



EMBODIED CARBON ACTION PLAN 2024 YEAR 1



Photo: CSULB College of Professional & International Education
First Net-Zero Energy Classroom Building on a CSU campus

TABLE OF CONTENTS

- **Introduction**
- **MHP Sustainability Committee**
- **Education Plan**
- **Reporting Plan**
- **Reduction Strategy**
- **Advocacy Plan**
- **Appendix A**
 - **Commitment Letter**
- **Appendix B**
 - **Internal Announcement**



INTRODUCTION



On December 13, 2023, MHP pronounced our support for the SE2050 movement and committed to taking the steps necessary to contribute to reducing the embodied carbon footprint of our built environment. Through this pledge, we will educate ourselves on the latest carbon reduction design strategies, engage and inform our clients on these strategies, and specify low carbon impact materials on our projects.

We support the vision that all structural engineers shall understand, reduce, and ultimately eliminate embodied carbon in their projects by 2050.

The SE 2050 Program goals align with MHP's core values and MHP is passionately committed to taking the steps necessary to reduce embodied carbon emissions on our projects.



STRUCTURAL
ENGINEERING
INSTITUTE



Photo: Santa Ana College Johnson Center, Santa Ana, CA
Designed to meet LEED Silver Certification

MHP SUSTAINABILITY COMMITTEE



Dan Fox, S.E.
Committee Leader



Kyle White, S.E.
Committee Member



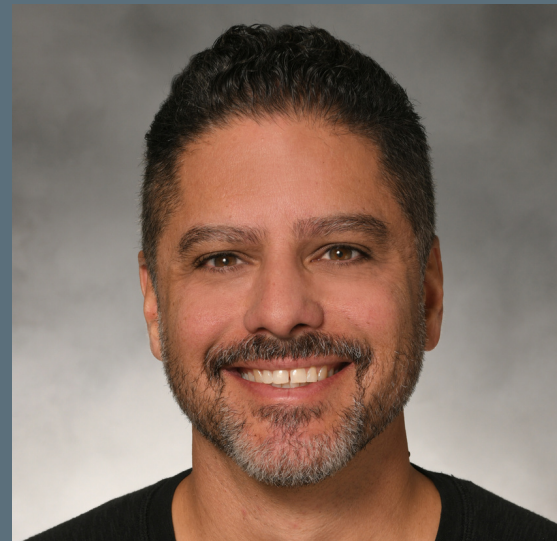
Matt Wexler, S.E.
Committee Member



Sonia Huynh, P.E.
Committee Member



Nick Coburn, EIT
Committee Member



Shawn Alvira
Committee Member

Our MHP Sustainability Committee manages our firm's participation in the SE2050 movement and consists of a dedicated group of individuals focused on the common goal of reducing embodied carbon contained within our designs. Our team will lead our company-wide embodied carbon education program; will develop program for implementing life-cycle assessments (LCAs) into our design projects; will gather and report the LCA results to the SE2050 database; will update MHP typical details and specifications to implement embodied carbon reduction strategies; and will prepare and lead MHP's embodied carbon advocacy plan.



EDUCATION PLAN

MHP is committed to enhancing the field of structural engineering and our impact on the communities we serve. As a component of our mission and core values, we prioritize and are committed to fostering a culture of continuous learning and development. We recognize the critical importance of environmental stewardship and are dedicated to continuously learning and implementing innovative approaches to minimize the embodied carbon footprint of our work.

Our Education Plan for our first year of SE2050 participation will consist of the following:

- The formation of our MHP Sustainability Committee and outline of Committee goals.
- The distribution of the MHP ECAP report to our Long Beach and San Diego offices.
- The presentation of at least one webinar/seminar to employees focused on an introduction to embodied carbon reduction. This presentation will be conducted at one of our monthly engineering meetings and during our orientation and employee onboarding period.
- Attend at least two presentations/webinars on sustainability, embodied carbon, life cycle assessments, etc. Lessons learned will be reported back to the office.
- Engage with the local Los Angeles CLF Hub by attending presentations and/or working sessions and reporting back to MHP.

In future years, we aim to include the following in our Education Plan:

- Execution of yearly presentations to all employees on latest embodied carbon reduction strategies and analysis methodologies.
- Preparation of written guidelines on best practices for embodied carbon reduction.
- LCA software training and demonstrations for employees.

Photo: Cal Baptist University, School of Business
Riverside, CA - LEED Certified



REPORTING PLAN

It is important that we set a baseline and track the embodied carbon impacts of the structural systems we design in order to assess trends and effectively implement carbon reduction measures into our practice.

Our Reporting Plan for our first year of SE2050 participation will consist of the following:

- MHP is committed to reporting embodied carbon data gathered from life cycle analyses for four (4) projects (two projects from each of our two offices).
- We plan to use the Embodied Carbon Order of Magnitude (ECOM) calculator available on the SE2050 website to calculate the embodied carbon of our projects for reporting.

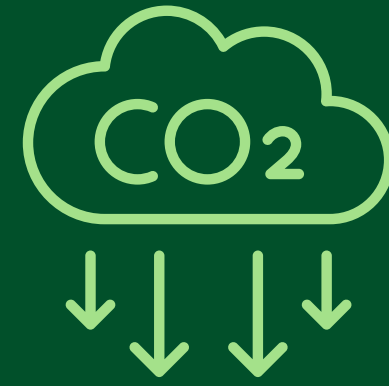
In future years, we aim to include the following in our Reporting Plan:

- Explore and potentially implement other LCA calculators (eg. Athena, Tally, One Click, etc.).
- Compare and analyze the embodied carbon emissions from multiple projects to understand which structural components and systems are the most/least sustainable.
- Improve our means of gathering material quantities on our projects, possibly via Revit plug-in software.

Photo: Advanced Technology & Education Park
Tustin, CA - LEED Certified



REDUCTION STRATEGY



With our first-year efforts largely consisting of establishing our baseline and developing internal knowledge, in future years we plan to progress toward SE2050 reduction goals by:

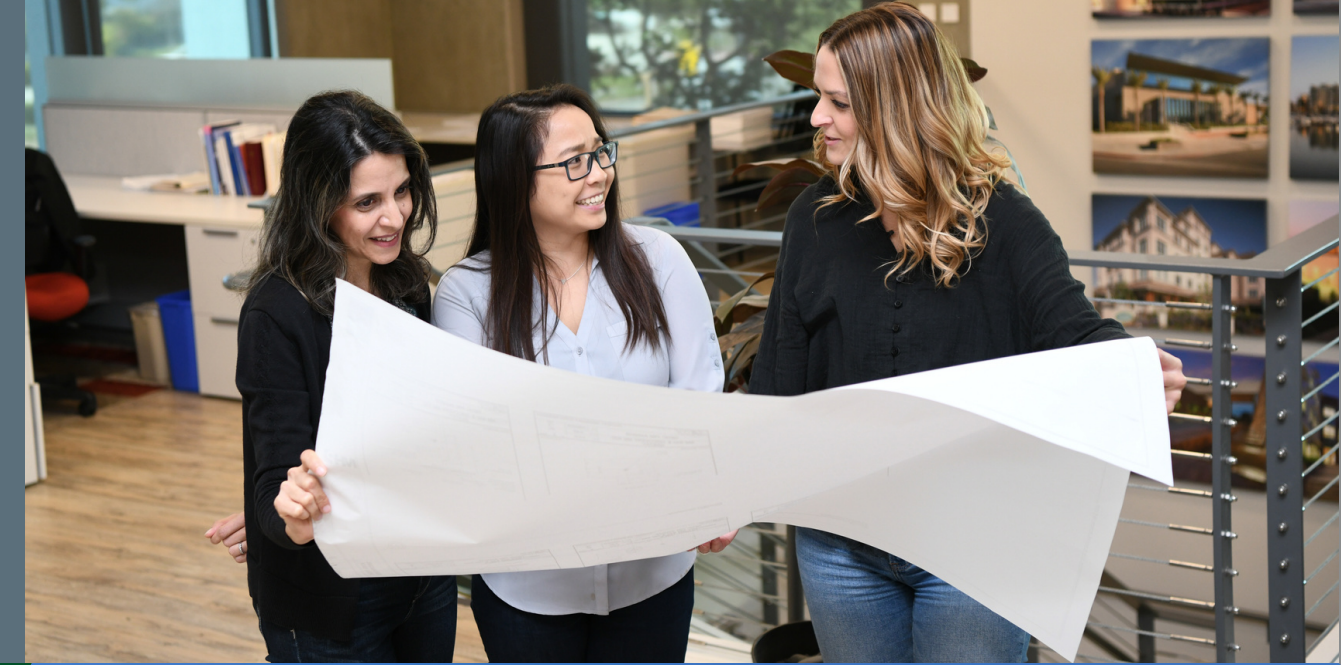
- Developing internal tools to implement embodied carbon reduction in our work.
- Incorporating embodied carbon reduction provisions into our standard specifications, notes, and details.
- Promoting embodied carbon reduction goals early in the life of a project by influencing structural system selection.
- Advocating for the use of advanced analysis and innovative solutions to reduce strengthening needs in retrofit and adaptive reuse projects.



Photo: LBMC Cherese Mari Lauhere Children's Village
Long Beach, CA - LEED Gold Certified

ADVOCACY PLAN

KNOWLEDGE SHARING



While our first year will primarily focus on internal knowledge development and solidifying our internal SE2050 committee, we will also seek to spread the word externally by:

- Updating our company website with a page dedicated to our SE2050 commitment.
- Announcing our SE2050 committee and commitment through social media such as LinkedIn.
- Incorporating SE2050 principles into our standard project proposals.
- Advocating for advanced analysis and innovative solutions in retrofit and adaptive reuse projects.
- Including SE2050 principles where appropriate in marketing collateral.
- Informing and educating clients and colleagues on our SE2050 commitment, goals, and means of carbon reduction.



Photo: Mt. San Antonio College Student Center
Walnut, CA - LEED Gold Certified



Appendix A: Letter of Commitment to the SE 2050 Program

December 13, 2023

To: Laura Champion, Director, Structural Engineering Institute

Dear Laura,

MHP Structural Engineers, a 43-person firm with offices in Long Beach and San Diego, California, is hereby signing on to the SE 2050 Commitment Program. We support the vision that all structural engineers shall understand, reduce, and ultimately eliminate embodied carbon in their projects by 2050.

The SE 2050 Program goals align with MHP's core values and MHP is passionately committed to taking the steps necessary to reduce embodied carbon emissions on our projects. Through this program, we will continually educate ourselves on the latest carbon reduction design strategies, we will engage and inform our clients on these strategies, and we will specify low carbon impact materials on our projects to support the common goal of reducing the carbon footprint of our built environment.

We therefore commit MHP to take the following steps which are part of the SE 2050 Commitment Program:

- Within six months and annually henceforth, we commit to reporting an Embodied Carbon Action Plan (ECAP) and permit the ECAP document or form be made public on the SE 2050 website.
- Within one year and annually henceforth, we commit to submit data to the SE 2050 project database in a collaborative effort to understand embodied carbon in structural engineering projects and to set attainable targets for future projects.

We look forward to joining this coalition and industry effort to achieve the goals of the SE 2050 Program.

Regards,

A handwritten signature in blue ink that reads 'Dan Fox'.

Dan Fox, SE
Associate, Project Manager

Appendix B: Internal Announcement

From: Daniel Fox
Sent: Friday, April 19, 2024 4:27 PM
To: MHP
Subject: MHP is a SE2050 Signatory Firm
Attachments: [SE2050 ECAP 2024 REPORT_PDF.pdf](#)

Hi Team,

For your information, if you weren't already aware:

MHP has now joined the SE2050 movement (<https://se2050.org/>) as a Signatory Firm and we have committed to a path of reducing embodied carbon emissions in the structural systems we design. As part of this commitment, we will be educating ourselves on the latest technologies in embodied carbon reduction; we will be calculating embodied carbon quantities on a minimum of four projects per year and reporting the results to the SE2050 database; we will be implementing strategies to reduce embodied carbon in our designs through development of our general notes, specifications, and details; and we will be looking for opportunities to share the knowledge we gain with our clients and colleagues. The data we report to the database will be used to inform industry benchmarks and targets, ultimately working towards net zero embodied carbon by the year 2050. Please find attached our Embodied Carbon Action Plan for our inaugural year in the program. Let me know if you have any questions.

Thanks,

DAN FOX, S.E.
Associate, Project Manager

562.985.3200 x 134 P
3900 Cover St. Long Beach, CA 90808
www.mhpse.com



*Celebrating 50 years of
Making Buildings Safe*