capacity shortfalls and associated costs of removing the soil began to exceed initial assumptions, a creative solution was implemented by HALC to mitigate impacts on the neighboring community and to keep the project moving forward.
Instead of relying on trucking alone, which would have added significant congestion to local streets and greater CO2 emissions for long-haul trips, HALC rehabilitated two existing rail yard tracks and installed two new rail sidings on an adjacent site owned by Harvard University. HALC worked with several rail owners and operators, including the MBTA, Keolis and CSX, and a rail logistics firm EPIC, to connect the new tracks to, and provide service within, the MBTA Commuter Rail Framingham/Worcester Line network. HALC also worked directly with the rail-adjacent receiving facilities to negotiate agreements informed by set schedules and volumes, which mitigated the risk of exceeding facility capacity constraints and permits.
This unique arrangement allowed soils to be sealed into intermodal containers at the excavation site, transported a short distance on yard trucks via a private haul road, loaded directly onto trains, and conveyed to out-of-state waste disposal facilities seamlessly.
This innovative and collaborative approach continues. The HALC team is investigating the possibility of using this asset to more efficiently ship materials to the site for future phases of construction. The establishment of this rail facility set a strong foundation for new partnerships and infrastructure that will benefit future projects.

INNOVATING TO CREATE HEALTHIER SPACES

HALC's commitment to innovation in environmental sustainability and healthier spaces is quite literally built into the project. When sourcing pavers for the exterior public open space, the team realized that all available options for pavers included fly-ash, a lightweight aggregate. Fly-ash is a byproduct of the combustion of coal, and as such contains trace amounts of elements which are highly toxic. These toxins can contaminate surface water, and because the pavers are being used near on-site stormwater management solutions, the potential negative health impacts of pavers containing fly-ash became a concern.
Ground glass pozzolan was determined able to meet the same functional requirements as fly-ash without posing a health risk. The Harvard University Office for Sustainability and the HALC team, in coordination with Tishman Speyer and SCAPE, the Phase A landscape architect, worked together to find a supplier willing to create a custom line of pavers free from fly-ash. Many iterations of samples

were examined to ensure that this novel product was durable, aesthetically appealing, and could be produced economically. This collaborative and innovative effort not only led to a safer and more sustainable solution for the project but also set a precedent for future material sourcing, demonstrating the power of teamwork in advancing environmental responsibility and design excellence.

CREATING AN INNOVATION ECOSYSTEM

The ERC, located at the crossroads of the Harvard Business School and the Harvard School of Engineering and Applied Sciences, will be a forum for exchange between academia and industry and support an ecosystem of growth opportunities for innovative enterprises. Harvard University researchers in fields like robotics, quantum, AI, and climate tech will find a supportive environment to develop cutting-edge research into market ready products at the ERC. This local pathway from classroom to market is vitally important for the local and regional economy: it will retain talent trained in Boston's top academic institutions as well as diversify and future proof the Massachusetts economy. Collaborations between industry leaders and Harvard research labs will create real solutions to the problems the world faces as it relates to energy, healthcare, fresh water, and climate change.

HALC has been deliberate in ensuring that there will be many opportunities for new and developing businesses to grow at the ERC. We worked closely with our partner Tishman Speyer to focus on leasing strategies that attract these companies. On-site incubator space and fully built-out 'growth-suites' allow flexible low-risk real estate solutions for new and expanding enterprises. The ERC Innovation Award recognizing extraordinary multi-disciplinary innovations will serve as an additional catalyst for collaborative projects between academic research occurring at Harvard and commercial enterprises, with its monetary prize providing much needed early capital.

More established companies leasing space on-site are just as important to the success of this innovation ecosystem and will benefit from engaging with it. Some small enterprises may find that joining teams working on similar projects within these larger groups is the best way to achieve their goals, providing the larger company with a fresh take and premier talent recruitment.

Innovation isn't just going to take place in the laboratory space on site, it is the ethos of the entire project. Marlon Blackwell Architects, who designed the 250-key, 17-story hotel component of the ERC, had never designed a hotel or high-rise prior to this project. Their experience of having the opportunity to step outside of their comfort zone to innovate and create an incredible building is the type of story Harvard hopes will become commonplace at the ERC.

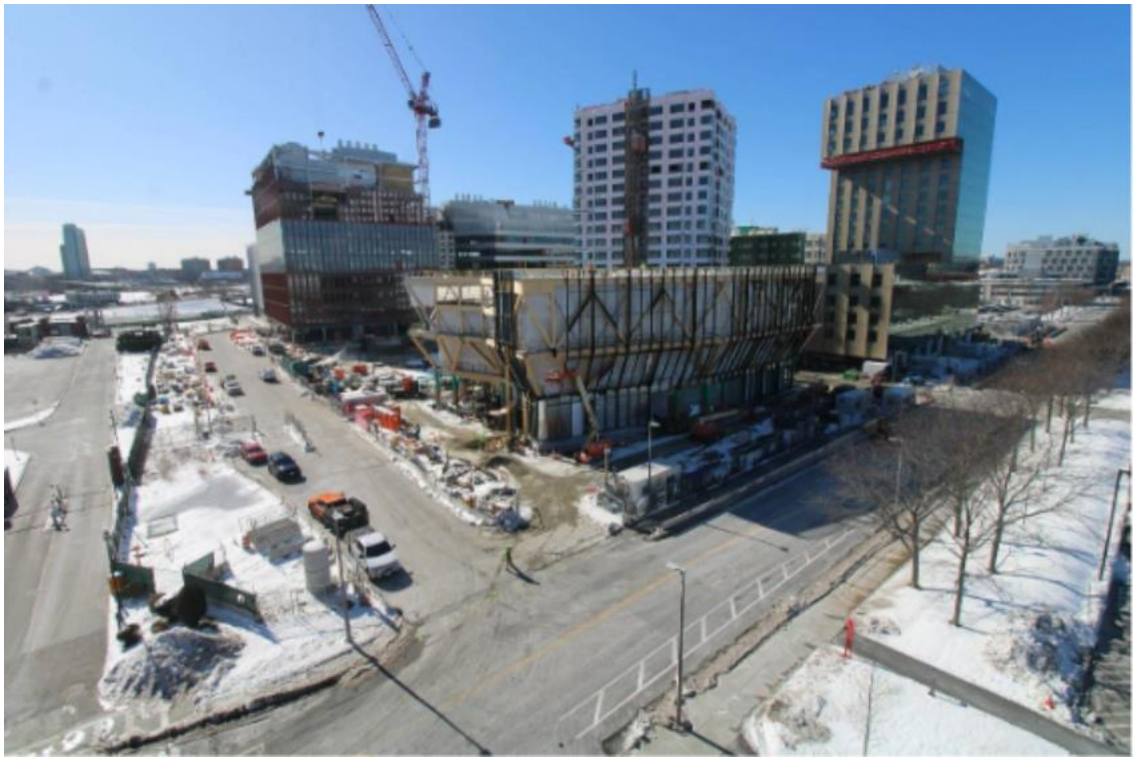

Image 2 – Current Construction Progress at the ERC

PLACEMAKING

Attracting and retaining world-class talent means competing with many options around the world: the ERC must be a compelling and vibrant urban space to maintain a strong innovation ecosystem. Such a place requires careful integration of well-designed urban spaces, opportunities for cultural expression, and a welcoming atmosphere.

HALC has been intentional in its study of the urban fabric of other innovation districts and strategic in its effort to improve upon them. Common criticisms of large mixed-use projects include a lack of authenticity, activation, or a strong identity. In response, HALC ensured each building at the ERC commissioned a separate architect to avoid a monolithic urban form. This large design team, including five architects, a master planner, and a landscape architect, carefully coordinated to deliver an intimate, porous urban environment shaped by cohesive yet distinct architectural expressions.

Though the design team has been thoughtful in making comfortable spaces that will naturally draw visitors, HALC has further ensured the space is filled with activity. Tishman Speyer was selected to develop the site in part because of their expertise in programming and activation. The public open spaces will house dynamic temporary public art installations and a full calendar of programmed public events. The Treehouse will add another layer of activity by hosting professional and cultural events, spilling out into the public realm.

The district promises the unique experience where Harvard students, local Allston residents, leaders of international pharmaceutical companies, or founders of new innovative start-ups can all sit next to each other at a conference hosting Nobel Prize winning speakers or attend a production at Tony Award winning American Repertory Theatre. By bringing together people with a wide range of expertise, the ERC will foster the sort of informal collisions that create new and unexpected multi-disciplinary partnerships that drive innovation.

Image 3 – Exterior rendering of public open space at the ERC

CREATING AN INCLUSIVE ENVIRONMENT

A space that is inclusive and welcoming for all is vital to creating an innovation ecosystem. The ERC is designed to house a diverse community, catering to the University students and faculty, local residents, and commercial tenants alike. By providing extraordinary levels of residential affordability on-site, HALC intends to create a more diverse place, fostering the variety of viewpoints necessary for innovation. Reserved retail square footage on ground floors of the project will house local, small, and/or Minority and Women-owned businesses at below-market rents, which will help the ERC to integrate and reflect the character of the local Allston neighborhood.

An inclusive result requires an inclusive process. HALC ensured that the construction contractors, designers, and professional consultants working on the ERC included minority and women-owned businesses. HALC also facilitated deep engagement with community groups and public officials to allow stakeholders the opportunity to voice concerns and improve the project. Tishman Speyer implemented a novel inclusive capital strategy with 5% of project ownership reserved for minority investors, allowing a wider range of people to benefit from the project's financial success.

BUILDING A SUSTAINABLE AND RESILIENT DISTRICT

Harvard is an institution that has endured nearly 400 years and has very long-term goals. It is important to Harvard that the ERC be built with durability and permanence in mind, making the sustainability and resiliency of the district a priority.

All project components are committed to reaching LEED Gold at minimum. In addition, all buildings will be fossil fuel-neutral on opening day and have committed to be fossil fuel-free by 2050. This is achieved through high performing exterior envelopes and complete electrification of building systems. The design team also extensively studied the impact of the project on local wind conditions, solar glare, daylight, shadow, water quality, air quality, and noise to ensure that the project is both comfortable on site and a good neighbor to abutting properties. Although not located within a FEMA floodplain, the project has been built with resiliency in mind and capable of managing the rainfall of future projections (year 2100) for a 10-year storm, far beyond what is required by local law.

CONCLUSION

The ERC will be successful in fostering an innovation ecosystem by simultaneously providing an inspiring and vibrant urban realm, bridging the gap between academic and commercial pursuits, providing opportunities for authentic cultural expression, and ensuring that all feel welcome and included. This new forum for the exchange of cutting-edge ideas will future proof the regional economy by ensuring that innovative research has local fertile ground to develop into impactful enterprises.

The collaborative efforts of many individuals representing private industry, academia, the local community, and governmental bodies have been vital to the successful development of the ERC. The Harvard Allston Land Company has orchestrated these efforts and embraced creative solutions to challenges along the way to create a place that inspires innovation to provide solutions to the biggest problems the world faces today.