



# EMBODIED CARBON ACTION PLAN



# EDUCATION

The SLAM Collaborative, Inc. (SLAM), a multi-disciplinary architectural and engineering firm, has formed an internal team called **The GREEN Team**, dedicated to sustainability. The GREEN Team comprises specialists researching various areas of sustainability, including embodied carbon. The GREEN Team conducts firm-wide presentations multiple times a year, covering sustainability topics and case studies for implementing sustainable practices. Each studio has a representative responsible for relaying the latest updates from The GREEN Team to the rest of the firm.







# EDUCATION

**The GREEN Team** has held multiple firm-wide Embodied Carbon presentations in recent years. Each presentation is recorded and archived for easy playback and reference. Since the last ECAP, the Structural Studio has incorporated these presentations into new employee onboarding documents, providing new staff with a basic understanding of embodied carbon and an introduction to SLAM's SE 2050 Database. A goal for this year is to train all Structural Studio members on gathering and reporting project data to this database, ensuring shared responsibility beyond the Embodied Carbon Reduction Champion. Additionally, SLAM aims to continue educating the Structural Studio on embodied carbon basics and familiarizing everyone with the proper units of measurement.



# REPORTING

This year, SLAM submitted 3 projects to the SE 2050 database, more than the 2 projects submitted last year. SLAM has formally submitted 5 projects to the SE 2050 database so far.

**The GREEN Team** has developed project Sustainability Checklists that are beginning to be implemented and discussed at Design Charettes. This checklist breaks down sustainable practices to consider at each project phase.

SLAM has tested multiple ways of measuring embodied carbon data, including Beacon (a Revit plug-in) and Tekla Structural Designer (TSD) Embodied Carbon Reports. Testing has determined that the Revit Material Quantity Schedules set up for estimation can also be utilized for embodied carbon reporting and are the most efficient way to measure the total embodied carbon of structural materials in projects to date.







# REPORTING

A goal for the upcoming year is to create a formalized method to determine the total embodied carbon of structural materials in all projects. This will be accomplished by developing a tutorial to be reviewed with the Structural Studio. Training others to measure embodied carbon will allow them to become more familiar with the information and enable comparisons between projects.





# REDUCTION

An embodied carbon reduction goal this year is to measure and report more projects' embodied carbon, providing more data to identify potential savings. The Structural Studio also aims to reduce the total quantity of structural materials for potential embodied carbon savings, including reducing the typical slab-on-grade from 5 inches to 4 inches or reducing the strength of slab-on-deck concrete to 3000 psi.

SLAM's Structural Steel and Concrete Specifications were updated to include submittal requirements for Environmental Product Declarations (EPDs) along with final quantities of steel and concrete materials for each mix design. Extensive research and discussion with local concrete plants regarding embodied carbon reductions in concrete led to sustainable updates to the concrete specifications. These updates include requiring Supplementary Cementitious Materials (SCMs), allowing for Portland Limestone Cement (PLC) concrete, and including more SCMs to provide concrete plants with more options for compliance.





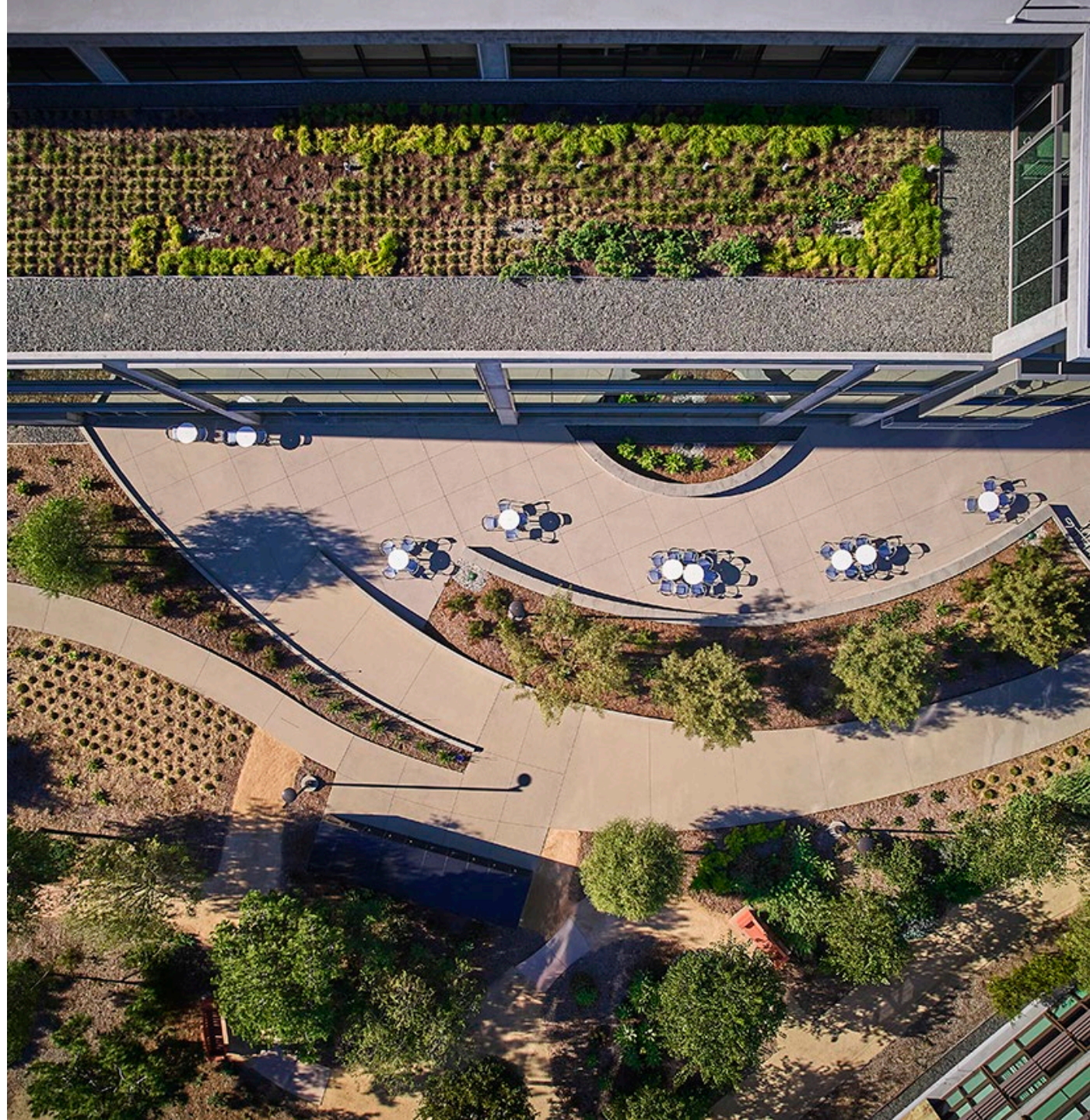
# REDUCTION

As a national firm working across the U.S., coordinating with local concrete plants is an ongoing task for SLAM. While including embodied carbon requirements in specifications is relatively simple, ensuring contractor adherence is challenging. These requirements must be emphasized on every project, discussed in concrete pre-construction meetings, and addressed before concrete bidding.



# ADVOCACY

**The GREEN Team** conducts firm-wide webinars on sustainable topics like embodied carbon and provides studio updates. Multiple team members participate in external sustainability committees, such as AIA COTE, NCSEA Sustainability Committee, and NCSEA Sustainable Policy Sub-Committee. This year, GREEN Team members have presented on embodied carbon to these committees.







# ADVOCACY

The Structural Studio works to educate SLAM's architects about embodied carbon, emphasizing its importance for discussion during project design and with clients. **The GREEN Team** has created marketing materials about embodied carbon for architects to use in client meetings. However, there have been some hurdles with this marketing task. One goal for this year is to internally develop materials about SLAM, the SE 2050 commitment, and embodied carbon for architects to utilize during client meetings. This will help raise client awareness and drive embodied carbon reduction efforts. By proactively educating internal teams and providing resources for client engagement, SLAM aims to mainstream embodied carbon considerations into their project workflows and design processes.

Another goal for this year is to get the sustainability page back up on SLAM's website. SLAM previously had a sustainability page with information about their commitment to SE 2050 and AIA 2030. The firm also posted a blog on their website with information about SE 2050 and SLAM's declaration of commitment to SE 2050.



The logo consists of two overlapping circles with a white-to-black gradient, positioned to the left of the text 'SLAM'.

SLAM