

SE 2050 EMBODIED CARBON 2026 ACTION PLAN (ECAP)



Nous is committed to promoting the practice of sustainability in our structures to help achieve net zero.



In collaboration with Angel City Lumber, the project featured wood slabs sourced from street trees harvested throughout Los Angeles.

SE 2050 Commitment

Nous Engineering has joined the SE 2050 Commitment. The SE 2050 Commitment program was developed and launched by the Structural Engineering Institute (SEI) and issued by the Carbon Leadership Forum (CLF). This comprehensive program has been created to ensure substantive embodied carbon reductions in the design and construction of structural systems by the collective structural engineering profession. The sharing of research and data on embodied carbon metrics will open up valuable resources and dynamic collaboration for the entire industry to learn from. Acquired knowledge is used to teach our staff and clients about the impacts of embodied carbon, providing a valuable dialogue and plan to move forward. By dedicating to SE2050, and committing our resources, we hope to create a process for the elimination of embodied carbon that will be an industry standard.

Nous is committed to finding favorable carbon reduction solutions for all of our projects across various geographic locations.



Based in Los Angeles, with a satellite office in San Diego, Nous works across the globe. Our projects are diverse and dispersed, aligned in their need for innovative solutions to resolve complex requirements, formal, technical or otherwise. All of our projects flow through the Los Angeles office making it easier to enact sustainability initiatives at a firmwide level. Design phase processes, material preference, and contractor knowledge vary by location. Collecting and using data from different markets gives us valuable insight that cannot be achieved by reviewing one area on its own. Collectively, this information helps us in finding the best solutions for each particular geographic location's need.

Nous is committed to educating our team on how we can best integrate carbon reduction efforts into our practice.

As part of Nous's commitment to sustainability and reducing embodied carbon in our projects, we have undertaken several key initiatives to ensure that our team remains at the forefront of current industry practices.

In our effort to enhance knowledge and ensure that all our staff, including the additions to the team, are equipped with the knowledge of embodied carbon and its impact on the built environment, we continued the Boston Society of Architecture's "Embodied Carbon 101" Lecture Series. The series provided foundational insights into the environmental impact of materials and construction processes and provided to be a great platform for productive discussions between the experienced and new staff members.

To further strengthen our understanding and ability to reduce embodied carbon, our team actively participated in a range of sustainability-focused conferences, symposiums, and workshops throughout the year. Staff attended industry-leading events including the SEAOSC Sustainability Summit, the AIA 1.5°C Symposium, and the Greenbuild International Conference and Expo. These events provided valuable exposure to emerging research, policy developments, and innovative design strategies aimed at reducing the carbon impact of the built environment. Additionally, team members engaged in workshops focused on rebuilding resiliently with timber following the Los Angeles fires, gaining insight into material-specific strategies for balancing performance, resilience, and carbon reduction. By learning directly from industry leaders and peers, our staff continues to expand their technical knowledge and bring forward-thinking solutions into our projects.

Through participation in these events, we gained critical insights into evolving best practices in low-carbon structural design, material efficiency, and resilient construction. The knowledge acquired has informed our approach to evaluating structural systems, optimizing material use, and integrating sustainability considerations earlier in the design process. These experiences have also strengthened our ability to collaborate with architects, contractors, and material suppliers in achieving shared carbon reduction goals. As a result, the lessons learned are actively shaping our internal standards and contributing to more informed, data-driven decision-making across our projects.

Beyond participation, our leadership team contributed to the broader professional community by actively participating as presenters and panelists. Members of our firm served as panelists at Circular SoCal, engaging in discussions focused on advancing circularity within the built environment. Our team also provided structural expertise at a public workshop demonstrating the use of compressed earth block (CEB) as a fire-resistant, low-carbon, and code-compliant alternative to conventional construction materials. Further contributions included participation in façade tectonics events, where we shared insights on the intersection of structural design, envelope performance, and embodied carbon. Through these efforts, we not only advanced our own knowledge but also supported industry-wide progress by sharing practical strategies and lessons learned.

Nous Leadership Team



Mit Gala, SE
Associate, Nous

Mit Gala is a licensed structural engineer, focused on advanced analysis, earthquake resilience, and seismic evaluation and rehabilitation of existing buildings. As Nous’s Signatory Director to the SE2050 Carbon Reduction Program, he oversees and implements the firm’s sustainable design initiatives, with the aim of reducing the carbon footprint of Nous’ structures and promoting sustainable design and construction practices industry-wide.

Key Team Members



Omar Garza, SE
Principal, Nous



Matt Melnyk, SE
Principal, Nous



Liz Mahlow, PE
Principal, Nous



Jon Buckley, SE
Principal, Nous

Nous is committed to measuring and tracking embodied carbon throughout the design process.

Nous leverages detailed 3D BIM models to quantify embodied carbon and track sustainability metrics throughout the design process. Athena Impact Estimator is our primary tool, allowing us to integrate carbon tracking directly into our existing modeling workflows. This approach ensures that embodied carbon considerations are embedded within our design process rather than treated as a separate exercise. To support data reliability and flexibility, Athena outputs are complemented by additional in-house and industry tools.

As we build on our first year as an SE2050 member, we are continuing to refine and expand our Life Cycle Assessment (LCA) processes. This year, we have focused on developing internal benchmark projects representing a broader range of building types and structural systems. These include a mass timber community building and a four-story, 40-unit affordable housing project. By establishing these benchmarks, we are creating a stronger foundation for comparing design strategies, understanding baseline impacts, and identifying opportunities for meaningful carbon reduction across different project typologies.

In doing so, we expanded both the scale and diversity of projects included in our reporting efforts. This growing dataset enhances our ability to identify trends, validate assumptions, and support data-driven decision-making across our practice. By tracking embodied carbon across a wider range of real-world applications, we are better equipped to communicate impacts to clients, refine our internal standards, and contribute to broader industry efforts aimed at reducing the carbon footprint of structural systems.



Japanese of Institute of Sawtelle pre-school, remodel preserving the original 1920's facade, roof and materials incorporating a fresh layout and energy efficient systems.

Nous Benchmark Project Data

Project I – Los Angeles, California
My Friend’s Place (MFP) is a non-profit organization dedicated to supporting youth experiencing homelessness in their transition toward wellness, stability, and self-sufficiency. This project represents a meaningful case study for evaluating embodied carbon in a mass timber community building typology, which we anticipate will play an increasing role in future development.

The use of mass timber provides an opportunity to study the environmental benefits of renewable materials in a multi-story, program-driven facility. Additionally, the project was also developed with an alternative steel structural scheme, allowing for a direct comparison between two viable and interchangeable systems within the same architectural and programmatic framework.

By analyzing both the mass timber and steel options requested by the client, we were able to provide them with clear carbon impacts of each system to review in combination with project costs. Internally, we were able to identify the key drivers of embodied carbon. This comparative approach provides valuable insight into how structural material choices influence overall project emissions and supports more informed decision-making in future projects. The findings reinforce the importance of early system selection and highlight opportunities to reduce embodied carbon through thoughtful structural design.

My Friends Place System KgCO2e



Mass Timber Option



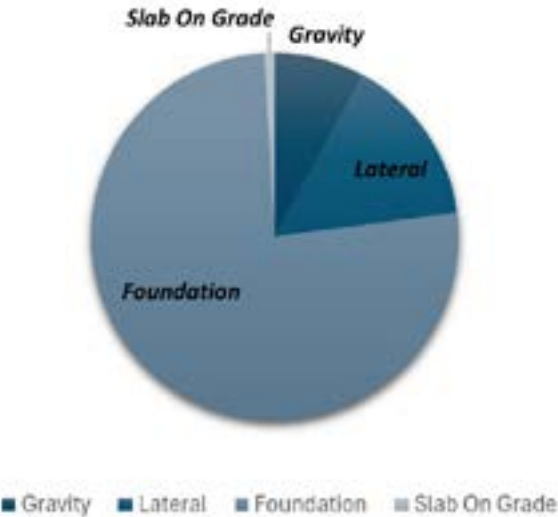
Nous Benchmark Project Data

Project II – Wilmington, California
Safe Harbor II is a 100% affordable housing development funded by Holos Communities. Their development goals include providing opportunities for a fuller life by creating spaces through a holistic lens as they work to end homelessness, combat global warming, and reverse racial inequity. This site includes a new, four-story, 40 unit residential complex utilizing Type VA wood-frame construction. The project features an occupiable open space deck with residential units connected by a series of open-air catwalks.

This project was selected as a representative example of efficient wood-framed multifamily construction, a highly common building typology in Los Angeles and within our practice. Affordable housing projects often emphasize material efficiency and cost-effectiveness, making them well-suited for evaluating strategies to reduce embodied carbon. As such, Safe Harbor II serves as a strong benchmark for understanding the environmental impacts of this prevalent structural system.

Through this analysis, we are able to better quantify the embodied carbon associated with Type VA wood-frame construction and identify opportunities for further optimization. The project provides a valuable baseline for comparison against other structural systems and building types, helping to inform future design decisions. By studying a typical yet high-impact project typology, we continue to refine our approach to reducing embodied carbon across a significant portion of our work.

Safe Harbor II System KgCO2e



Nous is partnering with industry leaders to advance adaptive reuse, circularity and low-carbon rebuilding strategies through building reuse and relocation.

In our ongoing efforts to reduce embodied carbon and support more sustainable construction practices, we are engaging in adaptive reuse initiatives that extend beyond traditional project delivery. In partnership with Omgivning, Nous is providing structural expertise for the relocation and retrofit of a nearly 100-year-old historic home to a site impacted by the Eaton Canyon fire. This effort is part of a broader strategy to reuse existing buildings as an alternative to new construction for communities rebuilding after wildfire damage.

This approach retains the embodied carbon within existing buildings while minimizing construction waste and reducing the need for new materials. By relocating and adapting these homes for new use, we are supporting a more circular model of construction that prioritizes reuse at the building scale. This strategy also provides a meaningful pathway for rebuilding communities in a more resource-efficient and resilient way.

This collaboration reflects our commitment to exploring innovative approaches that integrate structural engineering with adaptive reuse, disaster recovery, and community-focused design. Working with architects, preservationists, and local stakeholders, we are helping to develop scalable solutions that reduce embodied carbon while supporting long-term resilience in the built environment.



Nous is committed to enhancing our commitment to net zero through industry organization involvement.

Nous will engage with the broader design, construction and real estate industries as we partner on educating each other and enhancing our commitment to carbon reduction together. Nous will utilize our network of clients and design collaborators to expand our knowledge on the best practices for carbon reduction and informing clients and contractors of the benefits for the study and use of innovative materials and efficient designs. Our industry organization involvement includes:

- American Council of Engineering Companies (ACEC) of California
- American Institute of Architects, Los Angeles (AIA|LA)
- American Institute of Steel Construction (AISC)
- American Society of Civil Engineers (ASCE)
- Association for Women in Architecture + Design (AWA+D)
- LA Forum for Architecture and Urban Design
- Structural Engineers Association of California (SEAOC)
- National Organization of Minority Architects
- Urban Land Institute (ULI)





LOS ANGELES
5050 Eagle Rock Boulevard
Los Angeles, CA 90041

+1 213 627 6687

SAN DIEGO
8910 University Center Ln. #400
San Diego, CA 92122

nousengineering.com