SE 2050 ECAP Submission Form

Email *

houston.sheffield@greshamsmith.com

Firm Name *

Gresham Smith

Education

The first step to increased engagement within your firm is through education. We all should strive to understand the impacts of our design decisions and their effects on our environment.

Distribute firm-wide announcement of your firm’s pledge to join the SE 2050 Commitment. *

- (●) Completed
- ( ) Not Completed

Provide a brief narrative describing how your firm is promoting a firm-wide education program for embodied carbon reduction and the firm's commitment to SE 2050. *

The Gresham Smith sustainability and resiliency team is growing in staff and scope here in 2025. Beyond that team our structural team is intending to get more involved with this group and data analytics to facilitate more understanding and design strategy of our embodied carbon emissions across a variety of commercial projects. This will include training for our structural department so that anyone is capable of running a basic LCA, as well as revamping our specifications, general notes, and basic practices.

Our structural team is in the midst of focusing on a goal of using BIM and LCA design tools to efficiently report embodied carbon emissions within 90% accuracy. Starting in April of 2025 our goal is to report a minimum of 20 projects for the 2026 ECAP. Another goal is for our team to dive into a deeper 2026 ECAP that will be custom made to further demonstrate as an industry leader for SE 2050.

Name of Embodied Carbon Champion (Point Person) *

Houston Sheffield III

Email of Embodied Carbon Champion *

houston.sheffield@greshamsmith.com

Phone number of Embodied Carbon Champion *

813-473-8966

LinkedIn URL

www.linkedin.com/in/hhs3

Set a date within the first year to present the “Embodied Carbon 101” Webinar to your firm. Incorporate this information into your orientation/on-boarding programs. *

- (●) Committed / Completed
- ( ) Not Committed / Not Completed

Minimum (1) additional elective to educate your firm about embodied carbon and a narrative of its significance. *

- (●) Committed / Completed
- ( ) Not Committed / Not Completed

ELECTIVES (Min. (1) required, recommended to achieve (4) per year): *

- [x] Have one representative of your firm (any employee) attend quarterly external education programs (e.g. webinar, workshop) provided by SE 2050, Carbon Leadership Forum (CLF), or other embodied carbon resources.
- [x] Share the SE 2050 library of resources with technical staff.
- [x] Share embodied carbon reduction strategies with your firm as outlined in Top 10 Carbon Reducing Actions for Structural Engineers document produced by SE 2050.
- [ ] Nominate a minimum of (1) employee per office to participate in a CLF Community Hub.
- [ ] Provide narrative outlining plans for minimum (2) firm-wide presentations per year on the topic of embodied carbon
- [x] Present the document, “How to measure and report embodied carbon” to all technical staff.
- [x] Attend a presentation or demo of an LCA-based tool used to calculate embodied carbon.
- [x] Initiate an embodied carbon interest group within your firm and provide a narrative of their goals.
- [ ] Provide a narrative of how the Embodied Carbon Reduction Champion will engage embodied carbon reduction at each office. (intended for multi-office firms)
- [ ] Other actions you feel appropriate and a narrative for why.

Elective Narrative (Optional):

Reporting

Quality data is essential to making informed decisions and setting important benchmarks and the development of appropriate embodied carbon reduction targets. The SE 2050 database is a central component to building a successful Commitment Program and reaching our collective embodied carbon reduction goals by 2050.

Submit an annual minimum of (2) projects per U.S structural office or (5) total projects for the firm to the SE 2050 Database. *

- ○ Completed
- ◉ Committed and on track
- ○ Need help reaching this target
- ○ Not Completed

Number of Projects Reported Last Year (zero in first year)

2

Number of Offices Reporting Last Year (zero in first year)

1

Provide a narrative on how your firm plans to measure, track, and report embodied carbon data. *

Currently utilizing the connectivity between BIM 360 and EC3 to capture emission data. Our plan is to better utilize Revit and efficient LCA design tools to streamline emission reporting quickly. Then we want to envelope this into better specifications, material choices, and design options to optimize our structural framing designs. Moving forward we want to finalize a standard to capture embodied carbon depending on project scale and phase to further predict when design need to be revised to reduce emissions. We will most likely continue to use a combination of Tally and EC3.

Describe the internal training for embodied carbon measurement you provided or will provide. *

Our sustainability team needs to present to the structural team on the basics of reporting emission data via Tally, EC3, or other design tools. We could even facilitate quarterly data reporting to see trends or educate ourselves on how different project materials and sizes impact the environment. We should also encourage an open discussion on updating concrete, steel and CMU specifications. Then we need each engineer to commit to submitting data to a single source spreadsheet of one project per year.

ELECTIVES (Not required, recommended to achieve (1) per year):

- [ ] Submit all projects to the SE 2050 Database
- [ ] Meet your target average embodied carbon reduction from the previous year.
- [x] Report a greater percentage of projects than the preceding year.
- [ ] For a project submitted to the database, ask the Architect or Owner if the project has a carbon budget or if there are established project sustainability goals at the project kickoff meeting.
- [ ] Other actions you feel appropriate and a narrative for why.

Elective Narrative (Optional):

Embodied Carbon Reduction Strategies

Embodied carbon reduction of structural materials is the ultimate goal of the SE 2050 program. As a starting point, you will have access to the SE 2050 project database and Program resources to identify and set strategies. This section also serves to share lessons learned and incite innovation. Demonstrate leadership by not only applying, but developing

best practices and actively collaborating with the design community. This is our profession's opportunity to take action and make an impact.

Set an EC reduction goal for the coming year and an implementation narrative (Qualitative goals focused on education are appropriate for the first year) *

Once a streamlined process is setup for reporting emission data our team should strive to reduce CO2 emissions by 5% for a few of our projects without the year. This would likely be completed inside EC3 design tools.

For second year's ECAP and beyond, provide a narrative about what you have learned about embodied carbon reduction in the past year. Describe successes and misses to help the program improve.

Time management away from billable project work needs to be made and communicated across the structural group. We need to create a new culture where team members get excited about collecting this data and learning more on what simple changes can be made to aid in the environment. The largest hurdle is most likely getting more engagement from the team than a few engineers in the office. Personal achievement of LEED AP or others would be encouraged to facilitate more education on the topic.

Minimum (1) additional elective to educate your firm about embodied carbon and a narrative of its significance. *

- ○ Committed / Completed
- ◉ Not Committed / Not Completed

ELECTIVES (Min. (1) required, recommended to achieve (4) per year): *

- [ ] Incorporate data visualization into your ECAP. How are you looking at data to make informed design decisions and communicate design options to your clients?
- [ ] Provide a project case study in your ECAP that captures a reduction of embodied carbon or some lessons learned.
- [ ] Create a project-specific embodied carbon reduction plan.
- [x] Complete a system embodied carbon design comparison study during the project concept phase.
- [ ] Participate in a project LEED design charrette and speak to potential design considerations impacting embodied carbon.
- [ ] Calculate your firm average benchmark for embodied carbon.
- [x] Update your specifications and incorporate embodied carbon performance. Include embodied carbon in your submittal review requirements.
- [x] Collaborate with your concrete supplier to reduce embodied carbon in a mix design.
- [ ] Work with a contractor during material procurement to meet an embodied carbon performance criteria on at least (1) project.
- [ ] Have an Environmental Product Declaration (EPD) created as a result of a project.
- [x] Incorporate biogenic materials on at least one project annually.
- [ ] Provide a narrative of how circular economy has been used on your projects. Incorporate re-use or design for deconstruction into at least one project.
- [ ] Quantify construction waste reduction on a project and the impact to embodied carbon.
- [ ] Integrate embodied carbon mitigation strategies in your General Notes.
- [ ] Other actions you feel appropriate and a narrative for why.

Elective Narrative (Optional):

Advocacy

True change can only come with industry-wide adoption. This section recognizes that our impact reaches beyond any one firm. Plan opportunities to share your experience and knowledge within your firm, with your design community, and

beyond. Host a webinar or lunch 'n learn, attend a conference, connect with the SEI Sustainability Committee, or reach out to manufacturers and policy-makers.

Provide a narrative about how you plan to share knowledge and data to accelerate adoption of embodied carbon reduction. *

As stated in our first narrative in this ECAP we will be working closely with our ESG group as well as our SRC to create internal educational programs. These programs will cover the bases of why reducing embodied carbon is important but will also take lessons learned from various types of projects.

Describe the value of SE 2050 to clients. How can we collaborate to drive adoption? At your option, attach any associated marketing materials. *

We want to provide our clients with a product they can be proud of, both aesthetically and environmentally. SE 2050 has demonstrated that reducing embodied carbon is feasible and at the same time does not have to be excessively expensive. Many things can be implemented through specifications that will greatly reduce the embodied carbon of a project while still providing an economically designed structure. We need to take control of framing plans and material types and to voice that to the owner and architect in the schematic design phase. Also, to always be designing with sustainability in the back of the engineer's mind.

Optional: Upload any documents you would like to exhibit.

Add file

Declare your firm as a member of the SE 2050 commitment on boilerplate proposal language. *

- (●) Committed / Completed
- ( ) Not Committed / Not Completed

ELECTIVES (Not required, recommended to achieve (2) per year):

- [x] Share your commitment to SE 2050 on your company website
- [ ] Give an external presentation on embodied carbon that demonstrates a project success or lessons learned (Tip: Get connected at a CLF local hub near you!)
- [ ] Discuss with the Owner / Client the option of requiring that some of the structural materials come with facility-specific or product-specific EPDs
- [ ] Share education opportunities with clients
- [ ] Provide a narrative of how you have encouraged industry and policy change incentivizing availability of low-carbon and carbon sequestration materials
- [ ] Start an embodied carbon community of practice or mentorship program in your office
- [ ] Mentor a firm new to the embodied carbon space
- [ ] Other action you feel appropriate and a narrative for why.

Elective Narrative (Optional):

Program Feedback

Please add any comments that you wish to share publicly. The Program Leadership Group is committed to transparently improving SE 2050.

Comments: