2023

Sustainable Action Plan

PCA

Architecture
Interiors
+ Planning

EDGE - Allston, MA
LEED for Homes v3, Platinum

Our Executive Summary

Our Vision
PCA's **Sustainable Action Plan (SAP)** details specific steps for our internal staff to mitigate and minimize the built environment's negative impact on the climate, and to define what **Building Better Buildings** look like to PCA through the lens of sustainable design.

Our Goal
This document will serve as a map for PCA to follow over the next three years outlining our focus on key **Pillars** for the design and construction of our projects. Awareness and staff engagement for consistent sustainable design dialogue and knowledge will further advance PCA's internal and external communication on sustainable design. The Pillars include: **Building Materials, Building Performance, Total Carbon, Feedback Loops** and **Strategic Team.**

Each of these **Pillars** encompasses an objective that PCA will achieve strategically with intentional tactics supported by our **Timeline + Workflow**.

Our Success
With our SAP in place, we will guide our clients, subconsultants and project partners through a balanced design and building process that will have lasting value and impact on the environment, the economy and, most importantly, in the communities where we work.

Led by our **Director of Sustainability, DiAnn Tufts**, we practice sustainable design - environmental, social and economic. For us, this is demonstrated in how our design gives back to society and improves the communities where we work right now, and for future generations. Whether guided by Passive House, ILFI Net Zero or LEED, sustainable design makes our world cleaner.
- Our Values

ECO - Allston, MA
LEED for Homes v3, Platinum

Our Metrics to Record and Report

We will measure our results by using the following metrics, gleaning insights to make further recommendations or changes:

- 5 new material resources + guides
- 100% of interior design staff + 25% of architectural design staff graduate from Healthy Materials courses
- 100% of projects track + report building performance metrics, publicly visible in office
- 1 new process instituting envelope building science audits
- 1 new tool + process for concept analysis, improving building performance
- 65% pEUI reduction of total portfolio
- 70% pLPD reduction of total portfolio
- 17 new building certifications
- 13 new staff sustainable accreditations
- 1 new process for identifying + supporting project green leaders

The following pages detail this work.

McElwain School Apartments - Bridgewater, MA
PHIUS Passive House Final Certified

Our Holistic Design Approach

PCA has a balanced understanding of sustainable design philosophies that allow us to maximize the potential for positive impact throughout all aspects of our projects. Taking a Holistic **Sustainable Design Approach**, our team incorporates strategies that address various impacts highlighted through the following **Holistic Design Icons**. This approach ensures that our thoughtful process focuses on people, the environment and project proforma during all design phases.

PCA's Holistic Icons are inspired by the Living Building Challenge Petals.

Place
Restoring a Healthy Interplay with Nature

Energy
Reduce Load + Meet Demand

Beauty
Uplifting the Human Spirit

Materials
Safe For All Species Through Time

Equity
Supporting a Just + Equitable World

Health + Wholeness
Elevate Well-Being

Water
Conservation + Optimized Uses

"We create — through architecture, interior design and planning — the kinds of environments where people can live their best lives."
- The Power of Placemaking, by PCA

THE PILLARS

Building Materials
Human Impact

Building Performance
Resource Impact

Total Carbon
Environmental Impact

Feedback Loops
Quality Impact

Strategic Team
Staff + Partners Impact

Our Overview

The next several pages detail the SAP Pillars and how we will reach our objectives through tactics.

Our Objective: Informed material decisions + implementation
Building Better Buildings that - have a balanced approach to human health + individual project priorities, and to minimize client risk by avoiding potential, future material mitigation.

Our Objective: Knowledgeable execution of building envelopes and minimizing energy + water use
Building Better Buildings that - utilize smart envelopes, recognizing our greatest opportunity for energy impact and potential for moisture risk, serving our clients and remain ahead of the curve with increasing requirements.

Our Objective: Minimize the built environment's negative impact on climate change and mitigate the burden on future developments; be prepared, be responsive
Building Better Buildings that - respect nature's building blocks, addressing total carbon is not just our responsibility but our greatest opportunity to lessen the need for further extreme intervention through architecture.

Our Objective: Have data and informed experience to advise our clients
Building Better Buildings by - working smart not hard; building off our shared knowledge and experience to design thoughtfully, informed, and faster.

Our Objective: Strategic use of our staff, time + succession planning
Building Better Buildings by - having the right people in place to execute our plan today, tomorrow and beyond.

Holistic Design Impact

Place: Designing with awareness of land impacts throughout the material life cycle

Beauty: Enriching our lives through beautiful space with timeless design

Equity: Designing with awareness of upstream and downstream community impacts

Water: Considering the water consumption in manufacturing and disposal

Energy: Considering the energy consumption in manufacturing, transportation and disposal

Materials: providing clean materials to protect inhabitant health

Health: Promoting wellness of building occupants, contractors and manufacturers

Building Materials
Human Impact

Our Objective
Informed Material Decisions + Implementation

Our Work Actions

- **Education:** Parsons' Course to empower individuals and accelerate the rate of adoption in our work
- **Material Project Guides:** Create a project guide and standards for material decisions that consider chemical health risks and life cycle
- **Project Audits:** Develop a process for implementing the guide, proving support, accountability and a centralized understanding for feedback loops
- **Specifications:** Coordinate the goal outlined in our guide with our consultants and create a Healthy Base Spec

Track + Publicly Report Staff + Project Metrics
Where We Are Heading in 2026

35%	10	15	15	3	3
Staff Completed Healthy Materials Course	Tools + Guides Implemented	Healthy Product Advocacy	LVT Free Building Designs	PVC Free Building Designs	Flame Retardant Free FF+E Designs

Where We Are in 2023

10%	1	2	3	0	0
Staff Completed Healthy Materials Course	Tools + Guides Implemented	Healthy Product Advocacy	LVT Free Building Designs	PVC Free Building Designs	Flame Retardant Free FF+E Designs

Holistic Design Impact

Water: Respecting our waterways as a shared resource and the energy intensity in use

Energy: Reducing the overall use of energy and being cognizant of utility sources

Materials: Building lighter to conserve material resources while designing for performance

Building Performance
Resource Impact

Our Objective
Knowledgeable Execution of Building Envelopes and Minimizing Resource Use

Our Work Actions

- **Education:** Targeted building science education for key staff, empowering consistent and direct knowledge at the project level, e.g. Building Science Fight Club, CPHC
- **Envelope Audits:** Develop a required and systematic approach to envelope and building science audits across our projects
- **Early Energy Modeling:** Identifying tools and approaches for targeted in-house early concept studies
- **Energy Data:** Utilize existing tools such as DDx & project energy models for data to inform what is and is not working

Track + Publicly Report Project Metrics
Where We Are Heading in 2026

65	70	35	9k	6
pEUI Percent Reduction	pLPD Percent Reduction	Multifamily Water Use (Gal/SF)	Multifamily Per Person Energy (kBtu/Person)	Tools + Guides Implemented

Where We Are in 2023

48	52	No Data	No Data	0
pEUI Percent Reduction	pLPD Percent Reduction	Multifamily Water Use (Gal/SF)	Multifamily Per Person Energy (kBtu/Person)	Tools + Guides Implemented

Holistic Design Impact

Place: Respecting the power of the natural environment and adapting to changing conditions

Equity: Acknowledging climate change is a justice issue

Materials: Evaluating the threaded connection of health, energy + embodied carbon

Health: Using resiliency and mitigations strategies to provide safe and secure spaces

Total Carbon
Human Impact

Our Objective
Minimize Architecture's Impact on Climate Change and Mitigate the Burden on Future Developments; Be Prepared, Be Responsive

Our Work Actions

- **Education:** Seek-out learning opportunities and develop a learning plan to get off the ground in the next 3 years, both for key individuals + general staff
- **City or State Requirements:** Stay informed and up to date. Track developing requirements, industry approaches, consultant capabilities + incentives
- **Embodies Carbon Studies:** Evaluate available tools, identify PCA specific workflows, and look for training

Track + Publicly Report Project Metrics
Where We Are Heading in 2026

35	1.6	2	1
Percent of Portfolio Reporting Design Emissions	Multifamily Annual Design Emissions (pCUI)	Tools + Guides Implemented	Project Tracking + Reporting Per Person Total Carbon

Where We Are in 2023

10	2.1	0	0
Percent of Portfolio Reporting Design Emissions	Multifamily Annual Design Emissions (pCUI)	Tools + Guides Implemented	Project Tracking + Reporting Per Person Total Carbon

Holistic Design Impact

Place: Aligning our work with our values to understand if we have executed our vision

Equity: Hearing and believing the lived experience of all as a valued design tool

Health: Continually improving for the benefit of our work and all who are impacted by it

Feedback Loops
Quality Impact

Our Objective
Having Data and Informed Experience to Advise our Clients

Our Process Actions

- **Tell Our Story:** Evolve how we talk about our work and become more fluid in telling a project's sustainable story
- **Existing Tools:** Apply and evolve existing office communication tools to daylight, understand, solve and communicate common project pitfalls, e.g. Roundtables, Project Shares, Lessons Learned, etc.
- **New Tools:** Collect building data to understand how our designs operate compared to our aim and why; use patterns and findings to inform our future designs

Track + Publicly Report Project Metrics
Where We Are Heading in 2026

17	12	1	2	1	2
LEED Certified Buildings	Residential Design Certified Passive House Buildings	Commercial Design Certified Passive House Buildings	Net Zero Buildings Operational Carbon	CORE Certified Living Building	WELL Certified Building

Where We Are in 2023

15	1	0	0	0	0
LEED Certified Buildings	Residential Design Certified Passive House Buildings	Commercial Design Certified Passive House Buildings	Net Zero Buildings Operational Carbon	CORE Certified Living Building	WELL Certified Building

Holistic Design Impact

Place: Fostering a workplace where people are encouraged to thrive and given the tools to do

Equity: Providing an engaging space for all to develop a sustainable curiosity in their role

Health: Growing a supportive framework for individuals to realize success + alignment of their values in their work

Strategic Team
Staff + Partners Impact

Our Objective
Strategic Use of Resources + Succession Planning

Our Process Actions

- **Leadership:** Identify new leaders and provide ongoing support for our existing leaders
- **Accredited Professionals:** Utilize those with LEED, WELL, CPHC accreditations as part of an engagement strategy
- **Strategic Partners:** Evolve our consultant options and collaborate with Peer Groups, e.g. SDL (Sustainable Design Leaders, peer network), BE+, PHMA, to use what's out there to get there faster
- **Staff Evaluations:** Recognize our staff's strengths + areas of growth and appropriately build project teams

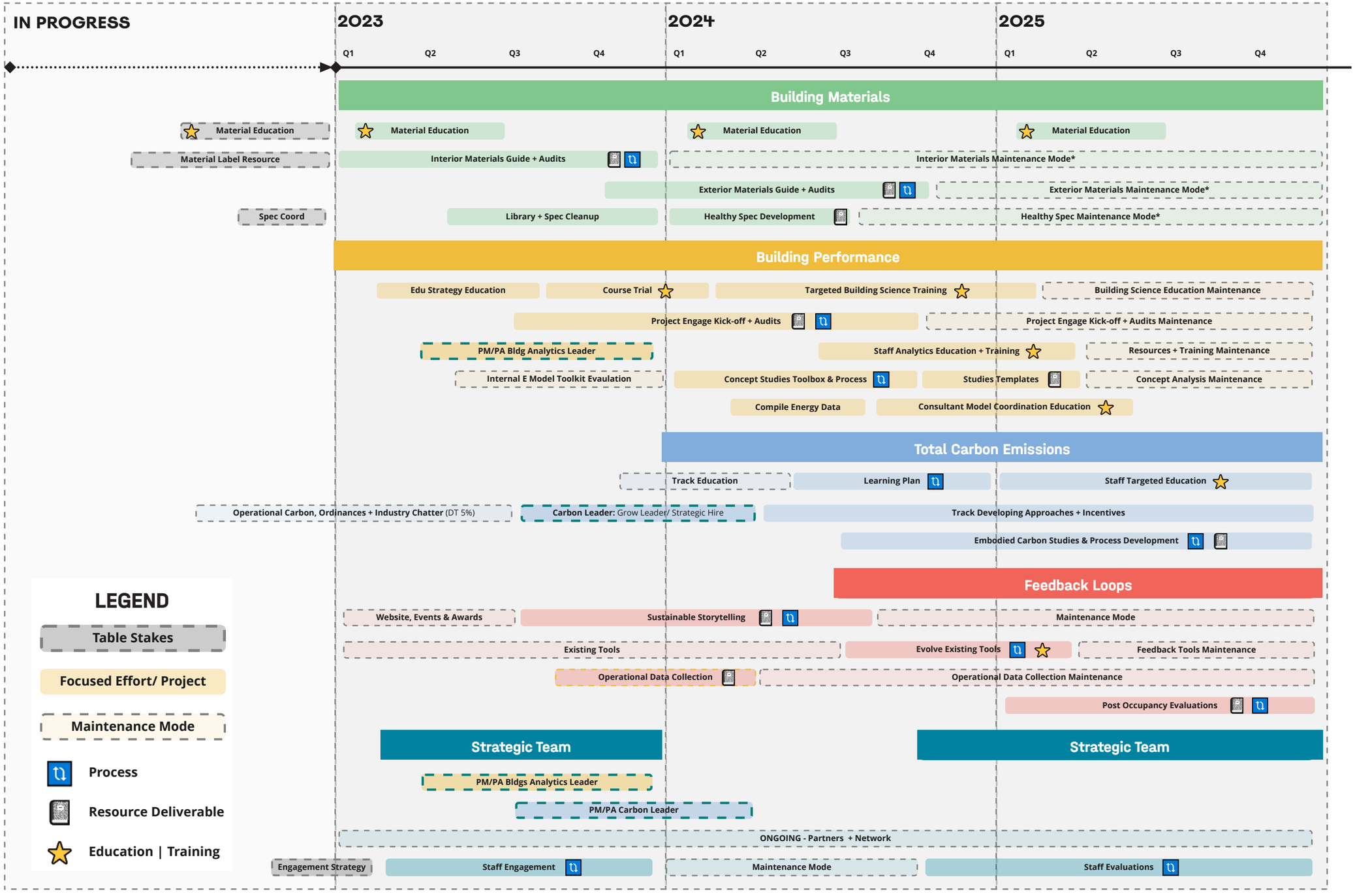
Track + Publicly Report Staff Metrics
Where We Are Heading in 2026

30	12	6	5	2	2
LEED AP Designers	Sustainable Team Leaders	PHIUS Certified Consultants	Industry Thought Leaders	WELL Accredited Professional	Living Future Accredited Professional

Where We Are in 2023

23	3	3	3	1	1
LEED AP Designers	Sustainable Team Leaders	PHIUS Certified Consultants	Industry Thought Leaders	WELL Accredited Professional	Living Future Accredited Professional

Our Timeline + Workflow



Our Conclusion

Thank you for exploring PCA's **Sustainable Action Plan (SAP)**. With this three-year journey, our staff will have the resources, tools and knowledge to set the path forward for sustainable design execution throughout our practice and projects.

Sustainability, simply put, is thoughtful and informed design enabling us to build better and healthier buildings with the aim of minimizing the built environment's negative impact on the climate. At PCA, we recognize the opportunity and responsibility to be part of change.

Balancing sustainable approaches in our design and decision making will require intentional development over the next three years with sustainability front of mind, allowing us to gain comfort navigating and exploring all opportunities - leaving nothing off the table.

We believe that a sustainable built environment is one of the most important steps in addressing today's most pressing issues as it relates to climate change and increased carbon emissions. We recognize the opportunity and responsibility to mitigate the impact of building on our environment.

Leadership
Our clients and business partners will be better prepared to execute their visions and add real value to their communities.

Outcome
Ultimately, our communities will be cleaner, safer and poised for the present time and the future, as we continue our efforts and intended impacts for a balanced design approach.

RADIUS - Boston, MA
LEED for Homes v3, Gold

Thank you.

Contact
DiAnn Tufts LFA, CPHC, LEED AP BD+C
Director of Sustainability
dtufts@pcadesign.com

Laura Homich AIA, LEED AP BD+C
Sustainability Principal
lhomich@pcadesign.com

PCA
221 Hampshire St
Cambridge MA, 02139
617-547-8120

Follow Us

@pcadesign
@pcadesign_
@pcadesigners