

# SUSTAINABILITY ACTION PLAN 2023





# CONTENTS

VISION	p4
FIRM BACKGROUND	p6
ENERGY PERFORMANCE	p8
COMPANY HISTORY	p10
OUR COMMITMENT	p12
<hr/>	
THE PLAN	
DESIGN APPROACH	p18
ENERGY MODELING	p22
OUTREACH	p26
STAFF TRAINING	p28
FIRM OPERATIONS	p30
<hr/>	
MOVING FORWARD	p34

< RHODE ISLAND SCHOOL OF DESIGN NORTH HALL  
KATHERINE FAULKNER, PRINCIPAL (W NADAAA)

SUSTAINABILITY ACTION PLAN

At West Work,  
**sustainability** is a  
consciousness of  
design that meets  
current human  
needs without  
compromising  
the necessities of  
future generations.

This Sustainability Action Plan (SAP) is a roadmap for our AIA 2030 Commitment, with the following goals:

- Hone the specific path toward carbon neutrality.
- Define near and long-term actionable goals.
- Communicate best practices to our clients & peers.

The Plan is developed from lessons learned, staff input and our collective aspirations.

# VISION

**“All building projects, whether new construction or renovation, have the obligation to carry the smallest possible carbon footprint.”**

West Work, from its founding, has been dedicated to Carbon Free Boston, the City pledge to become carbon neutral by 2050. We strive to create zero energy buildings for all our new construction projects.

BSA TRIPLE DECKER CHALLENGE | 2020 >  
Existing buildings contain significant embodied carbon<sup>2</sup>, making their rehabilitation priority over their demolition.

## ▼ 1 ENERGY

A Solar District approach aggregates 25 neighborhood buildings for a combined output of 706,275 kWh/year, with the net excess available to a third-party purchaser (e.g. City of Boston). Existing energy demand is dramatically lowered with application of insulating envelope; gas-fired boilers are replaced with Energy Recovery Ventilators and mini-split Heat Pumps.



# FIRM BACKGROUND

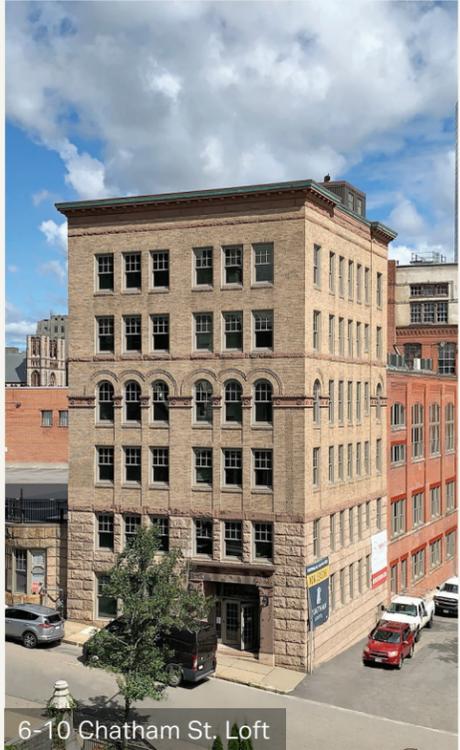
West Work (WW) is a design collaborative that pursues architectural beauty in the context of human well-being, carbon reduction, with the efficient use of material and financial resources.

Located in Boston, we integrate architecture, energy design, and real estate development consulting services.

Our portfolio of expertise includes new construction and retrofits of residential, higher education, and civic spaces. Much of the residential work is affordable and in service of transitional housing.

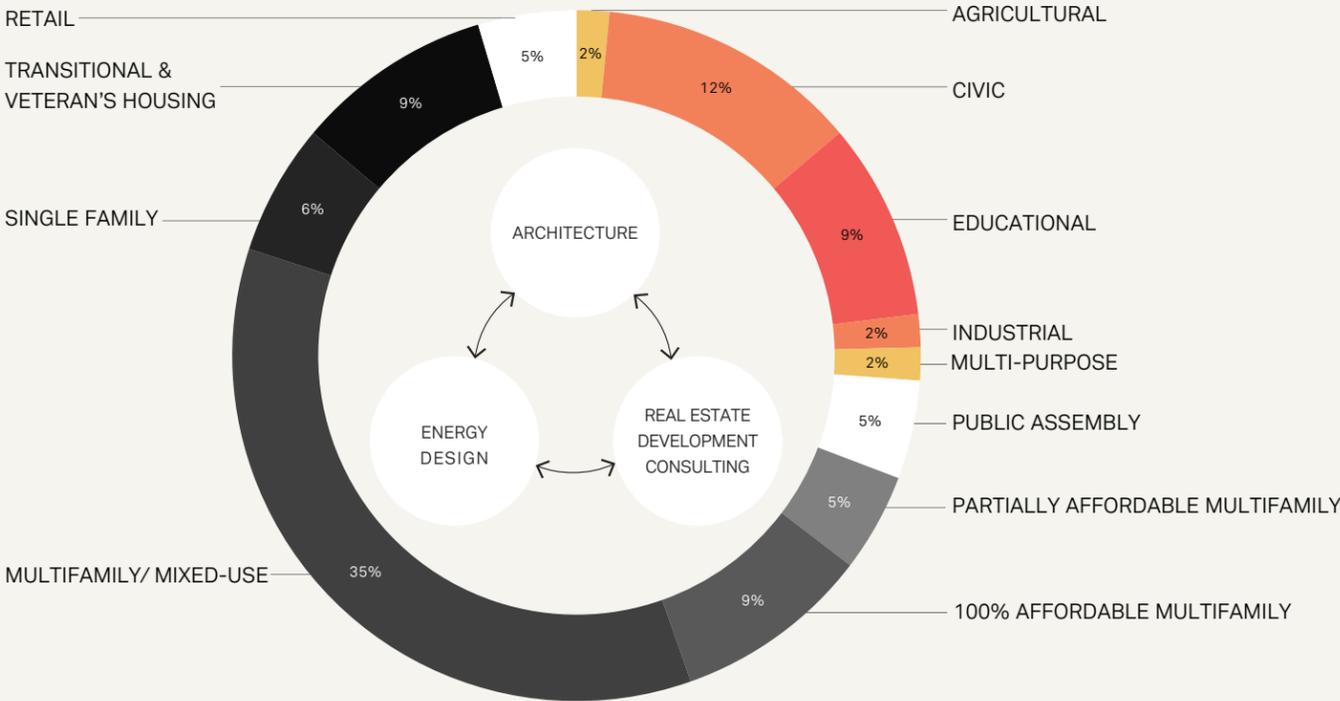


Haverhill Public Library



6-10 Chatham St. Loft

## WW PROJECTS (2023)



1 Elmwood St, Design & Development



Castle Square Apartments, Deep Energy Retrofit



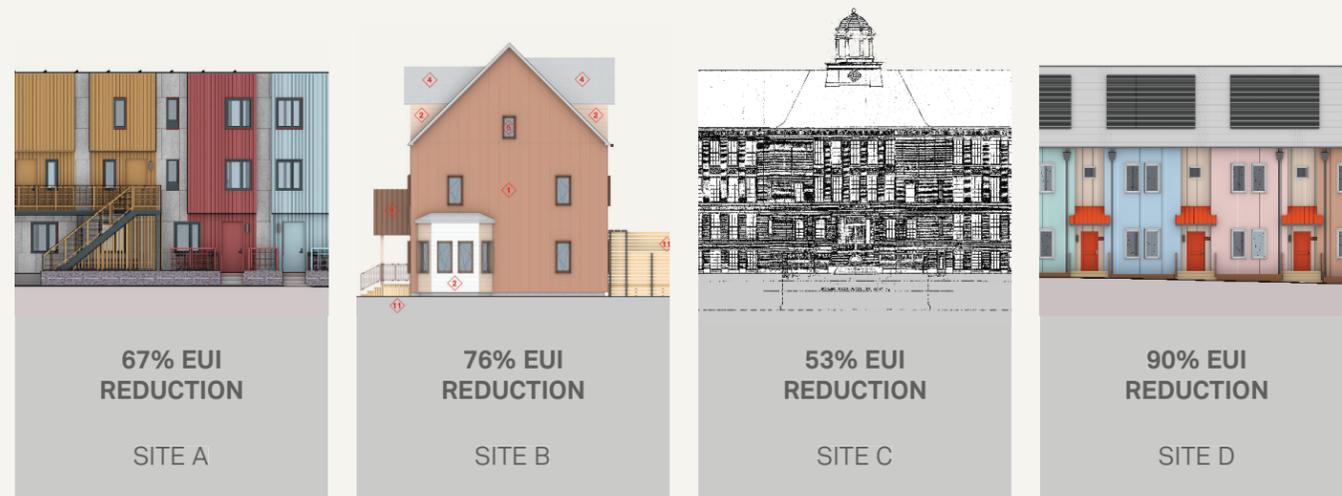
213 Harvard Street, Development Management

# ENERGY PERFORMANCE

**Our projects achieve more than 60% of Energy Use Intensity (EUI) reduction.**

West Work uses energy modeling to evaluate energy efficiency of buildings, ensure compliance with global standards, and ensure energy cost optimization.

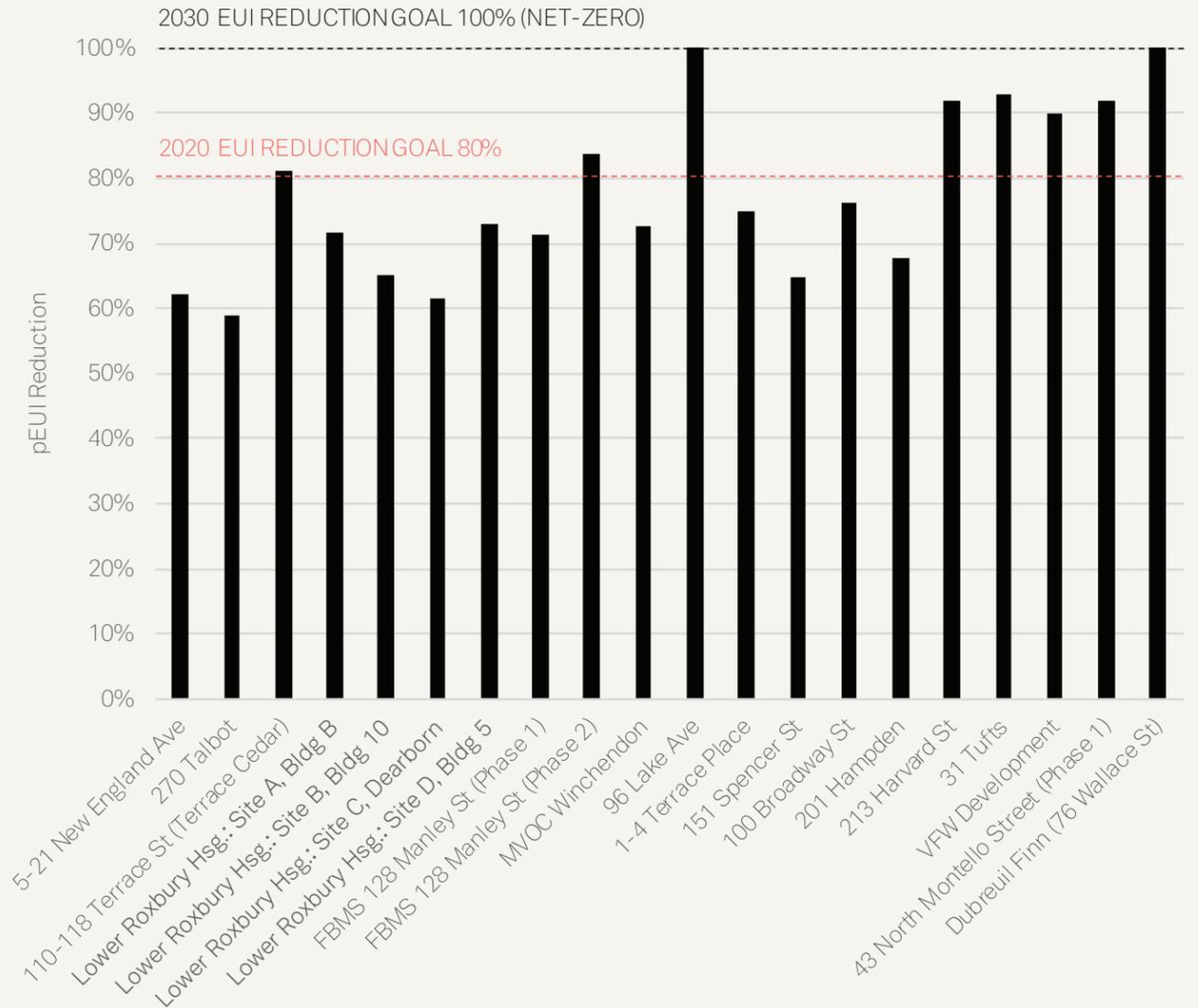
With the energy analysis, we offer clients different design scenarios, equipping them with knowledge while also finding the best fit with them.



## LOWER ROXBURY HOUSING, 4 SITES | 2023

Our current Deep Energy Retrofit proposals for 41 affordable housing buildings across 4 sites have more than 50% EUI reduction from their existing conditions.

WW PROJECT EIUs (2023)



# COMPANY HISTORY

2011



## Deep Energy Retrofit at Castle Square Apartments

*Architect: EHA*  
Occupied rehabilitation of 500 units in South End, Boston. The building achieved LEED Platinum certification and 75% energy savings over pre-renovation costs.

2017



## NADAAA Restores University of Toronto Daniels Building

*Architect: NADAAA (Katherine Faulkner, Founding Partner, Principal in Charge)*  
Restored 19th-century Knox College with a contemporary addition. Now the home of the School of Architecture, the building is a living lesson in history and sustainable systems.

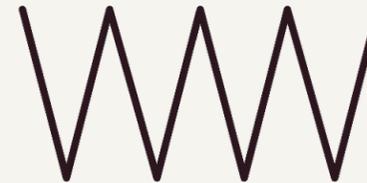
2019



## RISD North Hall

*Architect: NADAAA (Katherine Faulkner, Founding Partner, Principal in Charge)*  
This was RISD's first hybrid steel and CLT structure in New England, first new residence hall in 34 years and first to use Integrated Project Delivery, a collaborative approach that redistributes risk and profit among the client, design team, and contractors.

2020



## West Work Launched

WW was launched by Katherine Faulkner as a certified Women-Owned Business Enterprise (WBE).

2021



## Highland Park Technologies (HPT) Launched

HPT was launched by Katherine Faulkner, Christian Borger, and Evan Smith as the R&D arm of WW to develop a deep energy retrofit panel company. They look at currently available and unconventional envelope systems and are a powerful resource for WW's exterior envelope upgrade projects.

2022



elton+hampton architects

## WW Merges with Elton Hampton Architects

WW joined forces with EHA to combine projects for education, affordable and market rate housing, and deep energy retrofits.

2022



## Pursuing Passive House Certification at 1 Elmwood Street

WW, as the Architect of Record, is working on the architecture, energy design, and real estate development consulting to construct a seven-story, 40-unit compact living apartment in Roxbury.

2022



## Passive House Certification & 100% Affordability at 31 Tufts Street

WW is working with E3 Development to provide 16 units of deeded affordable housing in Somerville. The project received Passive House PHIUS Core 2021 Design certification and is anticipated to finish construction in Summer 2023.

2023



## Deep Energy Retrofit of 41 Affordable Housing Buildings at Lower Roxbury

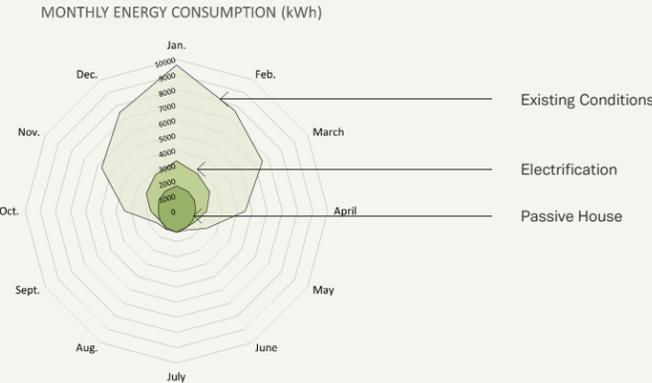
Still in the works, this is a deep energy retrofit project of 41 existing housing buildings of different construction types and operating systems. We are proposing site design, building enclosure and system updates.

# OUR COMMITMENT

## We commit to carbon neutrality by 2030.

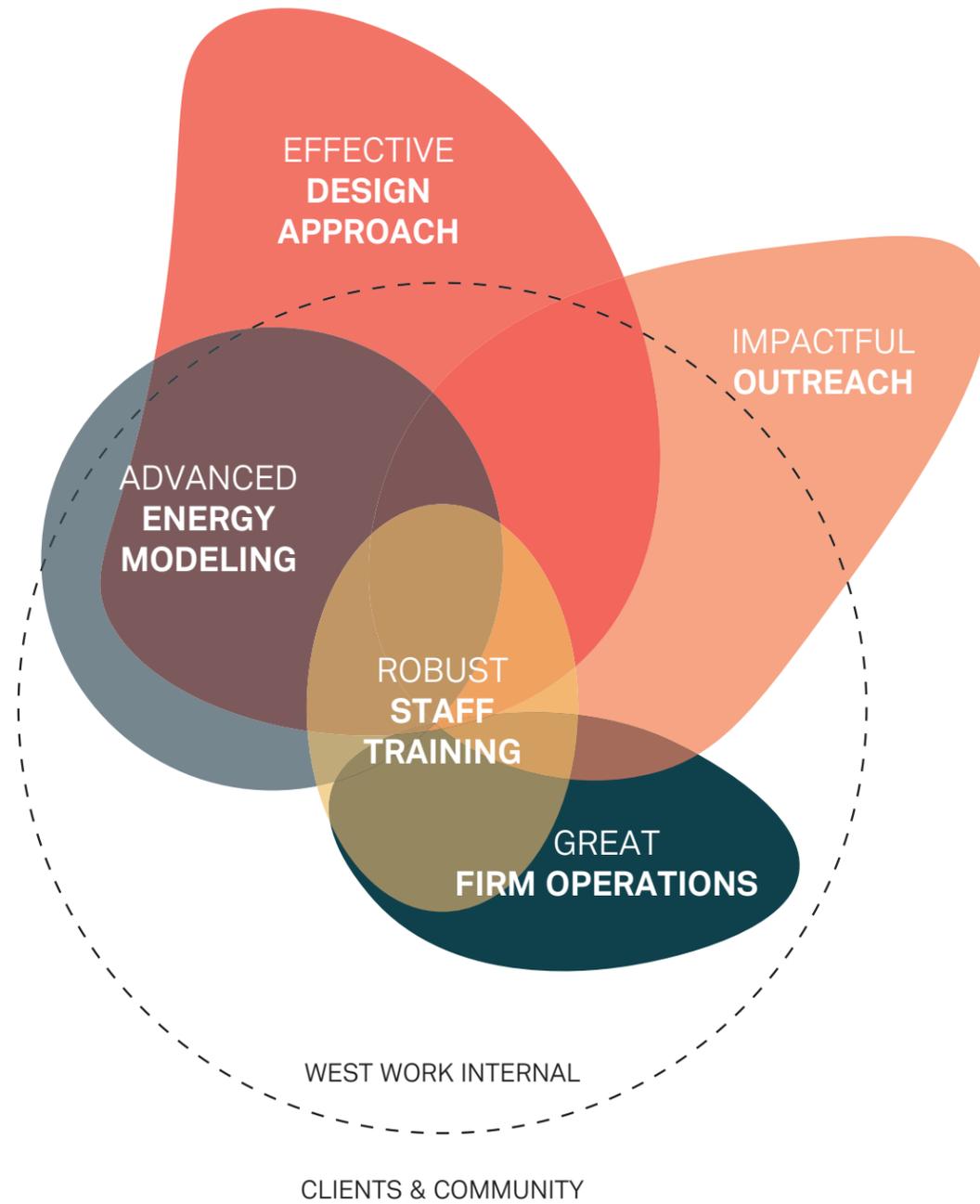
As of 2023, West Work is a 2030 Challenge signatory, along with 1200 other Architecture firms nation-wide<sup>1</sup>, with the shared goal of achieving net-zero across our portfolios.

Meeting the AIA energy use reduction milestones is imperative to keeping the U.S. in compliance with the Paris Accord Agreement goal of limiting global warming to 1.5°C.<sup>1</sup> We invite you to join us in this pursuit of carbon neutrality!



DUBREUIL FINN (76 WALLACE ST)  
Passive House Certified Home with architect, NEDC; EUI from 3 Case Studies Within Project

## OPERATIONAL APPROACH OVERVIEW



## CONTENTS

VISION	p4
FIRM BACKGROUND	p6
ENERGY PERFORMANCE	p8
COMPANY HISTORY	p10
OUR COMMITMENT	p12
<hr/>	
THE PLAN	
DESIGN APPROACH	p18
ENERGY MODELING	p22
OUTREACH	p26
STAFF TRAINING	p28
FIRM OPERATIONS	p30
<hr/>	
MOVING FORWARD	p34

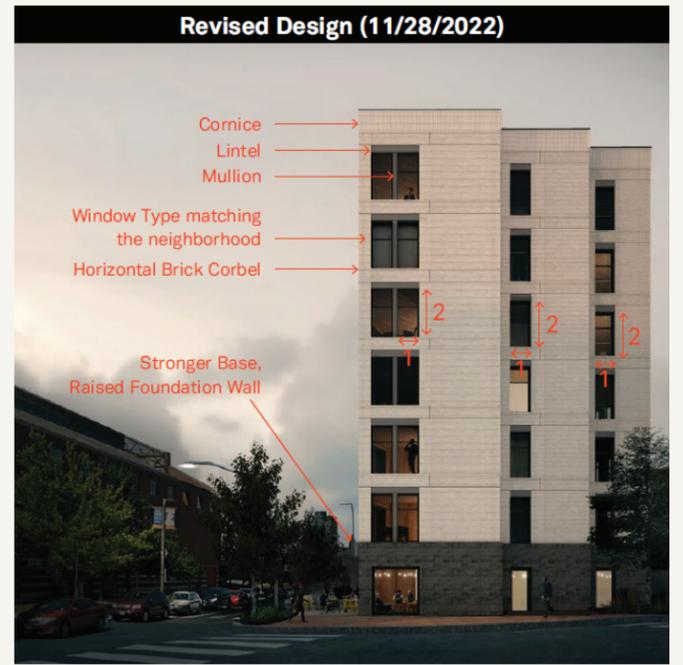
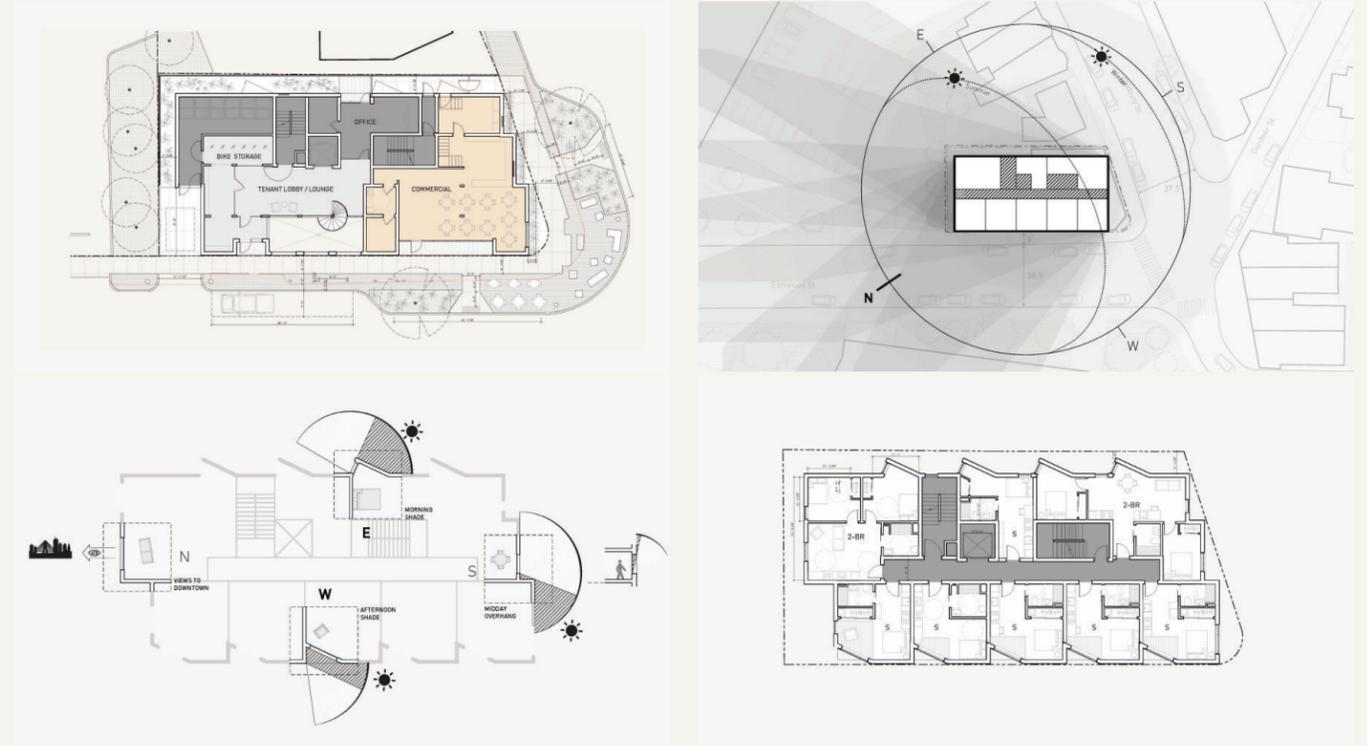
# THE PLAN: AN OVERVIEW

	DESIGN APPROACH	ENERGY MODELING	OUTREACH	STAFF TRAINING	FIRM OPERATIONS
NEAR-TERM GOALS	<ul style="list-style-type: none"> <li>• Outline West Work’s design process.</li> <li>• Add energy modeling in Schematic Design.</li> <li>• Establish a centralized information platform.</li> <li>• Start a material &amp; detail catalogue.</li> </ul>	<ul style="list-style-type: none"> <li>• Outline Energy Design workflow.</li> <li>• Annual Impact &amp; Progress Report.</li> <li>• List projects to energy model.</li> </ul>	<ul style="list-style-type: none"> <li>• Publish our SAP online.</li> <li>• Publicly share educational materials.</li> <li>• Publish informational blog posts.</li> <li>• Find &amp; attend 2-3 community events annually.</li> <li>• Collect EPDs for specifications.</li> </ul>	<ul style="list-style-type: none"> <li>• Monthly lunch and learns.</li> <li>• Regular committee meetings for professional development.</li> <li>• Utilize Impact &amp; Progress Report to assess staff training.</li> </ul>	<ul style="list-style-type: none"> <li>• Calculate our carbon footprint annually.</li> <li>• Use carbon footprint to identify areas of improvement on our Carbon Neutrality Plan.</li> <li>• Document footprint in Impact &amp; Progress Report.</li> </ul>
LONG-TERM GOALS	<ul style="list-style-type: none"> <li>• Set up firm-wide meetings to discuss design approach.</li> <li>• Implement material &amp; detail catalogue in design process.</li> </ul>	<ul style="list-style-type: none"> <li>• Create product catalogue.</li> <li>• Provide priceable feasibility study packages.</li> <li>• Discuss new software tools.</li> <li>• Assign a “Sustainability Advocate” per project.</li> <li>• Add energy services to all our design services contracts.</li> </ul>	<ul style="list-style-type: none"> <li>• Highlight housing projects in Impact &amp; Progress Report.</li> <li>• Mentor for the Affordable Housing Development Competition (AHDC).</li> <li>• Collaborate with sustainability-minded product manufacturers.</li> <li>• Publish our Impact &amp; Progress Report online.</li> </ul>	<ul style="list-style-type: none"> <li>• Appoint two staff members to oversee training and professional development.</li> <li>• Develop project reference binders.</li> <li>• Clarify incentives and support for licensure and certifications.</li> <li>• Research post-occupancy tracking and implementation method.</li> </ul>	<ul style="list-style-type: none"> <li>• Discuss compensation for public transportation.</li> <li>• Start up office composting.</li> <li>• Begin discussions on office certifications.</li> </ul>

# DESIGN APPROACH

## Energy analysis fuels informed decision making.

West Work believes in an iterative design process that ensures each stage of a project is informed by our conversations with clients and building simulations using realistic datapoints, resulting in beautiful and sustainable design that exceeds our clients' needs while staying within budget.



CURRENT EFFORTS:	NEAR TERM GOALS:	LONG TERM GOALS:
<ul style="list-style-type: none"> <li>• Iterative energy modeling.</li> <li>• Prioritizing design excellence and client budget.</li> </ul>	<ul style="list-style-type: none"> <li>• Outline West Work's design process.</li> <li>• Add energy modeling in Schematic Design.</li> <li>• Establish centralized information platform.</li> <li>• Start a material &amp; detail catalogue.</li> </ul>	<ul style="list-style-type: none"> <li>• Set up firm-wide meetings to discuss design approach.</li> <li>• Implement material &amp; detail catalogue in design process.</li> </ul>

1 ELMWOOD ST  
Existing building renovation with 40-units & additional retail, Top: Plans & diagrams of building design, Bottom: revised façade integrating historical design features in Roxbury

# DESIGN CHECKLIST TEMPLATE

	PRE DESIGN	SCHEMATIC DESIGN	DESIGN DEVELOPMENT	CONSTRUCTION DOCUMENTS	CONSTRUCTION ADMINISTRATION	POST CONSTRUCTION
<b>GREEN FUNDING</b>	<input type="checkbox"/>	<input type="checkbox"/>				
	<input type="checkbox"/>	<input type="checkbox"/>				
	<input type="checkbox"/>	<input type="checkbox"/>				
<b>TEAM INTEGRATION</b>	<input type="checkbox"/>	<input type="checkbox"/>				
	<input type="checkbox"/>	<input type="checkbox"/>				
	<input type="checkbox"/>	<input type="checkbox"/>				
<b>INTERNAL ACCOUNTABILITY</b>	<input type="checkbox"/>	<input type="checkbox"/>				
	<input type="checkbox"/>	<input type="checkbox"/>				
	<input type="checkbox"/>	<input type="checkbox"/>				
<b>CLIENT INTERACTIONS</b>	<input type="checkbox"/>	<input type="checkbox"/>				
	<input type="checkbox"/>	<input type="checkbox"/>				
	<input type="checkbox"/>	<input type="checkbox"/>				
<b>ENERGY TARGETS &amp; MODELING</b>	<input type="checkbox"/>	<input type="checkbox"/>				
	<input type="checkbox"/>	<input type="checkbox"/>				
	<input type="checkbox"/>	<input type="checkbox"/>				
<b>DESIGN STRATEGIES</b>	<input type="checkbox"/>	<input type="checkbox"/>				
	<input type="checkbox"/>	<input type="checkbox"/>				
	<input type="checkbox"/>	<input type="checkbox"/>				
<b>DATA COLLECTION</b>	<input type="checkbox"/>	<input type="checkbox"/>				
	<input type="checkbox"/>	<input type="checkbox"/>				
	<input type="checkbox"/>	<input type="checkbox"/>				

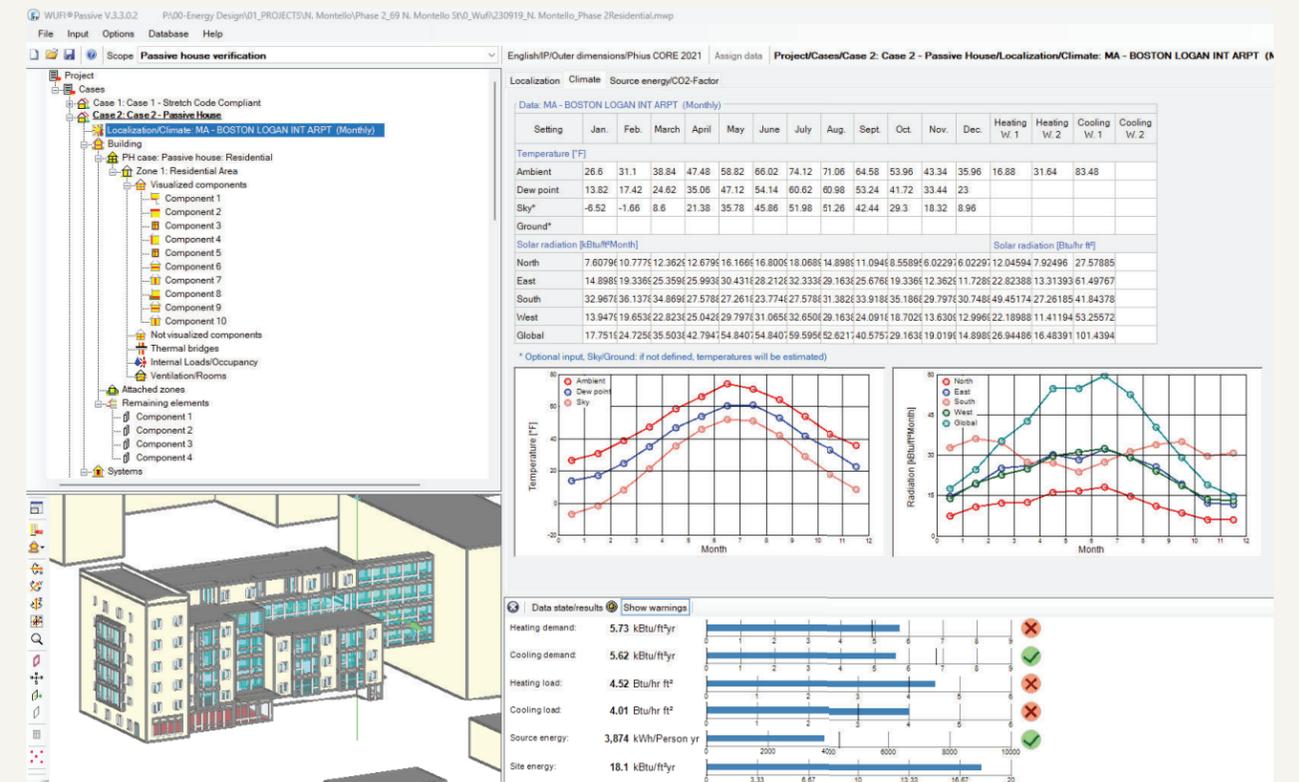
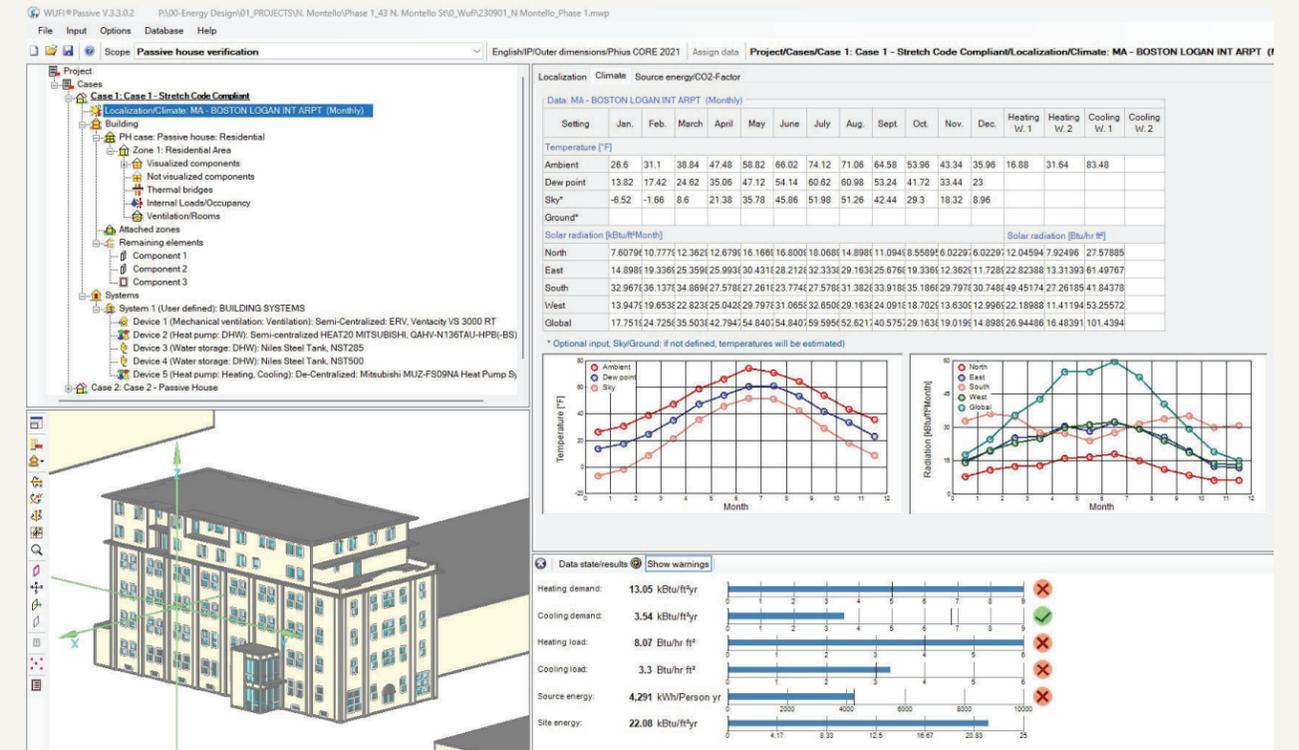
West Work will be developing a Design Checklist, an internal document to ensure tasks at each design phase are executed thoroughly and a means to test out new processes. The Checklist is for PMs to reference over the course of a project, as well as for the design team staff to understand and see the overall progress of the project they are working on.

We anticipate editing and refining this checklist annually in order to keep improving our design approach and stay updated with best practices.

# ENERGY MODELING

Our goal is to make energy modeling a consistent effort across all projects.

During the creation of this Action Plan, we have identified which projects have or have not been energy modeled, and developed visuals to see how our projects are performing. Moving forward, a firm-wide effort to get all projects energy modeled and reviewed on a regular basis will be instrumental in engaging our staff to work towards our energy reduction goals.



## CURRENT EFFORTS:

- Energy modeled 50% of our projects, with more pending.
- Documenting all our active projects, their target EUI, and pEUI.
- Upload energy data to AIA's Design Data Exchange (DDx).

## NEAR TERM GOALS:

- Outline Energy Design workflow.
- Annual Impact & Progress Report.
- List projects to energy model.

## LONG TERM GOALS:

- Create product catalogue.
- Provide priceable feasibility study packages.
- Discuss new software tools.
- Assign a "Sustainability Advocate" per project.
- Add energy services to all our design services contracts.

N MONTELLO (PHASE 1 & 2) WUFI ENERGY MODELS

## MODELED PROJECTS

WEST WORK PROJECTS



OUTSIDE FIRM PROJECTS



## PENDING PROJECTS

- 1 Elmwood St
- Gardner St

## NO ENERGY MODELS

- YMCA Attleboro
- Windrush Commons
- UMass Boston Clark Athletic Center
- Timberlyn Heights
- Strain Station Fawcett St
- Strain Station 541 Mass Ave
- Rev Clinics Leominster Dispensary
- Podcast Studio
- NHS Lower Winter Street
- Haverhill Public Library
- Garrison Trotter Housing Initiative
- FBMS Stoughton Motel
- FBMS Attleboro Pleasant Street
- Batson Building (40-50 Warren St)
- 52 Old Bay Rd
- 2400 Mass Ave
- 17 Castleton St
- 100 Bridge St

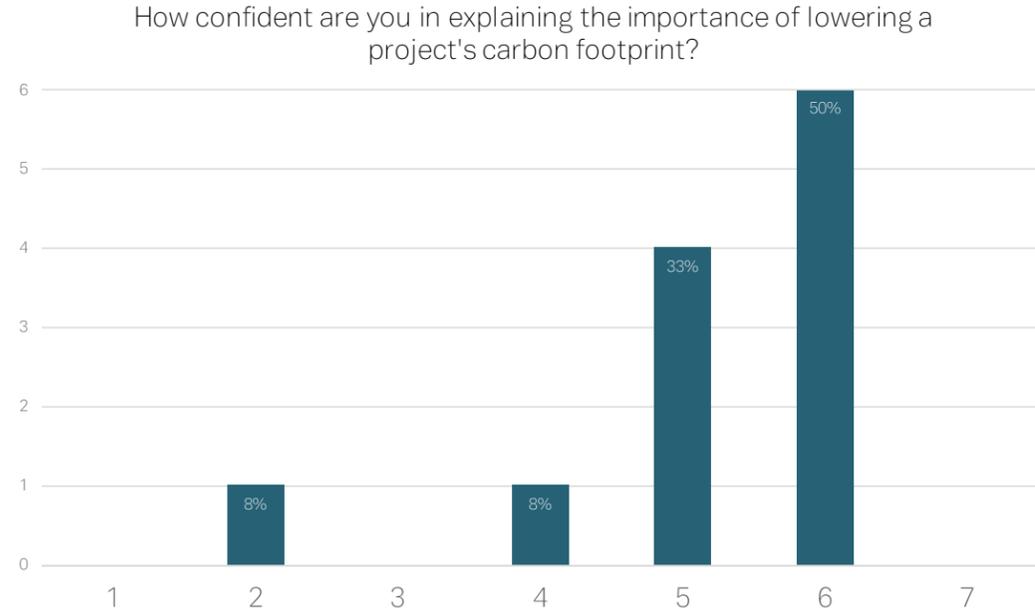
# OUTREACH

**Marketing and participation in external events are key ways we would like to exchange knowledge with others.**

Meanwhile, staff training will be necessary to ensure our staff can clearly and concisely explain our company values as well as the impact of buildings on the environment.

CURRENT EFFORTS:	NEAR TERM GOALS:	LONG TERM GOALS:
<ul style="list-style-type: none"> <li>Encourage firm members' participation in sustainability-related events, conferences, and professional memberships.</li> </ul>	<ul style="list-style-type: none"> <li>Publish our SAP online.</li> <li>Publicly share educational materials.</li> <li>Publish informational blog posts.</li> <li>Find &amp; attend 2-3 community events annually.</li> <li>Collect EPDs for specifications.</li> </ul>	<ul style="list-style-type: none"> <li>Highlight housing projects in Impact &amp; Progress Report.</li> <li>Mentor for the Affordable Housing Development Competition (AHDC).</li> <li>Collaborate with sustainability-minded product manufacturers.</li> <li>Publish our Impact &amp; Progress Report online.</li> </ul>

We asked our staff the following in our SAP Survey Series:

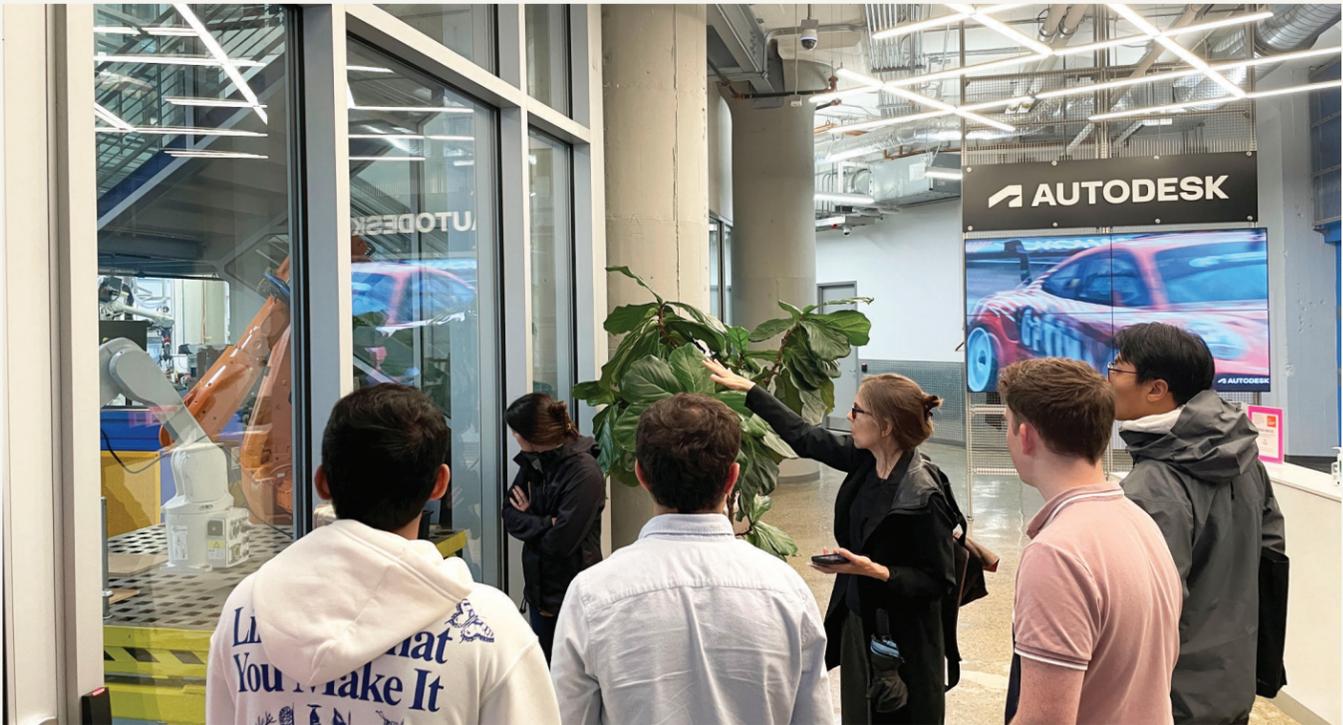


# STAFF TRAINING

## We aim to support our staff for licensure and certifications.

Currently, three of our staff are Certified Passive House Consultants (CPHC), and 29% of our staff are accredited Architects. 90% of our staff plan on getting an Architecture license and additional certifications in the next five years.

West Work is also applying for the Built Environment Plus (BE+) Workforce Training Fund's Express and General Programs, which funds trainings for sustainability-related accreditation exams and green building fundamentals.



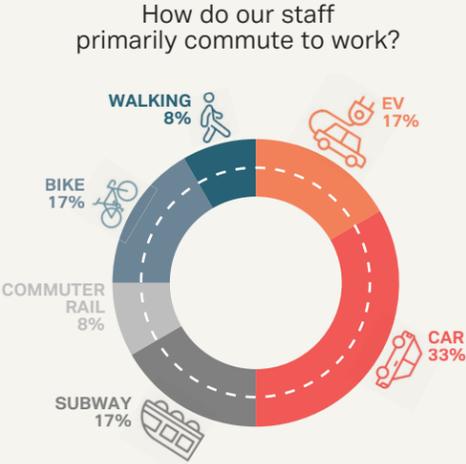
WW STAFF AT AUTODESK TECHNOLOGY CENTER

CURRENT EFFORTS:	NEAR TERM GOALS:	LONG TERM GOALS:
<ul style="list-style-type: none"> <li>• Sporadic lunch and learns.</li> <li>• Financial support for professional development.</li> </ul>	<ul style="list-style-type: none"> <li>• Monthly lunch and learns.</li> <li>• Regular committee meetings for professional development.</li> <li>• Utilize Impact &amp; Progress Report to assess staff training.</li> </ul>	<ul style="list-style-type: none"> <li>• Appoint two staff members to oversee training and professional development.</li> <li>• Develop project reference binders</li> <li>• Clarify incentives and support for licensure and certifications.</li> <li>• Research post-occupancy tracking and implementation method.</li> </ul>

# FIRM OPERATIONS

We are committed to carbon neutrality not just in our projects, but in our office as well.

As we get situated into the office, which is new to half of us, we are excited to make workspace improvements, encourage energy-saving habits, and reduce our carbon footprint where possible.



OUR NEIGHBORING MURAL ON 87 TERRACE ST  
Photo by Maxwell Altman

CURRENT EFFORTS:	NEAR TERM GOALS:	LONG TERM GOALS:
<ul style="list-style-type: none"> <li>• See Carbon Neutrality Plan (next page).</li> </ul>	<ul style="list-style-type: none"> <li>• Calculate our carbon footprint annually.</li> <li>• Use carbon footprint to identify areas of improvement on our Carbon Neutrality Plan.</li> <li>• Document footprint in Impact &amp; Progress Report.</li> </ul>	<ul style="list-style-type: none"> <li>• Discuss compensation for public transportation.</li> <li>• Start up office composting.</li> <li>• Begin discussions on office certifications.</li> </ul>

# OFFICE CARBON NEUTRALITY PLAN

	 <b>ENERGY USE</b>	 <b>WATER</b>	 <b>RESOURCES</b>	 <b>TRANSIT</b>	 <b>HEALTH</b>	 <b>COMMUNITY</b>
<b>CURRENT EFFORTS</b>	<ul style="list-style-type: none"> <li>• Turn off lights when not in use.</li> <li>• Installed LED lights in the office.</li> <li>• Thermostat controlled environment.</li> </ul>	<ul style="list-style-type: none"> <li>• Minimize dishwashing water.</li> </ul>	<ul style="list-style-type: none"> <li>• Started a scrap paper pile &amp; print double-sided.</li> <li>• Have mixed-recycling.</li> <li>• Have little to no use of disposable kitchen items.</li> <li>• Support local food vendors as much as possible.</li> </ul>	<ul style="list-style-type: none"> <li>• Take most sustainable form of transportation available.</li> <li>• Accommodate remote work for long distance staff members.</li> </ul>	<ul style="list-style-type: none"> <li>• Cycling and walking to work.</li> <li>• Choosing vegetarian options for staff meals.</li> </ul>	<ul style="list-style-type: none"> <li>• Contribute to low-income and minority architecture student mentorship and scholarships through Mass CEC.</li> </ul>
<b>GOALS</b>	<ul style="list-style-type: none"> <li>• Introduce energy-saving power strips.</li> <li>• Shut off power strips when not in use.</li> <li>• Ensure appliances are energy efficient.</li> <li>• Offset energy using renewables or purchase carbon offsets.</li> <li>• Energy model our office.</li> </ul>	<ul style="list-style-type: none"> <li>• Minimize dishwashing soap.</li> <li>• Install low-flow toilets and faucets.</li> <li>• Implement rain-water collection on building roof.</li> </ul>	<ul style="list-style-type: none"> <li>• Track our waste and reduce them.</li> <li>• Start a composting program.</li> <li>• Research local stationery items and look for minority/women-owned businesses.</li> </ul>	<ul style="list-style-type: none"> <li>• Encourage biking, walking, and public transportation.</li> <li>• Provide public transit benefits.</li> <li>• Offset travel- and commuter-related carbon.</li> </ul>	<ul style="list-style-type: none"> <li>• Source healthier foods when catering.</li> <li>• Introduce plants into office and establish a plant care routine.</li> <li>• Schedule brief office walks</li> <li>• Encourage taking walking meetings and phone calls when possible.</li> </ul>	<ul style="list-style-type: none"> <li>• Understand and publish the effects of climate change on our community in Roxbury.</li> <li>• Find volunteer opportunities.</li> <li>• Assess community resiliency and project impact on design projects.</li> </ul>

# MOVING FORWARD

We commit to:

- Advancing our **design approach** to reach carbon neutrality.
- Making **energy modeling** a standard.
- **Outreach** by sharing sustainability knowledge to our clients & community.
- **Staff training** so we may all understand and pursue carbon neutrality & climate change advocacy.
- Improving our **firm operations** to reach net zero.



# DEFINITIONS

**Energy use intensity (EUI):** A measure of a building’s annual energy consumption normalized by annual consumption relative to the building’s area, expressed in kBTU/ft<sup>2</sup>/year.<sup>3</sup>

**Predicted energy use intensity (pEUI):** The predicted energy use for a project, measured by an energy model.<sup>3</sup> In West Work’s reports, we use site energy consumption.

**Site energy:** The net energy produced and consumed by a building on the project site, as measured by the utility meter and reflected in utility bills. It does not represent the energy used to, or the emissions from, providing energy to the building.<sup>3</sup>

**Source energy:** The total energy produced and consumed by a building on the site plus the energy used to, or the emissions from, providing energy to the building.<sup>3</sup>

**Operational carbon:** Greenhouse gas emissions that are released due to building operations.<sup>3</sup>

**Embodied carbon:** All the greenhouse gas emissions along building supply, from cradle to grave.<sup>3</sup>

# SOURCES

1. “The 2030 Challenge.” Architecture 2030, [architecture2030.org/2030\\_challenges/2030-challenge/](https://architecture2030.org/2030_challenges/2030-challenge/). Accessed June 2023.
2. Strain, Larry. “Time Value of Carbon.” Carbon Leadership Forum University of Washington, 2017.
3. “Creating a Sustainability Action Plan That Works.” The American Institute of Architects.
4. “Yuttapong Icon Style / Lineal.” Flaticon, [www.flaticon.com/authors/yuttapong/lineal](https://www.flaticon.com/authors/yuttapong/lineal). Accessed June 2023.