



EMBODIED CARBON ACTION PLAN

2026



OUR EXPERTS

TLC continues to support industry efforts focused on understanding and reducing embodied carbon in the built environment. Our staff contributes to these efforts through collaboration with project teams, participation in professional discussions, and ongoing engagement with sustainability initiatives within the design and construction community.

Within our firm, experienced engineers help guide embodied carbon initiatives and support the integration of carbon considerations into structural decision-making. In the coming year, we will continue to expand these efforts by promoting early discussions about embodied carbon and encouraging thoughtful material and system selection during the design process.



REBECCA CEGELIS, PE
Embodied Carbon Reduction Champion
Associate, Structural Engineer



DERICK THOMPSON, PE
Director of Structural Operations
Principal

EDUCATION

TLC is committed to advancing embodied carbon education and is dedicated to empowering both our employees and clients with the knowledge to make informed, sustainable decisions.

- We are continuing to develop a firm-wide embodied carbon education program. Presentations will be tailored to the various engineering disciplines within TLC to support informed design decisions across project teams.
- TLC shares resources from the SE 2050 Commitment Program with staff to support ongoing learning and awareness.
- Our team participates in quarterly Embodied Carbon Champion meetings through the SE 2050 Commitment Program to exchange knowledge and implementation strategies with other participating firms.
- We plan to incorporate embodied carbon concepts into a company-wide onboarding program to introduce new structural engineers to sustainable design principles and embodied carbon considerations early in their careers.

The decisions we make concerning refrigerants, materials, system types, and equipment sizing have a profound impact on both embodied and operational carbon emissions.

Michael P Sheerin, PE, LEED AP
Chief Executive Officer



KNOWLEDGE SHARING

TLC is committed to sharing knowledge and practical experience to support the reduction of embodied carbon across the design and construction industry. We actively engage with clients, project partners, and industry groups to promote carbon-conscious structural design.

- We continue to share embodied carbon knowledge through presentations and engagement with industry partners.
- Our template proposals include language recognizing our participation in the SE 2050 Commitment Program.
- In collaboration with a confidential client, we have established an Embodied Carbon baseline for all their new warehouse projects, with support from industry partners specializing in Life Cycle Assessments.
- We coordinate with project owners and material suppliers, including local concrete producers, to discuss project-specific carbon reduction goals and opportunities.
- Lessons learned from project collaborations are shared internally to inform future designs and improve embodied carbon tracking practices.



REDUCTION STRATEGY

Over the coming year, TLC will continue expanding embodied carbon tracking and using project data to inform design decisions.

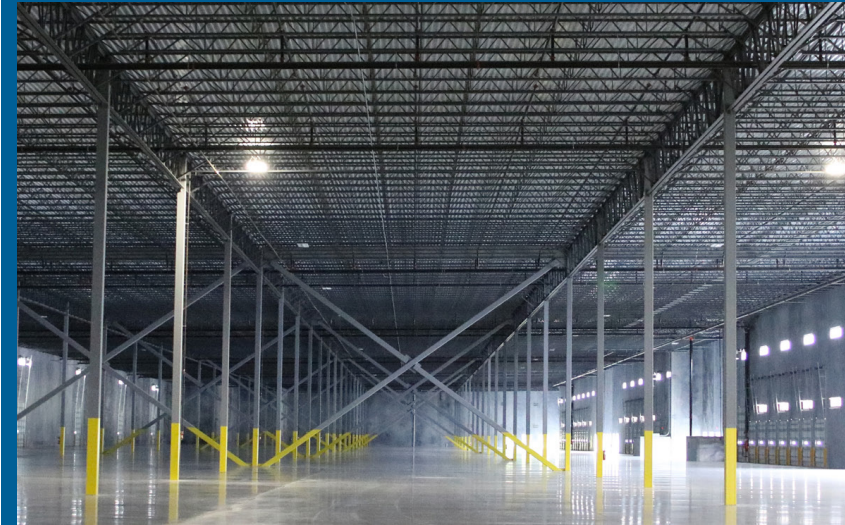
- 1. Baseline Tracking:** We are tracking embodied carbon for projects representing 50% of our structural engineering group's new design revenue to establish a consistent baseline.
- 2. Process Improvement:** We are refining our embodied carbon tracking process to improve communication of results and support thoughtful structural system and material decisions in early design
- 3. Specification Integration:** When aligned with client objectives, we will integrate embodied carbon considerations into specifications and project documentation to support reduction strategies and reinforce carbon-conscious design decisions.
- 4. Data Strengthening:** We are continuing to collect project data to strengthen our baseline and ensure that future reduction targets are informed by consistent and reliable information.
- 5. Target Setting:** Once baseline data is established, we will define measurable embodied carbon reduction targets and expand tracking to additional project types.

SHORT-TERM FOCUS

Establish a consistent baseline through expanded tracking

LONG-TERM GOAL

Set and achieve measurable embodied carbon reduction targets



CONFIDENTIAL WAREHOUSE PROJECTS

LOCATED ACROSS THE NATION

TLC is collaborating with owners and project partners on warehouse structures that serve as a central focus of our embodied carbon efforts. These projects utilize standardized structural templates, allowing us to apply consistent embodied carbon tracking methods and evaluate how material selection and framing strategies influence overall impact.

This work supports our baseline development and establishes a repeatable approach for benchmarking structural systems across similar project types. The insights gained from these projects inform future reduction strategies and help refine our embodied carbon tracking process. We also coordinate with our MEP engineers to evaluate interdisciplinary considerations and ensure a balanced approach to performance and carbon reduction.

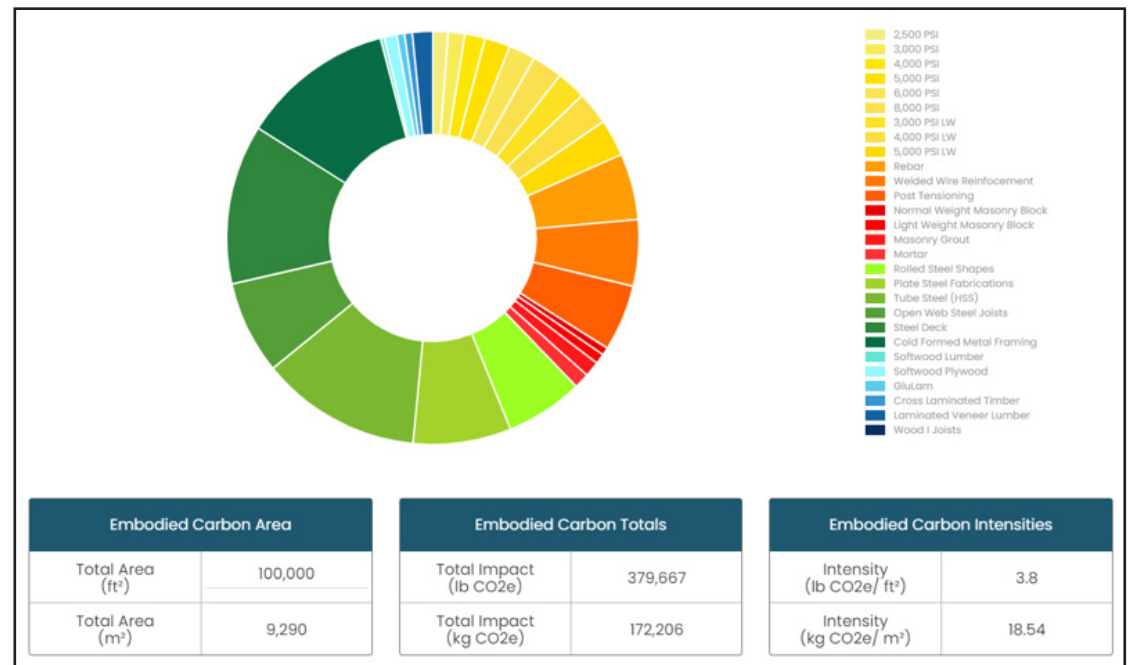
REPORTING PLAN

In 2026, TLC will continue refining our embodied carbon tracking process to improve consistency and support ongoing baseline development and future reduction targets.

Embodied carbon calculations will be developed using material quantities extracted from Revit models and evaluated through the ECOM Tool, providing a consistent method for tracking and reporting project data.

TLC will submit five projects to the SE 2050 Commitment Program database in accordance with program requirements and will continue strengthening our documentation practices to support reliable and transparent reporting.

EMBODIED CARBON OF CONFIDENTIAL WAREHOUSE PROJECT USING SE2050'S ECOM TOOL



LESSONS LEARNED

Through our continued participation in the SE 2050 Commitment Program and early tracking efforts, we have identified several key takeaways.

- Early design decisions have the greatest impact on embodied carbon outcomes. Structural system selection, grid layout, and span lengths largely determine material quantities, reinforcing the importance of early coordination with architects and project teams.
- Material efficiency remains one of the most effective reduction strategies. Optimizing structural systems and reducing overall material use often provides greater impact than material substitutions alone.
- We have also found that establishing a consistent and reliable baseline requires more data than initially anticipated. Continued tracking across similar project types is necessary to build confidence in our assumptions and inform future reduction targets.
- Finally, collaboration and internal awareness are critical. Engaging project teams early and continuing to build firm-wide understanding of embodied carbon supports more informed and consistent design decisions.
- These lessons will continue to inform how we refine our tracking approach and integrate embodied carbon considerations into our design process.



ELECTIVE DOCUMENTATION



EDUCATION

- Our embodied carbon champion will continue working with the structural team to support implementation of carbon-conscious design strategies.
- Continue to promote use of SE 2050 resources and encourage ongoing engagement.
- Host at least one internal or external session annually focused on embodied carbon.
- Integrate embodied carbon education into onboarding for new structural engineers.

REPORTING

- Contribute five projects to the SE2050 Database.
- Continue refining our embodied carbon tracking approach to improve consistency and reliability.



ELECTIVE DOCUMENTATION



REDUCTION

- **Short-term goal:** Track embodied carbon for projects representing approximately 50% of the structural engineering group's new design revenue to support baseline development.
- **Long-term goal:** Continue building a consistent dataset to inform future reduction targets.
- Incorporate embodied carbon considerations into specifications and project documentation when aligned with client goals.

ADVOCACY

- Continue highlighting TLC's SE 2050 commitment in client and project communications.
- Provide embodied carbon education opportunities for clients.
- Support external presentations and develop materials that highlight the value of reducing embodied carbon in structural design.

