

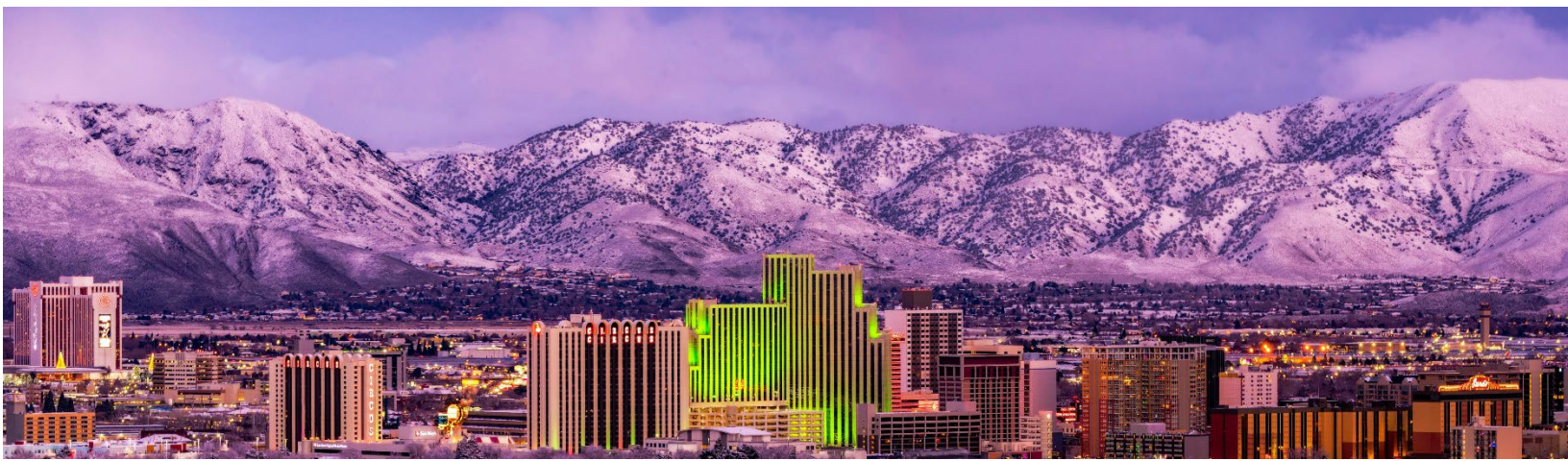


STRUCTURAL
ENGINEERING
INSTITUTE



EMBODIED CARBON ACTION PLAN

2025



Background

Linchpin Structural Engineering, Inc. (Linchpin) is an actively participating member in the SE 2050 Program and its collaborative effort of understanding and reducing our industry's impact on the environment. As a component of our participation in that program, the Linchpin sustainability committee produces an annual Embodied Carbon Action Plan (ECAP). In each year's ECAP, we lay out a series of long- and short-term goals and a defined action plan to meet them. Our goals and efforts are focused in four main categories: Education, Reporting, Reduction, and Advocacy.

This document does not provide overall background information on the SE2050 initiative or the basics of embodied carbon - for more comprehensive background information, please refer to Linchpin's inaugural 2022 ECAP, which provides significantly more detail.

Current Activity

At the beginning of last year, we reached out to local jurisdictions regarding current or future sustainability requirements. In those early conversations, there were no sustainability-focused initiatives or standards in place. However, within the past year, we are excited to announce that a number of jurisdictions within which we operate are taking the initiative to adopt more sustainable practices.

For example, Washoe County presented their Climate Action Plan to the Board of County Commissioners, which outlines their plans to track and implement sustainable practices to reach the goal of Net Zero by 2050. This plan cites energy use in buildings as the top source of greenhouse gas (GHG) emissions in Washoe County. While their reduction strategies rely primarily on reducing carbon emissions from building operations, the plan intends to also "expand and track the number of LEED-certified (or equivalent) [commercial] buildings," and "create a sustainable building materials management toolkit for businesses to reduce waste from construction renovation, demolition, and retrofit projects." We are thrilled that the plan has been adopted by the County Commission and implementation will begin this year. Linchpin will be working with Washoe County's Sustainability Committee, in conjunction with the AIA chapter of Northern Nevada, to assist in the efforts of tracking and implementation of these initiatives.

Additionally, the Town of Truckee is making efforts to develop a comprehensive Building Decarbonization Roadmap, which we were excited to discover is being supported by the Contractors Association of Truckee Tahoe (CATT). CATT is another organization Linchpin is involved in, and we are looking forward to being a part of the discussion between local jurisdictions working to adopt building sustainability requirements and contractors concerned about the impact of such policies on the construction industry.

Our focus this year is going to be geared towards working with local jurisdictions, designers, contractors, and suppliers, offering our insight into sustainable building practices from a designer perspective and working to remove the stigma that sustainable building practices are complicated and costly to implement.

Education

This section notes the efforts undertaken to further Embodied Carbon education among sustainability committee members as well as all Linchpin employees.

Ongoing/Annual Initiatives

- Update Linchpin's employees on our accomplishments and status of last year's goals.
- Attend conference sessions and webinars regarding embodied carbon and sustainable construction practices when available and share resources with firm.

Current Year's Initiatives:

- Obtain LEED Green Associate Status for all Sustainability Committee members.

Reporting

This section notes the work completed regarding documenting and reporting the embodied carbon and GWP for our designs.

Ongoing/Annual Initiatives:

- Mandate (1) project GWP takeoff per employee in the coming year, to reduce workload on data gathering for reported projects.
- Develop in-house project database for comparing project GWP data to seek reduction opportunities.
- Develop and implement a GWP reporting 'widget' for inclusion on the specifications sheet of all projects company-wide that includes the overall GWP data and some comparison values, i.e. 'this project's carbon emissions equate to XXX round trip flights from LA to NYC' to help develop carbon literacy for clients and contractors interacting with our plans.

Current Year's Initiatives:

- Now that we have field-tested and verified the efficacy of our in-house developed GWP calculator, we will focus on integrating it into the project design process for more (and eventually all) projects company-wide. During the calculator roll-out, the committee will provide support to designers to ensure that it is being used correctly, with the long-term goal of including project GWP data in all deliverables and performing internal data comparisons.
- Initial data collected appears to indicate that we are documenting consistent GWP intensity data across our projects, which will help us establish company-wide benchmarks and ensure accurate takeoffs between all designers as we work to reduce our design intensities.

Reduction

This section discusses our progress with reducing the embodied carbon content of our designs.

Ongoing/Annual Initiatives:

- Work with suppliers to advocate and understand their capacity to provide concrete mixes designed to reduce embodied carbon and familiarize ourselves with the Environmental Product Declarations of manufacturers.
- Explore options for low carbon construction materials.
- Continue to standardize Revit material libraries for quick, seamless carbon takeoffs for reporting.

Current Year's Initiatives:

- Collaborate to develop sample design that meets NRMCA baseline.
- Advocate for mass timber construction on appropriate projects to gain exposure and boost exposure of that construction approach, which is uncommonly adopted in our area.

Advocacy

This section addresses our efforts to advocate for sustainable design efforts, both within our company and in the broader community.

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New Year's Initiatives:

- Continue to seek opportunities to discuss sustainability requirements with local governments and shift to a more proactive approach of lobbying for new sustainability requirements in jurisdictions.
- Develop a project management plan for use on all projects that includes basic sustainability checks and goals.

Ongoing Initiatives

This section summarizes several practices and efforts that will be considered generally ongoing, as opposed to time-restricted and/or completion-oriented. These initiatives will be the focus of our education for all Linchpin employees with the goal of standardizing sustainability-oriented mindsets and practices.

Ongoing Initiatives:

- Seek out and prioritize participation in LEED projects.
- Advocate for wood construction and partially grouted CMU walls.
- Economize concrete designs to minimize embodied carbon by leveraging concrete strength and minimizing overdesign.
- Collaborate with project design teams to implement designs that reduce embodied carbon emissions.