

# Embodied Carbon Action **Plan.**

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ECAP SE 2050

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2024

February 28, 2024

Laura Champion, Director  
Structural Engineering Institute

**RE: Letter of Commitment to the SE 2050 Program**

Dear Laura:

Klein & Hoffman, founded in 1953, and with a dedicated team of 70 employees across offices in Chicago, Philadelphia, and Milwaukee, is proud to announce our participation in the SE 2050 Commitment Program. Embracing the critical mission to understand, reduce, and ultimately eliminate embodied carbon in our projects by 2050, we are committed to leading by example in sustainable building practices within the structural engineering sector. Our commitment reflects a critical responsibility to both our local and global communities, acknowledging the urgent need to shift towards sustainable building materials and construction methods to achieve a Net Zero built environment.

As part of our pledge to the SE 2050 Commitment Program, Klein & Hoffman will:

- Within six months and on an annual basis thereafter, report our Embodied Carbon Action Plan (ECAP) and make this plan available on the SE 2050 website for public viewing.
- Within one year, and annually, we commit to contributing data to the SE 2050 project database.

This initiative aims to foster a collaborative understanding of embodied carbon in structural engineering projects, setting realistic and achievable targets for reducing carbon footprints in future endeavors.

We are excited to join forces with other industry leaders under the SE 2050 Program to drive meaningful change towards achieving the goals of a sustainable future in construction and engineering.

Sincerely,

**Klein and Hoffman, Inc.**



**Homa Ghaemi, SE, PE**  
CEO / Senior Principal

# Table of Contents



Education	6
Reporting	7
Reduction Strategy	8
Advocacy	9

**Klein & Hoffman**

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# About Us

At Klein & Hoffman, we’ve built a legacy of over 70 years in structural and architecture engineering, specializing in delivering innovative and creative solutions to a variety of real estate challenges. Our expertise spans the investigation, planning, and design of structurally sound buildings, focusing on enhancing building functionality and addressing issues such as moisture infiltration, corrosion, and the need for space modernization. Our client-centric approach, a cornerstone of our operations, is evidenced by our strong portfolio of returning clients and referrals.

Collaboration is not just a practice but a core principle, deeply ingrained in our culture and reflective in our work. We engage in deep collaboration with owners, managers, developers, contractors, and design professionals to diagnose and solve building issues, ensuring that every solution is a product of collective insight and expertise.

Our Structural Engineering Group is renowned for offering straightforward yet innovative solutions to complex problems, including building design, rehabilitation, structural strengthening, and significant alterations to existing structures.

Complementing these efforts, our Architectural Engineering Group focuses on building enclosure systems for both existing constructions and new projects, leveraging our collective experience to bring valuable insights to every project. Our hands-on, practical approach to problem-solving ensures our clients have peace of mind when it comes to modernizing and managing their facilities.

At Klein & Hoffman, our executive leadership team, with its extensive technical expertise, is passionate about delivering efficient, innovative, and creative solutions, ensuring that an exceptional client experience is at the core of everything we do.



# Our Team



**Homa Ghaemi, SE, PE**  
CEO / Senior Principal



**Peter Power, RA**  
President / Senior Principal



**Todd Gorrell, RA**  
Principal



**Glenn Johnson, RA, BECx**  
Principal



**Terry McDonald, SE, PE**  
Principal



**Allysia Youngquist, RA**  
Principal



**Nathan Barry, PE, Associate IV**  
Embodied Carbon Champion



# Education

To equip our structural engineers with the skills and insights necessary to implement the Embodied Carbon Plan, sustainability is an encouraged topic in our weekly ‘Tool Time’ presentations. These 5-to-10-minute presentations give individuals the opportunity to share technological advancements in materials, new LCA tools and software that is available, and regional examples of reduction strategies.

By incorporating sustainability education into our daily practice, we empower all Klein & Hoffman employees to think critically and make environmentally responsible choices.

## Checklist:

### Required

- ☒ Distribute firm-wide announcement of Klein & Hoffman’s pledge to join the SE 2050 Commitment.
- ☐ Present “Embodied Carbon 101”. To be presented during a Klein & Hoffman technical session by March 2024.

### Elected

- ☐ Have a Klein & Hoffman representative attend quarterly external education programs provided by SE 2050, the Carbon Leadership Forum, or other embodied carbon resources.
- ☐ Share the SE 2050 Library of resources with our technical staff and through our firm intranet.
- ☐ Attend information sessions on LCA-based tools used to calculate embodied carbon.
- ☐ Initiate an embodied carbon interest group within Klein & Hoffman and provide a narrative of our goals.

# Reporting

Klein & Hoffman is committed to reporting the required (2) projects in our commencement year as a signatory firm. We will perform LCAs on the renovation and reuse of existing structures to determine the embodied carbon impacts of salvaging the existing structure in comparison to building new.

We have elected to perform an LCA, utilizing Athena, on a 5-story renovated parking structure and the new Marcia P. Coggs, Department of Health and Human Services Building.

## Checklist:

### Required

- ☐ Submit a minimum of (2) projects per U.S. office with structural engineering services to the SE 2050 Database.

### Elected

- ☐ Describe how each office is measuring and reporting embodied carbon.
- ☐ Compare the embodied carbon emissions from multiple projects across the firm. Analyze and document what data or pieces of information are most important and communicate findings to the firm.
- ☐ Propose other actions that promote the reporting of embodied carbon data and describe their value.

# Reduction Strategy

As a first-year signatory firm, education of the Klein & Hoffman staff will be the primary focus throughout the year. Quarterly meetings, technical seminars, and sustainable material representatives will be utilized to incorporate sustainable building practices into the fabric of our design process.

## Checklist:

### Elected

- Complete a system embodied carbon design comparison study during the project concept phase
- Work with a contractor during material procurement to meet an embodied carbon performance criteria on at least (1) project
- Quantify construction waste reduction on a project and the impact to embodied carbon

# Advocacy

Klein & Hoffman encourage all employees to get involved with educational communities such as the Carbon Leadership Forum and other chapters of national organizations and their sustainability committees. As our knowledge base grows, we intend to use it to encourage sustainable design and construction solutions.

## Checklist:

### Required

- All new proposals will include language informing clients that Klein & Hoffman is a signatory firm of the SE 2050 commitment.
- Have discussions with our clients regarding sustainability and the importance of the SE 2050 commitment.

### Elected

- Share Klein and Hoffman’s commitment to SE 2050 on our company website

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