

SE 2050 EMBODIED CARBON ACTION PLAN 2026



01 EDUCATION

Over the past year, we worked to ensure that we met the goals established in our 2025 Embodied Carbon Action Plan and continued to educate our employees, our clients and our local communities about embodied carbon.

- 1 As part of our Better Practices education series, our Sustainable Design Community of Practice (CoP) presents embodied carbon tracking and reduction strategies to the entire firm. We are committed to giving an updated embodied carbon presentation annually.
- 2 As part of our company-wide onboarding program, FastStart, and our previously launched Materials and Environmental Quantities (MEQ) initiative, new engineers are introduced to embodied carbon goals, resources, and digital workflows developed for material quantity and carbon tracking. We also continue to train project managers and BIM leads across all offices to track material quantities and embodied carbon throughout the project lifecycle, while partnering with Managing Directors in each office to help ensure our tracking goals are achieved.
- 3 Through student outreach initiatives such as ACE Mentorship, university information sessions, and career fairs, members of our Sustainability Community of Practice (COP) connect with students and foster an early interest in sustainability as they begin their careers.



CLF REGIONAL HUB SUMMIT

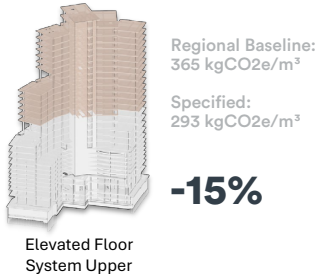
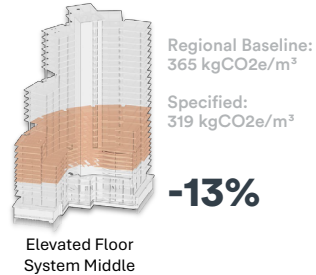
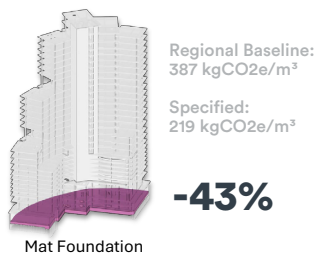
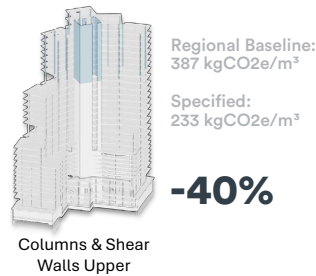
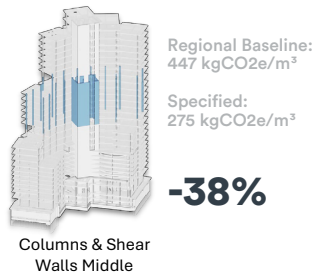
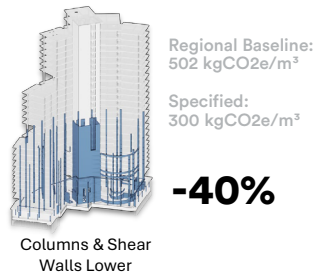
To promote embodied carbon education at Walter P Moore, we are committed to having a representative from each office actively involved in their local Carbon Leadership Forum (CLF) hub. In Fall of 2025, two of our hub leaders attended the first CLF Regional Hub Summit in Boston, where 30 leaders from 18 hubs gathered to share successes, exchange resources, and advise CLF headquarters on supporting regional efforts. The summit featured updates on policy research and advocacy, along with regional stakeholder mapping and strategies for policy engagement. Key discussions at the summit included how state and local policies, building codes, material reuse, and circularity strategies can significantly reduce embodied carbon particularly when engaging a broader range of stakeholders beyond traditional project partners. Attendees also had the opportunity to experience policymaking success in the Boston region with their visit to the Stellata at Bunker Hill, one of the largest public housing redevelopments and largest Passive House project in North America, and to the Sublime Systems' R&D and manufacturing facility.

"Speaking to a local university course as a representative of our CLF regional hub was a valuable opportunity not only to support the mission of CLF but also to showcase how practicing structural engineers can engage with sustainability. Engaging with students is also a window into how education is already shifting to support our changing industry, and we can expect to see a growing number of new professionals with a strong foundation in sustainability and fresh perspective on how we can build more sustainable structures."



— Sophie Sisson, Senior Engineer

02 REPORTING



REPORTING REFINEMENT

Product-specific EPDs enable higher-fidelity embodied carbon reporting. However, while all domestic structural steel mills and many rebar mills can supply product- and facility-specific EPDs, many markets still lack multiple ready-mix suppliers able to provide mix-specific EPDs. This was the case in Houston, Texas in 2020 when work began on Norton Rose Fulbright Tower.

From our experience with the Bank of America Tower, we knew the Houston market could provide lower carbon concrete mixes. However, at the time of supplier selection, no ready-mix suppliers had mix-specific EPDs. The project team, led by Skanska, used a creative approach to facilitate procurement of lower-GWP mixes. Recognizing that plant-level EPD setup can take months, the team required mix-specific EPDs by project completion rather than at bid. During procurement, component-level LCAs were used to estimate the relative GWP intensity of mixes based on proportions. This data informed updated WBLCA models to assess impacts on the building's GWP.

CEMEX implemented a plant-level EPD framework that provided the first mix-specific EPDs in one of the nation's largest construction markets. A lack of product-specific EPDs in a local market is not a roadblock, but rather an opportunity to establish a clear path to GWP reductions with accountability and transparency that benefits future projects.

During 2025, we continued to refine and develop our carbon tracking process. Our data tracking includes projects with embodied carbon assessments calculated in a variety of ways. Some are the results of Whole Building Life Cycle Assessments (WBLCAs) based on Construction Document level quantities with life cycle phases and impact information from Athena Impact Estimator or Tally. Others are based on cradle-to-gate environmental impact data from industry average and supplier specific EPDs and early-stage quantity estimates. For all data, we are tracking the project phase as well as the source of both the bill of materials and impact data.

We submitted five projects and their Structural Material Quantities to the SE2050 database this year, and plan to submit a minimum of five more during the coming year.

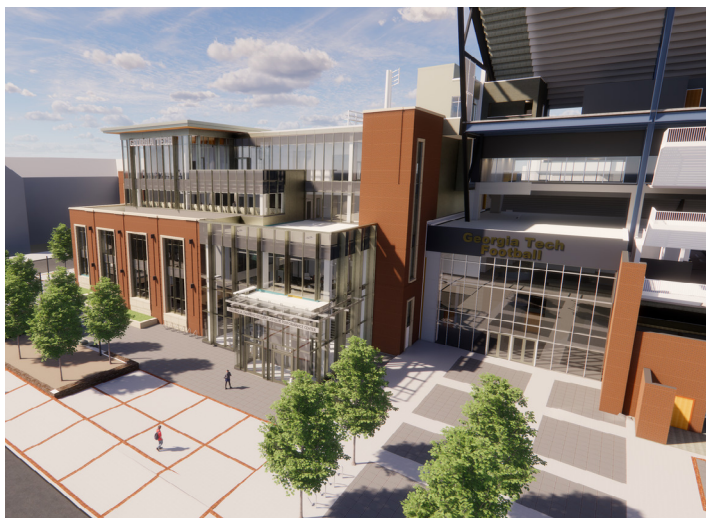


03 REDUCTION

This year, we met our goal of tracking embodied carbon for projects representing over 50% of our 2025 revenue. Looking ahead, we'll maintain our current volume of project data while adding more detail—such as project changes and as-built updates—to support more sustainable material choices and further carbon reductions.

Fanning Center Reduction Strategies Highlight

- 1 Salvaging over 25 tons of structural steel avoided roughly 25,000 kg of CO₂ emissions – the equivalent of a driving a gasoline-powered vehicle 60,000 miles.
- 2 Using mass timber for the rooftop canopies yielded a reduction of approximately 30,000 kg of CO₂ compared to a traditional steel alternative.
- 3 Requiring cement replacement and mix-specific EPDs on the project confirmed a 21% reduction in embodied carbon from concrete over the CLF 2023 southeast baseline values, saving over 200,000 kg of CO₂.



PROJECT HIGHLIGHT

THOMAS A. FANNING GEORGIA TECH STUDENT ATHLETE PERFORMANCE CENTER Atlanta, Georgia

The Georgia Institute of Technology's new 100,000 SF Student Athlete Performance Center features dedicated spaces for sports medicine, strength and conditioning, nutrition, academic support, and a sport science lab. Since the project required partial demolition of Bobby Dodd Stadium's existing steel framing, Walter P Moore saw a material circularity opportunity and proposed re-using steel members from the stadium in the new facility. This required buy-in from the entire project team – including S/L/A/M Collaborative,

DPR Construction, Steel, LLC, and Green Circle Demolition. Water P Moore identified salvageable pieces and created a mapping document highlighting their possible placement in the new design. Following deconstruction, the steel was transported to Steel, LLC's facility 10 miles away from the site for refabrication which included removing remaining connection material. In addition to steel reuse, the project achieved other embodied carbon reductions. The rooftop canopies are framed with southern pine cross-laminated

timber (CLT) panels and glued-laminated (GL) beams sourced from SmartLam's Dothan, Alabama plant. The project also required cement replacement and mix-specific EPDs for all concrete mixes as part of the project specifications. These design interventions collectively minimized the project's carbon footprint while validating the feasibility of steel reuse. Critically, these sustainable benchmarks were achieved with no impact on the project schedule and no additional cost to the owner.

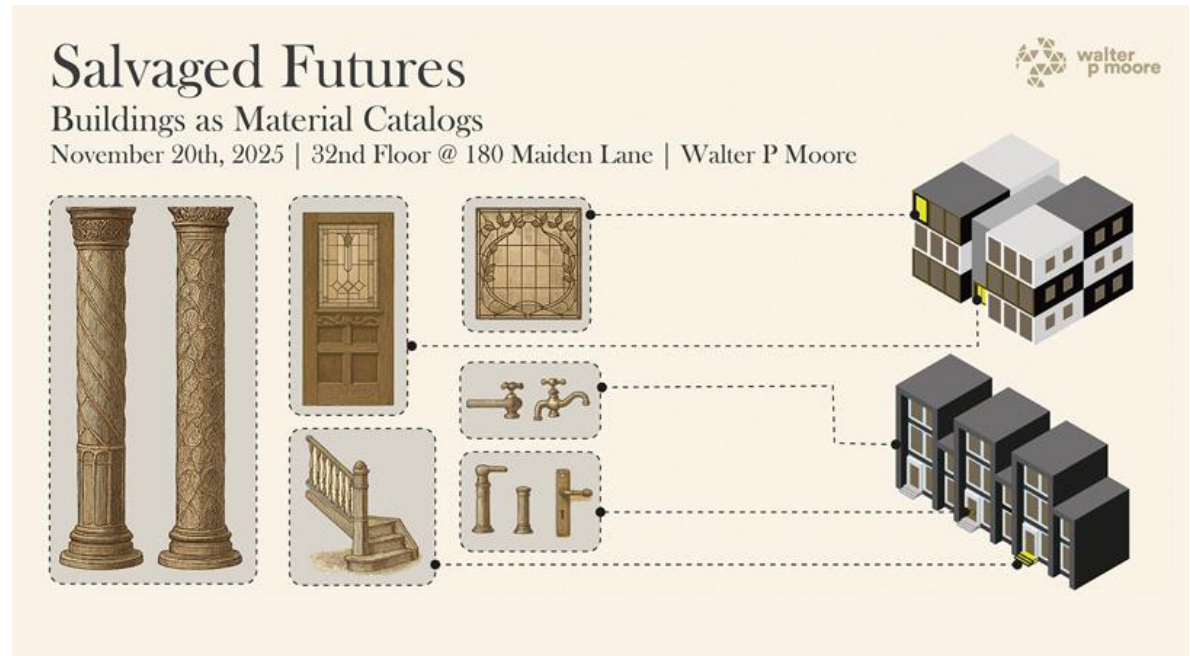
ADVOCACY & KNOWLEDGE SHARING

Walter P Moore is committed to sharing knowledge and data to accelerate embodied carbon reduction throughout the design and construction industry. We continue to be involved in the leadership of SE 2050 as well as many industry organizations advocating for reductions in embodied carbon.

- 1 We are continually championing conversations around embodied carbon reduction through drawing on and sharing our experiences. We share our stories through conference presentations, webinars, articles and project case studies.
- 2 We provide educational presentations to our clients about embodied carbon, life-cycle assessment and the importance of collaboration in reducing embodied carbon in our projects. We continually seek out opportunities to implement carbon reduction strategies including material circularity and adaptive reuse.
- 3 Last year, Walter P Moore was recognized for its advocacy efforts, receiving the inaugural Best in Advocacy Award through SE 2050's Recognition Program. This honor provided an opportunity to spotlight our initiatives alongside fellow award recipients at the SE 2050 2025 Signatory Summit and to share our work with the broader sustainability community at Greenbuild 2025.

ADVOCACY HIGHLIGHT

In November 2025, Walter P Moore hosted a panel exploring how existing buildings can serve as material banks. The panel included Felix Heisel from Cornell's Circular Construction Lab, Erin Heidelberger from KPF, Gizem Karagoz from the NYC EDC, Lara Kaufman from Studio Gang, Sydney Mainster from The Durst Organization, and JJ Beasley from Walter P Moore. The group examined strategies to shift the market from a "take-make-dispose" model to one where buildings are fluid and recoverable assets. The panel was followed by a discussion on how the approaches offered by the panelists, supported by policy and supply-chain collaboration, can unlock the full value of buildings at the end of their lives.



Below is a partial list of embodied carbon presentations and publications by our experts in 2025:

North American Structural Engineering Sustainability Symposium, SEI, February 2025

Perspectives on Sustainable Building Materials, ULI, February 2025

Digital Technologies Pioneering Sustainability, New York Build, March 2025

Building the Circular Future: Materials and Design, USGBC Circularity Forum, May 2025

Innovative Building Materials & Supply Chain, Innovating Building Materials & Supply Conference, June 2025

Sustainable Design and Embodied Carbon, SEOAL, August 2025

Are you ready? Embodied Carbon and LCA Updates in LEED v5, ACLCA Conference, September 2025

Concrete Preconstruction Meetings: The Structural Engineer's Perspective, GRMCA, October 2025

Get It Built! Navigating Policy, Practice, and Technical Translation, AIANY, November 2025

ACA Presents: Blended Cements: Successful Implementation for Lower Carbon Concrete, Greenbuild, November 2025

Beyond the Checklist: The Intersectionality of Embodied Carbon in LEED v5, Greenbuild, November 2025

Excellence in Action: SE 2050 Recognized Firms Advancing Decarbonization, Greenbuild, November 2025

The Thomas A. Fanning Student Athlete Performance Center: Salvaged Steel, Circular Steel, November 2025

05 INDUSTRY INVOLVEMENT

Our plans for the next year involve continued involvement in the Carbon Leadership Forum and SE 2050 and continuing to educate and advocate for the importance of embodied carbon reduction to our clients and our peers in the industry.

Experts from Walter P Moore are leaders in these industry organizations and committees:

- CLF Los Angeles HUB — Founding Co-Chair
- CLF Atlanta HUB — Founding Co-Chair
- CLF Dallas HUB — Founding Co-Chair
- CLF Houston HUB — Founding Co-Chair
- NCSEA Sustainable Design Committee — Founding Chair
- SEI Sustainability Committee — Founding Chair, Current member
- SE 2050 Advisory Council
- ACI318N — Sustainability
- AISC Sustainability Committee, Vice Chair
- USGBC Georgia
- AIA COTE Atlanta Steering Committee
- Lifecycle Building Center Advisory Board
- ACI 323 - Low Carbon Concrete Code
- AIA California Embodied Carbon Working Group - Vice Chair
- CVU Sustainability and Carbon Committee



Best in Education



Best in Reduction

SMITHGROUP

Best in Reporting



Best in Advocacy



Best in New Comer

LIONAKIS

READ MORE ABOUT THE SE 2050 RECOGNITION PROGRAM AT
[SE2050.ORG/RECOGNITION-PROGRAM](https://se2050.org/recognition-program)

BEST IN EDUCATION

In 2025, SE 2050 launched the second year of its Recognition Program, celebrating and sharing the achievements of its signatory firms. Out of 33 nominations from 17 firms, Walter P Moore was recognized for our education efforts documented in last year's ECAP. Education is central to effective stewardship at Walter P Moore. We prioritize embodied carbon education of our firm, our peers and our communities. We offer internal training for all levels; our biannual sustainability module at FastStart for new-hires, recurring seminars on carbon reduction strategies and in-house carbon tracking digital tools, and quarterly sustainability initiative updates to our Board of Directors. We recently mentored and encouraged two smaller structural engineering firms as they explored joining SE 2050. We also helped a local municipality develop guidelines to request EPDs for ready-mix concrete, hosted a material circularity panel, and included embodied carbon in our discussions within the ACE mentoring program. Thank you to SE 2050 for this recognition, and congratulations to all the participating firms!

06 OUR FIRM

In addition to reducing embodied carbon in our projects, we are also working to reduce embodied carbon in our office spaces. For our most recent office spaces we have been pursuing LEED v4 ID+C: Commercial Interiors ratings and interiors life cycle assessment. In our new downtown Los Angeles office, which achieved LEED v4 ID+C Platinum, we used strategies such as furniture reuse, dematerialization, and lower impact carpet to reduce embodied carbon. In our past office buildouts, we found that while the carpet we had selected had an EPD, the impact was higher than we expected. That quantitative transparency on previous projects enabled us to use EPD's to inform our choice of carpet for the Los Angeles office and further reduce embodied carbon. In addition, more than 60% of the furniture in our new space was reused, reducing both waste and embodied carbon. The LCA showed that through these strategies, the office achieved an embodied carbon reduction of over 50%.



ECAP AUTHORS



**DANIELLA
BLYAKHMAN, PE**



**DEREK
RIZZI**



**MURSHID
QAZI, PE**



**MITALI
TALELE, PE**

EMBODIED CARBON REDUCTION CHAMPION



DIRK KESTNER, PE, SE, F. SEI, LEED AP BD+C, ENV SP

Dirk Kestner, a Senior Principal and Director of Sustainable Design at Walter P Moore, is our Embodied Carbon Reduction Champion. Previously a structural designer and project manager, he currently collaborates across all our offices to leverage WBLCA to reduce embodied carbon. He is a member of SEI's Sustainability Committee and ACI 323 Low-Carbon Concrete and Vice Chair of the AISC Sustainability Committee. He was previously a member of the SE 2050 leadership group, a board member of The Carbon Leadership Forum, and Chair of the USGBC Materials and Resources Technical Advisory Group.

dkestner@walterpmoore.com | [512.330.1283](tel:512.330.1283) | [Austin, TX](#)

STRUCTURAL ENGINEERING



KELLY ROBERTS, PE, SE, LEED AP BD+C

Kelly Roberts is a Senior Principal and Managing Director of Atlanta as well as Regional Director for the Southeast. Kelly is also the National Sustainable Design Leader for the Structures Group. She is the founding chair and current past-chair of the NCSEA Sustainability Committee as well as a founding board member of the Lifecycle Building Center, co-chair for Atlanta CLF HUB, ACEC Georgia board member, and an AIA Atlanta COTE steering committee member. She is a past committee member of the USGBC Materials and Resources Technical Advisory Group and ACI 318N - Sustainability.

kroberts@walterpmoore.com | [404.898.2314](tel:404.898.2314) | [Atlanta, GA](#)

ENCLOSURE ENGINEERING



LAURA KARNATH, AIA, NCARB, LEED AP BD+C

Laura Karnath is a Principal and Senior Enclosure Consultant in the Los Angeles Office. She co-chairs Walter P Moore's Sustainable Design Community of Practice for the Structures Group, leads the embodied carbon efforts for the Enclosure Engineering team, supports firm-wide embodied carbon reduction initiatives, and performs whole building life cycle assessments for a wide range of project types and scales. She is a founding co-leader of the Carbon Leadership Forum Los Angeles Hub and vice chair of the AIA California embodied carbon working group.

lkarnath@walterpmoore.com | [310.254.1936](tel:310.254.1936) | [Los Angeles, CA](#)



WHO WE ARE

Walter P Moore is an international company of engineers, architects, innovators, and creative people who solve some of the world's most complex structural, technological, and infrastructure challenges. Providing structural, diagnostics, civil, traffic, parking, transportation, enclosure, technology consulting, and construction engineering services, we design solutions that are cost- and resource-efficient, forward-thinking, and help support and shape communities worldwide. Founded in 1931 and headquartered in Houston, Texas, our 1,000+ professionals work across 27 U.S. offices and nine international locations.

