



COLLECTIVE

CARPENTRY



Principled. Performance. Prefab.

High performance building
+ Off-site construction

Currently serving the western United States and western Canada.

Learn how our experience, flexibility, communication, and commitment to quality can be of value to your next project.

Fall 2020

What's inside...

Who we are	1
Our team	2
Our story	3
Our values	4
What we do.....	5
Our approach.....	5
Our recipe for success.....	6
How it works.....	11
Our system.....	11
Our process	13
What makes us different	15
The Collective Building Advantage.....	16



Who we are

We are Collective Carpentry, offering a unique and innovative approach to constructing **comfortable, sustainable, high performance buildings**. We specialize in **Passive House** and **Net Zero** design principles, **low embodied carbon** materials, and **off-site prefabrication** methods.

Our mission is to bring quality, comfort, health, safety, wise economic choices, and environmental responsibility more within reach for our customers, employees, and collaborators.





Working with Collective Carpentry was one of the easiest and most enjoyable parts of our project to build a high-performance net zero energy passive home. They came in on time, on budget, and with exceptional customer service. It was a pleasure working with Jan, Rane, Andrew and team. It is clear they take pride in what they do, and they do it well. Their good energy is part of our home!"

Janice Larson & Brent Bowyer
Lake Country, BC

Our team...

We are young entrepreneurs, raising families and investing in our community.

We work hard to create beautiful, high performance homes and other buildings to enrich the lives of their occupants.

We are skilled carpenters and motivated business people, with a thirst for knowledge and a desire to excel in our business.

We are inspired and motivated by the innovators in our industry; those who are leading the way through through environmental stewardship and adopting change early, driven by a desire to make better buildings.

We are passionate about building sustainable homes and buildings for a future of declining cheap fossil fuel energy.

We use progressive building designs and techniques. We will continue to innovate, to think outside the box, to challenge the standards, to ask questions, and to learn.



Our story...

Collective Carpentry started general contracting services for renovations and new construction in 2006, serving the Columbia Valley in British Columbia, Canada, and focusing on high performance construction - highly insulated and airtight, energy efficient, non-toxic, with high quality materials and methods.

2014



2006



In 2014, the company took construction of wall and roof assemblies off-site, to an indoor facility where 90% of framing, insulation, and air and moisture control layers can be installed, with a far greater level of control over quality, design, waste management, material selection, and worker health and safety.

Collective Carpentry wound down its general contracting activities in 2020 in order to focus exclusively on the manufacture of super-insulated prefabricated wall and roof panels for high performance, net zero, and passive house construction.

Collective Building Systems was formed in order to service the growing market for multi-family construction with prefab. Collective Carpentry and Collective Building Systems now offer several pathways for incorporating the benefits of prefab to homes, institutional buildings, and commercial buildings, from pre-designed systems to fully custom solutions.



2020



Our values...



ENVIRONMENTAL STEWARDSHIP

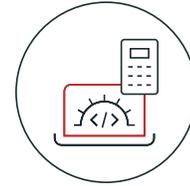
We believe that all buildings should be built and operated with attention to and consciousness of the environmental impact of their construction and use. It's why we use materials like cellulose insulation and avoid plastics with ingredients your grandmother wouldn't recognize. It's why we design insulation levels and thermal bridge-free details to Passive House levels of energy performance, reducing operating energy consumption by up to 90%.



QUALITY, ATTAINABLE HOUSING

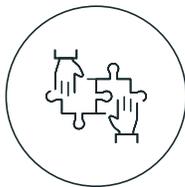
By moving processes inside, we help reduce the cost of quality construction so that housing can become more attainable for those who need it. We believe a high level of quality should be available to all members of society, and that sacrificing quality to make things more "affordable" is a non-sequitur, and essentially a design problem.

We can build high quality buildings that use healthy, durable materials and are comfortable for occupants in all seasons without excessive energy inputs by utilizing innovative strategies to make these buildings a reality.



INNOVATION

We use modern understandings of building science, process innovation, computer-aided design and manufacturing quality control and are constantly looking to learn from proven tools and techniques for increasing the quality, efficiency, and effectiveness of our process.



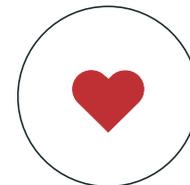
COLLABORATION

We know that collaboration between architects, engineers, contractors, sub-contractors, and the client is crucial to the success of any building project. We follow principles of integrated design to get as many players to the table as early as possible on every project. We respect the input of our collaborators during all phases of construction and include the client in these discussions. The result is fewer communication errors and oversights, a streamlined process, and a high quality product.



COLLECTIVE SUCCESS

Both within our company and extending outside of it to our clients and collaborators, none of us thrives unless the collective is thriving. From our compensation practices to our work-life balance, knowledge sharing, and activism for better buildings, we value the people who are at the root of all the work we do, and the people we do it for.



PASSION FOR OUR CRAFT

Our craft is more than an occupation, it's what we live and breathe. Our attention to detail, enthusiasm for our product, responsiveness to all of our clients needs, and care and focus we give to every panel that comes out of our shop are testaments to the passion we have for our craft.

What we do

Collective Carpentry brings together three decades of construction and design experience to offer a compelling solution that combines prefabrication and high performance design while maintaining a high amount of flexibility for customization often lacking in modular construction.

Our approach...

Today in the construction industry, unique opportunities for innovation have been created by:

- Skilled labour shortages;
- Changes in building regulations;
- Awareness of the environmental impact of the built environment;
- Increased demands for better comfort and health in homes and other buildings;
- Increased cost and complexity of the construction that addresses these challenges;
- A recent acknowledgement of the high amount of carbon emissions from production of materials like concrete, foam, and steel, contributing to the emergence of advanced wood-based materials.

Our approach starts with recognizing these challenges, and continues day after day as we seek to find and implement smart solutions to these problems.





The whole picture

We tackle issues of cost, complexity, quality, and social and environmental impact in the construction of homes, public buildings, and other structures.

Design, measure, build

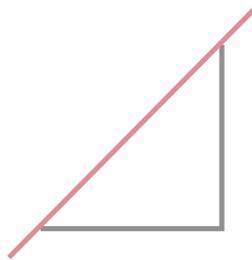
We design in 3D, measure 3 times, and are 3 times faster than building on site*.

Science!

We apply scientific understandings of issues, from climate change to toxicity, moisture, heat transfer, and comfort to our design and manufacturing process.

Quality control

We raise the bar for quality by taking control over how performance is designed and built into the building shell.



We travel

We serve hard-to-reach and diverse geographic markets in the US and Canada by limiting site time and accelerating construction timelines.

Panelize + Install

We design and panelize structural building elements at an off-site location, and deliver and install these components with skill, speed, and experience.

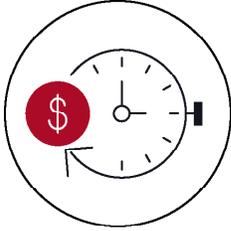
Working inside

We provide better working conditions for individuals, which leads to a better quality end product.

Working together

We collaborate with stakeholders using an integrated design process, leading to fewer errors, miscommunications, and roadblocks.

Our recipe for success...



1 We reduce site time and uncertainties

Did you know...

That labor shortages and lack of familiarity with **super-insulated envelope design and airtight construction** are some of the leading causes of project delays and cost overruns associated with high performance construction?

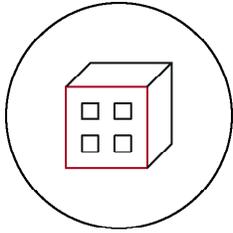
That not only is quoting accuracy improved in the manufacture of prefab panels thanks to the integration of 3D modeling and precision manufacturing, but that confidence in this process allows **cost overruns to be eliminated through fixed price contracts?**

That weather delays contribute not only to **delayed project schedules**, but to construction materials often being installed when **soaking wet?**

What exactly is a prefabricated super-insulated panel?

A prefabricated super-insulated panel is a section of wall or roof that is built in a climate controlled facility at a location away from the construction site, and delivered ready to install along with other wall and/or roof panels that compose the building's outer shell, or "building envelope".





2 We design and build prefab super-insulated wall and roof panels using sustainable materials

Did you know...

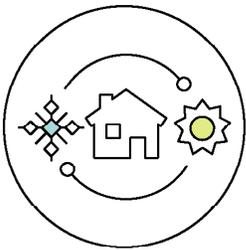
That site-built high performance building envelopes require a **large learning curve** for many contractors, with the complexities of thermal bridge-free insulation, continuous airtightness, and window integration often figured out on site?

That well-known “SIP” systems for prefab and modular construction regularly use a large amount of foam plastic insulation, which limits the **drying potential** of the enclosure, creating conditions for **rot and mold**?

That modern materials can be carbon storing, offer superior drying reserves, and **protect the integrity of the building envelope for 100 years** or more, allowing for regular upkeep of interior and exterior finishes while keeping the structure intact?



Whether structural or non-structural, insulated or uninsulated, weathertight or exposed, all panels are designed to be integrated with one another using special fastening, support, and airtightness strategies approved by an engineer.



3

We enable high performance levels of comfort and energy efficiency

Did you know...

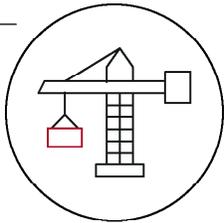
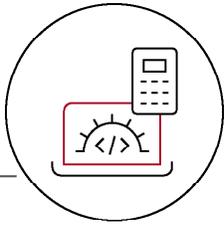
The average home loses up to 50% of the heating and cooling energy generated due to air leakages, not to mention the losses from thermal bridging, insufficient levels of thermal insulation, or low quality insulation choices?

Humans can feel temperature differences of just a few degrees, so any cold surfaces or drafty air can create thermal and psychological discomfort for building occupants?

That the design and energy modeling of the building envelope delivers **better comfort as a natural result of using the heating and cooling energy generated more efficiently?**

4

We carry projects from design through installation



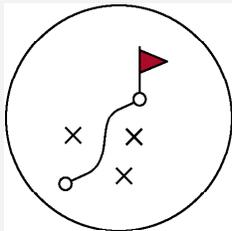
Did you know...

That poorly designed building assemblies that add insulation but don't optimize **drying potential** can lead to rot and mold behind the interior finishes?

That **building a 3D model** of your building enclosure can vastly improve the translation of complex structural and performance elements of your design to what gets built on site, avoiding surprises in cost and time?

That the installation of critical water, air, and thermal control layers can make the difference between costly building failures and a **building that keeps occupants safe and healthy**?

That with Collective Carpentry's experience in specializing in **super insulated assemblies** and seeing the projects through from design to installation, you can expect an unmatched level of attention to detail and minimal added upfront cost for a significant upgrade to the comfort and health of your building?



5

We service small and medium size construction projects across the western United States and Canada

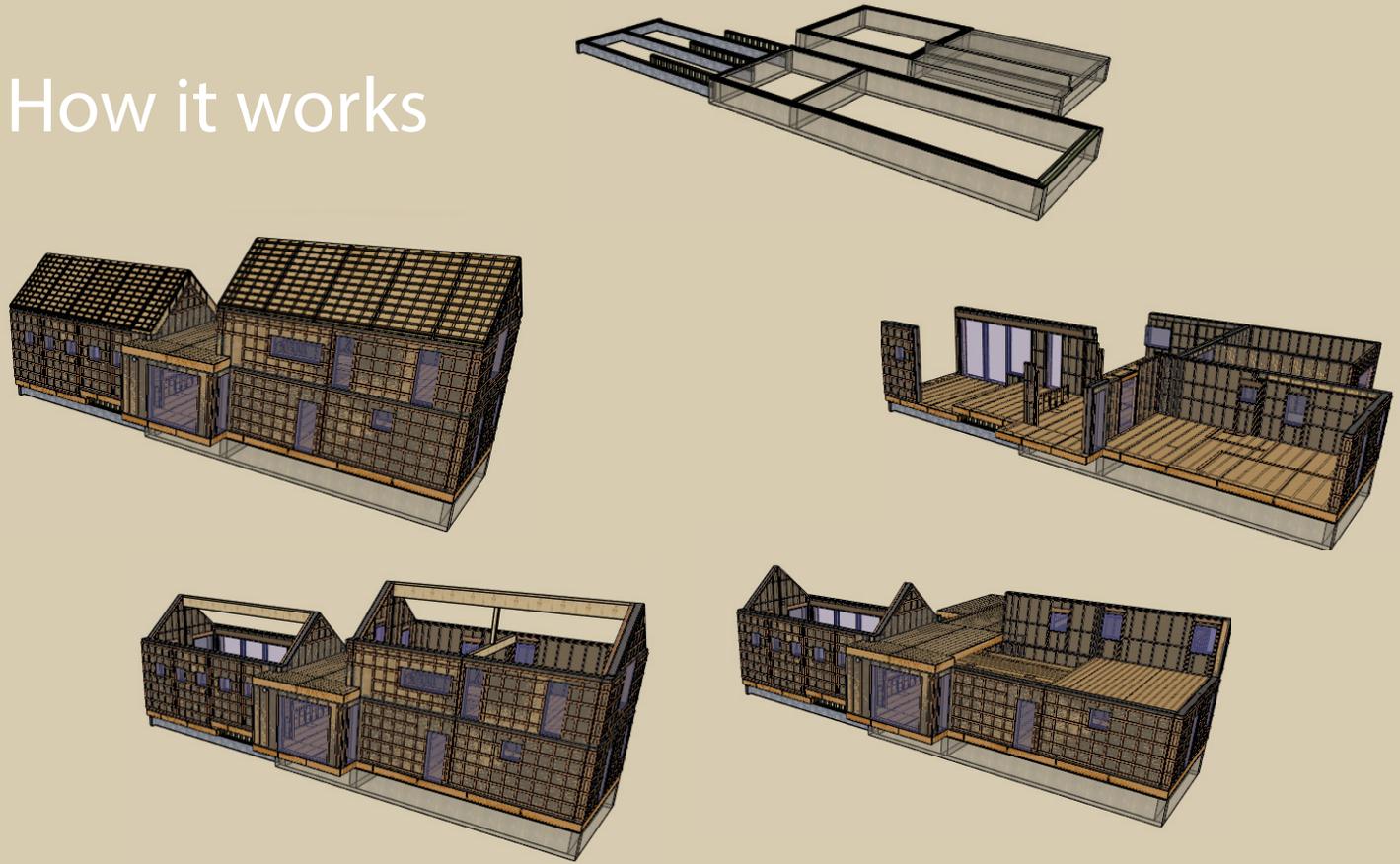
Did you know...

That most builders don't like to take on projects more than 100 miles from home because of the extensive amount of time and money involved in **moving labor** to the jobsite?

That **prefabrication installation timelines rarely exceed a few days to a few weeks**, allowing for specialized journeymen carpenters to be brought in for your project, no matter where you are in the Western US and Canada?

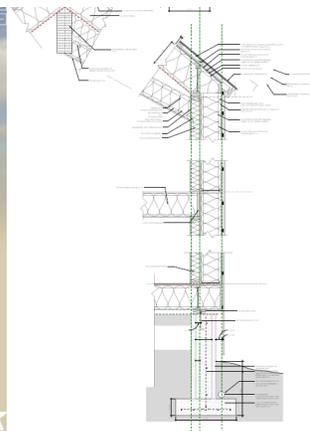
That **skill and experience** with high performance building practices tends to be concentrated in particular areas, and is often hard to find when and where you need it?

How it works



Our system...

While many conventionally constructed buildings incorporate elements of prefabrication, the prefabricated, super-insulated panels Collective Carpentry builds are specifically designed to deliver a more thoroughly weathered-in product with five important functions:





1



Structural integrity

Structural advanced framing built from dimensional lumber and ¾" plywood, incorporating LVLs, glulam beams, I-joists, and other structural wood posts and beams

2



Integrated rainscreen

Vertical and/or horizontal 2x strapping installed on top of the weatherproof building fabric, protecting this crucial control layer while providing an attachment mechanism for any exterior siding or roofing material you desire.

3



Continuous airtightness

Integrated layers of specialized tapes, building fabrics, and plywood designed to connect together onsite to provide interior and exterior continuous airtight layers, preventing drafts, energy losses, and moisture issues leading to rot and mold in the assembly.

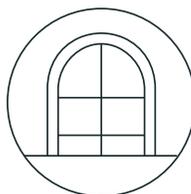
4



Continuous insulation

A continuous insulation layer combining wood fiberboard insulation and densepack cellulose insulation, with an advanced monolithic, airtight weatherproof building fabric, reducing heat transfer and thermal bridging, and keeping you warm and cozy in the winter and nice and cool in the summer.

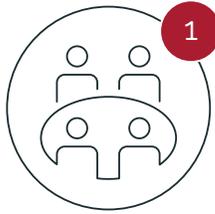
5



Planning for penetrations and services

Plumbing and electrical conduits, window bucks made of plywood or OSB, heat recovery and kitchen ventilation penetrations, and a dedicated interior cavity for services, protecting the integrity of the airtight layers during construction and for the life of the building.

Our process...



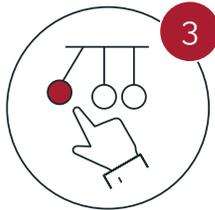
1

Initial conversation It all starts with an initial conversation so we can learn why you became interested in prefabricated high performance construction methods and where to take the conversation from there. We'll talk about where and when you're building, what aesthetic and functional elements you're looking for, and how you're thinking about the budget for your project.



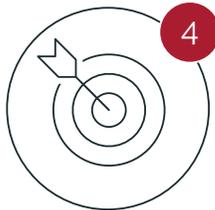
2

Building the team Whether you work with architects or builders in our partner network or bring your own to the table, the next step is often identifying what key members of the team we need to assemble. You might choose to have your architect or contractor handle further conversations with Collective Carpentry, or you might remain involved in some of the pricing and design questions as you seek to find the right solution for your build.



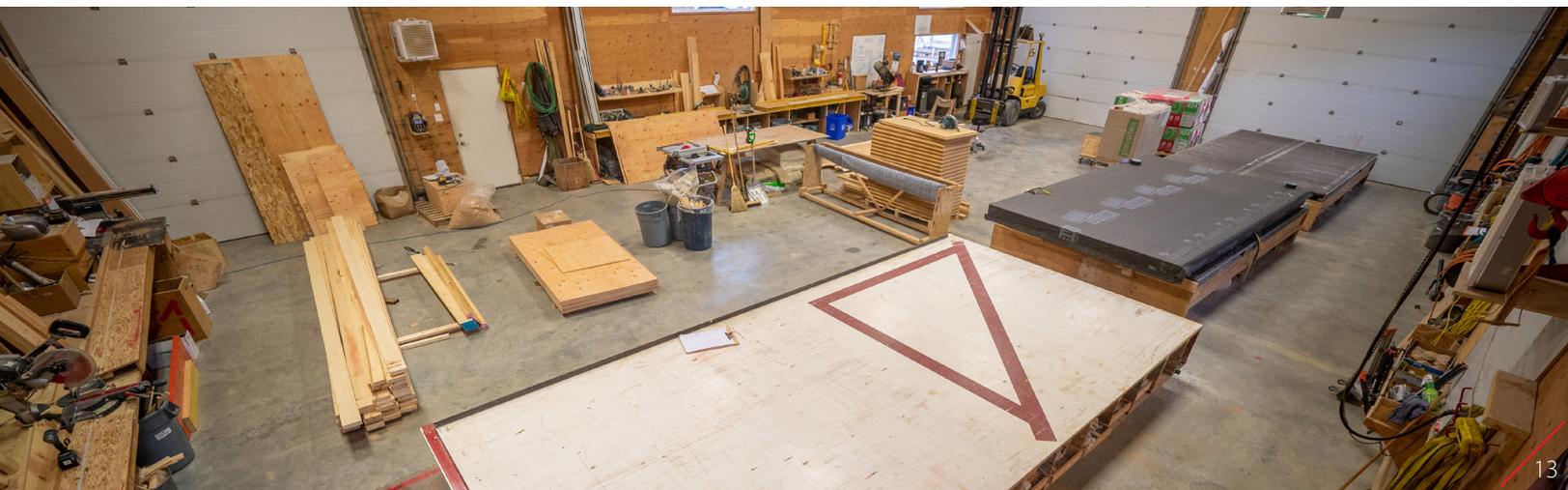
3

Choose your paradigm Depending on your budget and your desire for customization, Collective Carpentry can work with your design team to deliver one of three options: pre-designed, optimized, or custom. We'll be glad to discuss the implications of each with you and your design team.



4

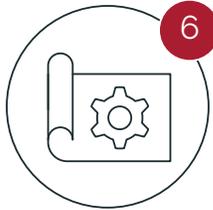
Define our scope Define which elements Collective Carpentry will prefabricate, and which will get completed by the site contractor. This involves weighing the advantages of a fully locked-in building envelope package vs. a limited scope that involves just the walls of your building, or anything in between.





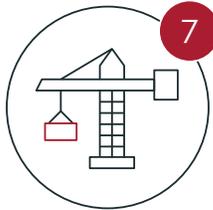
5

Send your designs Once you've made progress on your designs, you'll send them to us and we'll model your building in 3D in order to start breaking up the building into prefabricated sections. We'll return to you or your general contractor a detailed quote, and once you're ready, a 10% deposit will start the next phase.



6

Shop drawings & production Our design team meets and finalizes the design through a review process with the architect and structural engineers on the project, and we produce a set of shop drawings for production. With a 50% deposit, your project goes into production as soon as scheduling allows, even if your project won't get installed for another few months. Staying ahead of the production schedule is often the key to keeping a smooth transition between site work and panel delivery.



7

Delivery & installation Once your foundation preparation is complete, our shop team loads your panels, and our install team arrives at your project to complete the install in a carefully sequenced process involving structural and airsealing quality control, and a mix between methodical preparation days and intense and productive crane days. A 30% payment is due at this time.



8

Installation review We review our install with your site team and set them up for success in maintaining the integrity of the building envelope as they take the project into window installation, plumbing, electrical, and finishing stages. It is at this time that the final 10% payment is made.





What makes us different...

Experience - From our leadership to our shop and install teams, our deep experience in general contracting, computer aided design, timberframing, and sustainable construction helps support your project when changes, uncertainties, and complications arise.

Flexibility - While we are advocates for certain approaches, our relatively small size and company culture makes us inherently more flexible than many of our competitors.

Communication - We put an exceptional amount of time and focus into our efforts to be available, responsive, and attentive when it comes to communicating with clients and partners - you'll notice the difference from your first contact to your last.

Commitment to quality - We don't believe in selecting cheap, low-end building materials just because of the rest of the industry uses them. We believe that materials matter, and choose to work with materials that are proven by building science and field performance, paying for the value they provide. We put a far greater amount of focus on the importance of air, moisture, and thermal control in the building envelope than the vast majority of construction projects ever attempt, and guide our choice of materials by buying local, buying responsibly, and buying in quantity.

Local: We use local materials wherever possible, supporting local businesses and industries while valuing the sustainability of limiting the unnecessary and carbon-heavy transportation costs of sourcing from halfway around the world.

Responsible: We source products that come from responsibly managed forests, production methods that use no toxic or environmentally persistent materials, and products that require less energy (embodied carbon) to manufacture, from the extraction of raw materials through to processing, assembly, and delivery

Cost effective: By working with consistent and reliable suppliers, we are able to more accurately predict the cost of construction by incorporating the cost of materials in our 3D modeling software, improving accuracy and smart decision making while improving buying power.

The Collective Building Advantage

It can be a tough decision to try something new, to trust a new partner, to build a new relationship, or to fight for better quality in the construction industry - we understand.

Add to that an increasing competitive landscape as more companies seek to do just like we've done, following innovations in Europe and bringing the benefits of prefabrication and off-site high performance construction to the demanding climates of North America.

While our systems are the bedrock on which our services rely, the individuals who make it happen are the foundation for our success, and the collective we've assembled to date are rockstars. But the true advantage of working with us isn't in any one thing we offer - it's in the collective we can build together. By agreeing early in the process on a set of values to drive our projects forward together, we can realize an effort that is

- Mission-oriented
- Higher quality
- More consistent
- More adaptable and resilient
- More fun

That's the Collective Building Advantage.



Want to find out more?

Call: 778-785-0199
Email: info@collectivecarpentry.com
Web: www.collectivecarpentry.com
Instagram: [collective_carpentry](https://www.instagram.com/collective_carpentry)
Videos: Search "Collective Carpentry" on Youtube
Visit: Invermere, BC, Canada

Ask us about our monthly newsletter, our project open house tours, or for any of our team members by name.

Marketing & Sales: Craig Toohey

Design Office: Jan Pratscke, Jeremiah Blakley

Invermere Shop, Canada Install Team: Rane Wardwell, Jay Dubray, Andre Lodder, Matt Tutin, Jake Swallow, Laura Penny

US Install Team: Paul Tumason, Nate Sweeters

