

SUSTAINABILITY ACTION PLAN

2021 Edition





Team
the

TABLE OF CONTENTS

- 04 History & Culture
- 06 Structure & Approach
- 08 Commitment & Philosophy
- 10 Goals & Methods
- 12 Design Process
- 14 Education & Outreach
- 16 Education Infographic
- 18 Office & Operations
- 20 Sustainable Design Lab Coordination

HISTORY & CULTURE

Salazar Architect Inc. creates high-impact public interest architecture through thoughtful client, resident and community involvement, innovative design and creative interiors. Environmental stewardship, economic stability and social empowerment are integrated concepts and by being responsive to these needs we design unique, meaningful places that are rich in architectural character and affordable to build.

Our experience includes new construction, renovations and community planning - from individual buildings to large-scale mixed-use / mixed-income developments. We design with an eye toward contemporary precedents and neighborhood context. We have extensive experience with HUD and Low Income Housing Tax Credit funded multi-family housing. Our work integrates

sustainable design principles such as LEED, Earth Advantage and Enterprise Green Communities.

In the late 1990's the firm started as a pro-bono urban design practice serving low income communities-of-color in the San Francisco Bay Area. In 2007 Salazar Architect was founded with a focus on affordable housing and community based advocacy work. Since moving to Portland in 2014, we have continued to design affordable developments while expanding into market rate housing and other project types that bring community benefits.

Salazar Architect Inc. is a certified Oregon MBE / ESB / DBE firm. We are licensed in Oregon, California and Washington.

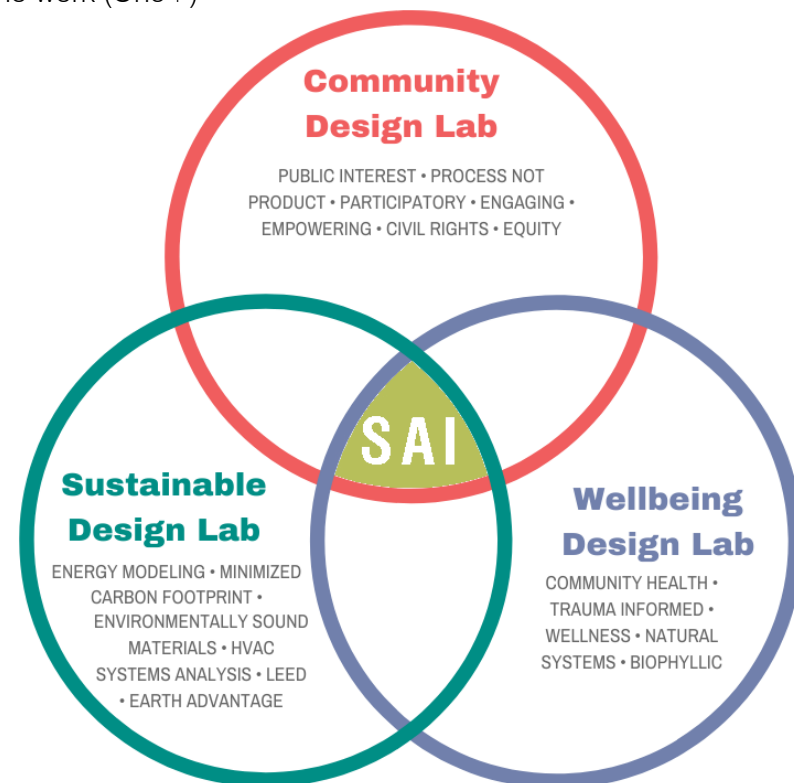


STRUCTURE & APPROACH

Salazar Architect's staff is organized into three Design Research Labs: Community Design, Wellbeing Design and Sustainable Design. The firm also has a Beyond Empowerment group that focuses on equity, diversity and inclusion. Through this structure, our staff perform research, advocacy and pro-bono work. They also provide periodic reviews of our ongoing design work to develop and implement an holistic approach. We empower staff to spend up to 10% of their work time in the Lab structure to help advance our community-based vision.

We coordinate the Design Labs and project staffing so that knowledge from each Lab is integrated into our design work. The Labs' work is organizing into research, implementation, documentation, and advocacy through the following activities:

- Conducting research and case studies
- Design reviews of ongoing work
- Tracking impacts
- Attending conferences and trainings
- Invited speakers
- Pro-bono work (One+)



Each of the Design Labs manages its own process and defines its own goals, which inform our collaborative process and add value to our design work. The mission of each lab is as follows:

COMMUNITY DESIGN LAB

Salazar Architect is one of the few private practices in the US specialized in Community Design, an established field that developed out of the civil rights movement and has had a resurgence in the 2000s. We create participatory processes, focus groups, workshops and open houses to gain community input and make meaningful, inspiring places. Our firm is a leader in this field and has decades of experience collaborating with a variety of clients and community-based organizations.



WELL BEING DESIGN LAB

The vision of the Well-being Design Lab is to learn, share knowledge and implement strategies pertaining to topic such as Biophilic Design, the WELL Building Standard, Emergency Preparedness, COVID Safety and Universal Design, which includes but is not limited to Trauma-Informed Design, Size and Age Inclusivity and ADA accessibility. As a lab, we do this through thoughtful research, internal implementation and cross-pollination within our firm



SUSTAINABLE DESIGN LAB

Salazar Architect strives to create sustainable, resilient, equitable and carbon-neutral places. We use energy modeling to integrate efficient building massing, well-insulated envelopes, natural day-lighting, healthy building materials and high-performance MEP systems. We are well versed in the requirements of LEED, Earth Advantage, Evergreen Sustainable Development and other rating systems. As a member of the AIA 2030 Challenge our goal is to dramatically reduce energy consumption and greenhouse gas emissions. We collaborate with PSU's Research-Based Design Initiative and the Energy Trust of Oregon's Net Zero Emerging Leaders program to advance our sustainable design expertise.



COMMITMENT & PHILOSOPHY

To further our commitment to practicing sustainable design, Salazar Architect is a signatory of the AIA 2030 Commitment. The AIA 2030 Commitment challenges architects to work towards the goal of designing all-carbon neutral buildings by the year 2030 by measuring the building energy use of new and renovated buildings.

As a public interest design firm, Salazar Architect understands the need to exercise leadership in creating the built environment. Buildings and environments represent the largest sources of greenhouse gas emissions in the US, and low-income neighborhoods are most at risk of the negative impacts of global warming and industrial pollution. The AIA's 2030 commitment is well aligned with Salazar's drive to create a more equitable built environment.

Buildings are constructed with finite natural resources. The manufacturing process and shipping of natural resources for use in the built environment contribute to greenhouse gas emissions (11% globally for the core and shell alone, Architecture 2030), waste byproducts, and habitat destruction. When in operation they are responsible for the largest share of carbon dioxide emissions by sector (28% globally, Architecture 2030). We realize the power of this impact and our responsibility to be at the forefront of sustainability.

Salazar Architect is also committed to environmental justice. Historically disenfranchised communities most often do not directly benefit from cutting edge sustainable strategies and are most likely to be negatively affected by climate change. We are committed to sustainability that benefits all

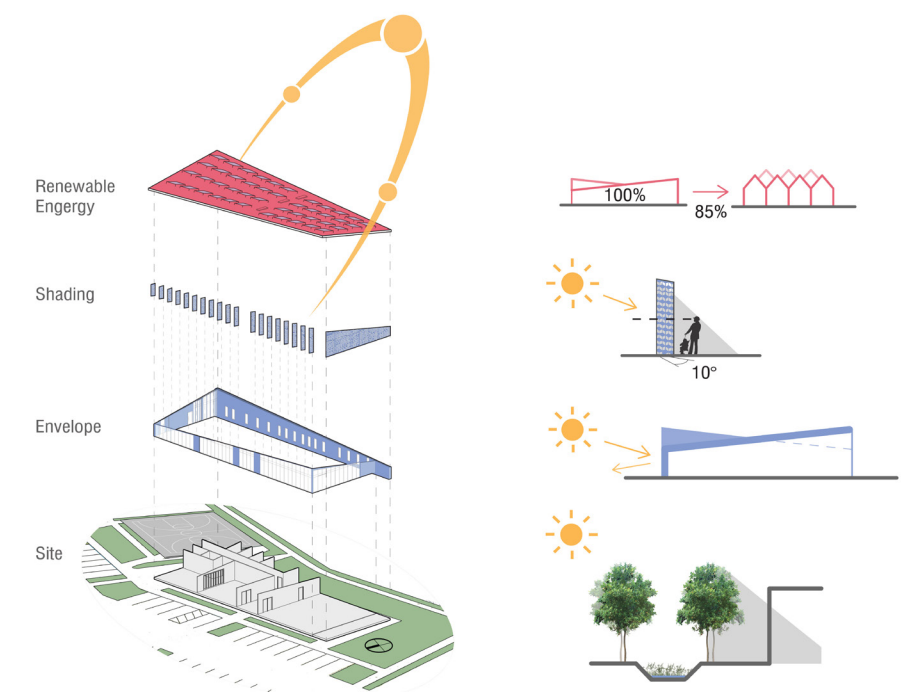


communities and protects the health of disadvantaged communities in the built environment.

Poorly designed and constructed buildings are inherently inefficient. By focusing on data-driven design and construction methods, we aim to reduce energy and material consumption. Our ultimate goal is for our work to regenerate resources and provide sustainable sources of energy to the communities we serve.

We will refine our design process and develop life cycle analysis tools to maximize our impact and continue learning. By quantifying the actual operating impact of our projects through methods such as life cycle cost analysis, embodied energy use and ecological impact studies, we can leverage data to inform the scope and goals of our design decisions.

We understand that our process is living and our methods will evolve over time. As we strive to reach our current sustainability goals, we aim to be transparent and forthright with our progress as we encounter challenges and successes. As we achieve goals we will continually recalibrate more ambitious goals for our future. This is how we at Salazar Architect will make a positive impact on the environment and inhabitants through architecture.



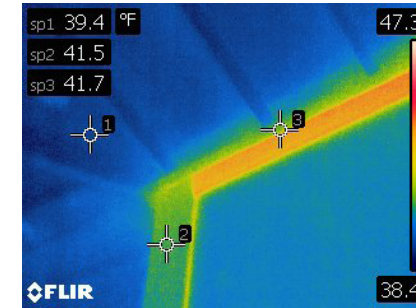
GOALS & METHODS



Salazar Architect aims to contribute to a more equitable and sustainable built environment through intersecting our ongoing research and practice with our Community Design Lab (CDL), Wellbeing Design Lab (WDL), and Beyond Empowerment Group (BEG). While each design opportunity has unique goals and constraints specific to their scope and context, our work strives to achieve these typical goals across all projects:



- Track and compare data points on all incoming and past projects through AIA DDx.
- Utilize green building rating systems such as LEED, Earth Advantage, Passive House, AIA COTE, and Living Building Challenge to set quantifiable goals on every project, whether seeking certification or not.
- Use these systems as a framework to track water usage, energy consumption, site impacts, material efficiency, and air quality.
- Design for resilience against natural or human-made disasters.
- Perform energy modeling throughout the design process, beginning at the conceptual stage of every project.
- Encourage clients to engage in post-occupancy evaluations to understand in detail how the building is performing and create a feedback loop for future design work.
- Advocate for expanded policy changes in Oregon and beyond.
- Deepen local community participation in all of our work.
- Strive for every project to meet AIA 2030 Challenge goals:
 - 2020 -- 80% below 2003 CBECS
 - 2025 -- 90% below 2003 CBECS
 - 2030 -- Net Zero



Salazar Architect uses the AIA Design Data Exchange (AIA DDx), which primarily tracks a building's Energy Use Intensity (EUI). Each of our projects performs a close-out process that includes AIA DDx reporting so that we can report and track our progress towards meeting AIA 2030 goals. Designated SDL members coordinate with Project Managers to collect data on projects and report on their predicted energy performance at key intervals throughout the design process.

The SDL has facilitated post-occupancy evaluations through the Portland State University Research Based Design Initiative at Vibrant! and Dahlke Manor. Salazar Architect encourages all of our clients to engage in post-occupancy research evaluations. We aim to track the following metrics when conducting POE:

- Energy-use
- Envelope efficiency
- Water-use
- Daylighting
- Livability/comfort
- Air quality
- Light pollution
- Ecological impact

DESIGN PROCESS

Initial Planning

The SDL meets with the Salazar project team shortly after project kickoff to discuss potential sustainability goals that would be best suited to the environment, community and users at a regional, local and site level. Salazar and the client work together to develop a prioritized list of goals that are the most impactful and best suited for the community and building users. We meet with the client, contractor and consultants to align the entire project team on the environmental goals strategize how each team member will contribute to the process and end product. An initial energy model is created. At least one member of the SDL is typically on each project to serve as liaison between the project team and the SDL.

Check-ins

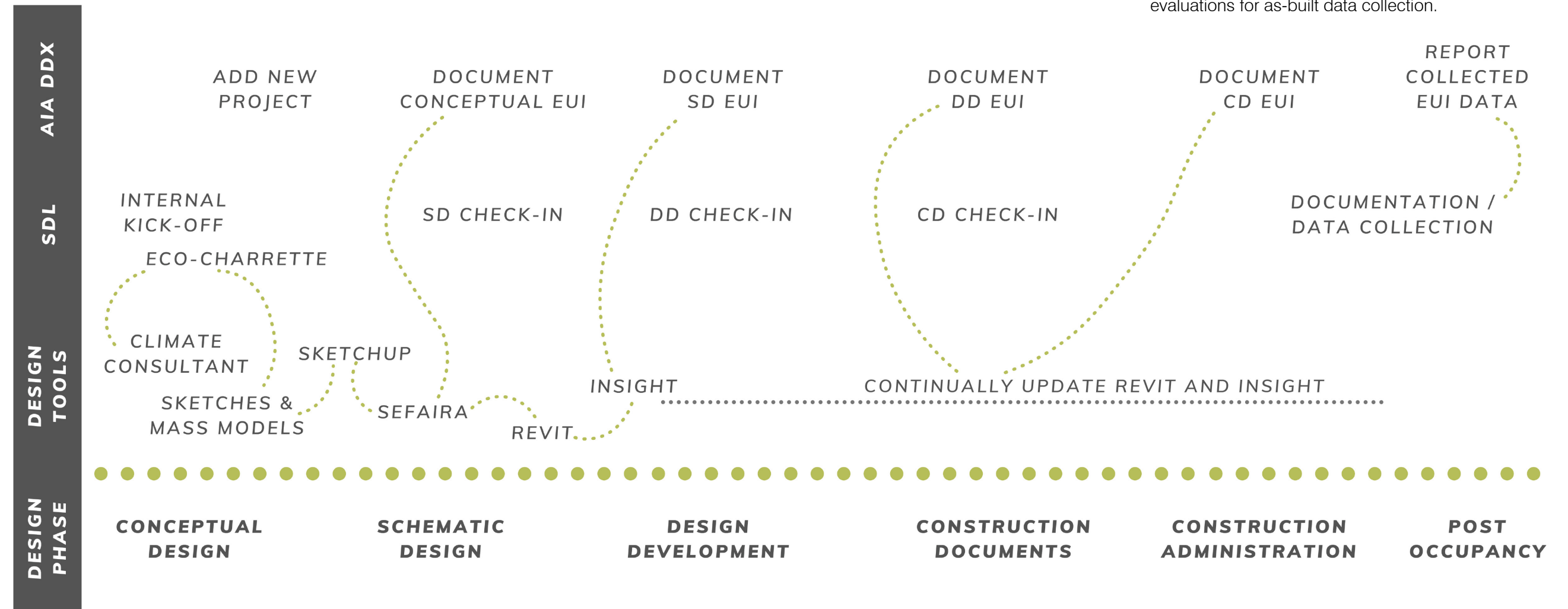
Throughout the design phases, the SDL will check in with the project team at key intervals to evaluate the status of the sustainability goals. Check-ins will include updating the energy model, running life cycle cost analyses, high performance fixture selection, material impact review, systems performance review, detail drawing, certification checklist tracking, and reporting the predicted EUI as the project moves to the next phase. The SDL liaison will be charged with making sure the project stays on track to meet its sustainability goals.

Data Collection

Project Managers will report the energy model PEUI at key stages of each project to the SDL. Salazar will collect post occupancy performance data to compare the energy model with the actual building performance. At the end of the project an SDL member will upload the project EUI metrics to the DDX. To understand how our design process impacts the PEUI of our buildings,

What did we learn?

Salazar will analyze the data collected to improve upon the process and set better goals on future projects. We will encourage clients to perform post occupancy evaluations for as-built data collection.



EDUCATION & OUTREACH

In order to educate our clients and communities, Salazar Architect prioritizes staff research and training on innovative sustainable materials, methods, building technologies, and energy strategies. Members of the SDL are tasked with connecting with sustainable industry professionals and other firms in order to share and learn. Salazar Architect offers staff a quarterly training stipend that each employee can put toward focused training, including sustainable design seminars and conferences. Salazar Architect also reimburses employees for exam fees associated with a variety of sustainable design accreditations. To educate our clients and communicate the importance of sustainable design, Salazar Architect provides research and proposals on how sustainable oriented practices will be environmentally, socially and financially beneficial. We educate our clients on various financial programs, current code requirements, and anticipated future policies. We provide simple, easy to understand diagrams and other graphic materials to assist with complex decisions. We are passionate about working with clients on sustainable measures at all scales. Together with the Community Design Lab, Salazar Architect facilitates community outreach meetings early in a project's development in order to establish sustainable priorities and opportunities to impact design decisions. After construction is complete, we contribute to educating the building's occupants in the form of training, classes, brochures, permanent signage, newsletters and other written online information. All resources are tailored to be culturally appropriate for the intended audience. We believe that providing support and information to residents on building operations is essential in maximizing a building's design.



For building owners and operators, we often provide an operations manual to help ensure the building continues to function effectively. These include maintenance product recommendations as well as strategies for minimizing user error. Post-occupancy evaluation is one of the most important steps in continuing the feedback loop on a building's measured performance, and we are striving to incorporate this process across all our work. We believe it is critical to generate quantifiable building operations data to continue learning and improving our sustainable strategies on future work. We believe that the success of our collective sustainability initiatives depends on transparency and visibility of our work, both internally and externally. For our internal process, strategies include staff program certifications, collecting & sharing data, updating & implementing new techniques, creating easy to absorb graphic information, and diagrams of sustainable measures. Outside of the office, we participate in various programs and volunteer opportunities that align with our mission:

AIA 2030 Working Group and the AIA Oregon Committee on the Environment

A support group of firms that participate in the AIA 2030 Commitment.

PSU Research Based Design Initiative

A program that pairs graduate students with local firms to conduct building science/building technology research.

Energy Trust of Oregon Net Zero Emerging Leaders

Architecture and engineering firms are awarded a grant to hire a student to research ways the firm can meet the AIA 2030 Challenge goals.



SUSTAINABLE DESIGN STRATEGIES

CARBON IMPACT

BY PROJECT COMPONENT

\$\$\$ COST

CO₂ CO₂ EMBODIED CARBON

● ■ ◆ DIFFICULTY

WINDOWS

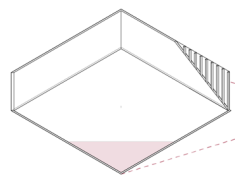
ALUMINUM FRAMED	● CO ₂ CO ₂ CO ₂ \$\$\$
VINYL FRAMED	● CO ₂ CO ₂ \$
WOOD FRAMED	● CO ₂ CO ₂ \$\$\$



OPERATIONAL CARBON

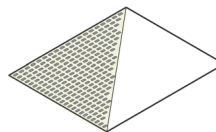
THE UNIT

USE EXPOSED STRUCTURE AS FLOOR FINISH	◆ CO ₂ \$
LIGHTWEIGHT & THIN GYPSUM	■ CO ₂ \$\$\$
NYLON CARPET TILES SOLUTION-DYED RECYCLED CONTENT	● CO ₂ \$\$\$



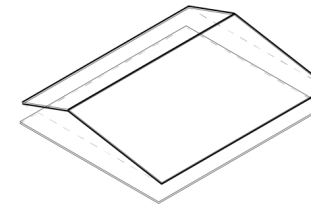
PARKING

TYPICAL CONCRETE PARKING LOT	● CO ₂ CO ₂ CO ₂ \$
PERMEABLE PAVERS (REDUCED CEMENT)	● CO ₂ \$\$\$
REDUCE PARKING SQFT DEVELOP ON-STREET PARKING SHARE EXISTING PARKING LOTS	■ CO ₂ CO ₂ \$\$\$



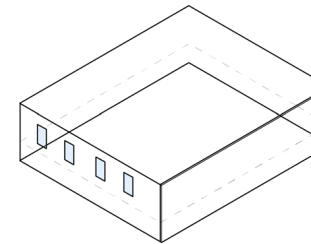
ROOF

STANDING SEAM METAL ROOF	● CO ₂ CO ₂ CO ₂ \$\$\$
ASPHALT SHINGLES	● CO ₂ CO ₂ \$
THERMOPLASTIC ROOF MEMBRANE PVC - MORE DURABLE, MORE EXPENSIVE TPO - MORE FLEXIBLE, MORE AFFORDABLE	■ CO ₂ \$\$\$



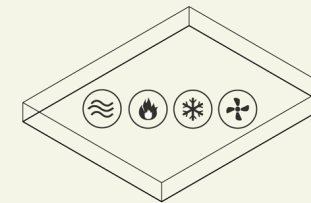
ENVELOPE

ADV. WOOD FRAMING	■ CO ₂ CO ₂ \$
METAL RAIN SCREEN SIDING	● CO ₂ CO ₂ CO ₂ \$\$\$
SPEC. LOW CARBON INSULATIONS BLOWN CELLULOSE FIBERGLASS BATT SHEEP'S WOOL	■ CO ₂ \$\$\$



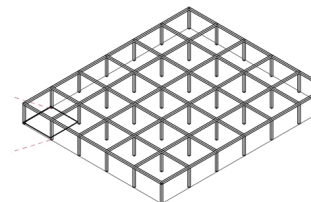
SYSTEMS

PRIORITIZE PASSIVE DESIGN STRATEGIES	● CO ₂ \$
INCLUDE RENEWABLE ENERGY SYSTEMS	■ CO ₂ CO ₂ \$\$\$
HIGH EFFICIENCY SYSTEMS	■ CO ₂ CO ₂ \$\$\$



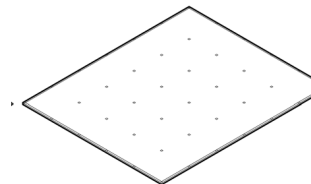
STRUCTURE

FSC CERTIFIED WOOD STRUCTURE (OVER PODIUM)	■ CO ₂ CO ₂ CO ₂ \$\$\$
STANDARD STEEL FRAMING OVER PODIUM	● CO ₂ CO ₂ CO ₂ \$\$\$
REDUCE CONCRETE & STEEL WHERE ABLE RECYCLED STEEL CONCRETE WITH HIGH % FLY ASH	■ CO ₂ CO ₂ \$\$\$



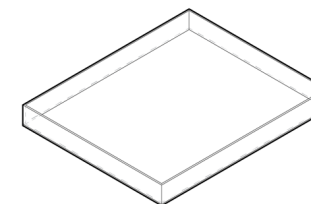
SLAB

USE EXISTING BUILDING SLAB	■ CO ₂ CO ₂ \$
REDUCE BUILDING FOOTPRINT	■ CO ₂ CO ₂ \$
HOLLOW CORE CONCRETE SLAB w/ STEEL REINFORCEMENT (TYP.)	● CO ₂ CO ₂ CO ₂ \$\$\$



BASEMENT

ELIMINATE BASEMENT WHEN POSSIBLE	● CO ₂ CO ₂ \$
REDUCE SQFT OF BASEMENT	■ CO ₂ CO ₂ \$\$\$
PARKING BENEATH BUILDING	◆ CO ₂ CO ₂ CO ₂ \$\$\$



OFFICE & OPERATIONS

Salazar Architect starts with our people and our shared values. We are equally committed to sustainability in our work and in our office.

We strive to make positive impacts and improvements in our daily activity in a number of ways. We currently track the amount of paper we use, minimize printing, and default to double-sided, black and white printing to save ink and paper. Members of the SDL never print hard copies. We also consider what office supplies we already have, what items we can reuse, and prioritize purchasing recyclable supplies. We keep a bank of reusable mugs to reduce use of coffee to-go cups and no longer purchase disposable plates, cups, napkins, or utensils.

Beyond office operations, we aspire to do more in the near future regarding office policies. Our goals include a catering and meeting policy that restricts disposables, plastic lids or wraps on food, and bottled water; we aim to hire only local business (especially those owned by women, BIPOC, and LGBTQIA+ communities when possible); we plan to conduct waste audits, organize composting for our shared building and track our energy usage at the office.

Salazar Architect is Silver Certified through the City of Portland's Sustainability at Work program. In 2020 we had an expert from Sustainability at Work come in to speak with our team and ensure that we are using best practices for recycling in the state of Oregon. With continued expert education and guidance we plan on striving to do more in our office and increase our positive changes to our operations.

Salazar Architect's team participates in the Bike More Challenge, a bike commuting competition. We had over 50% participation in 2019 and are hoping to increase participation in the future with the growth of the firm.

We believe that we can have a more positive impact on the environment by committing to sustainable practices in our work and our office.



SDL COORDINATION



