

FALL 2020

Sheet Metal

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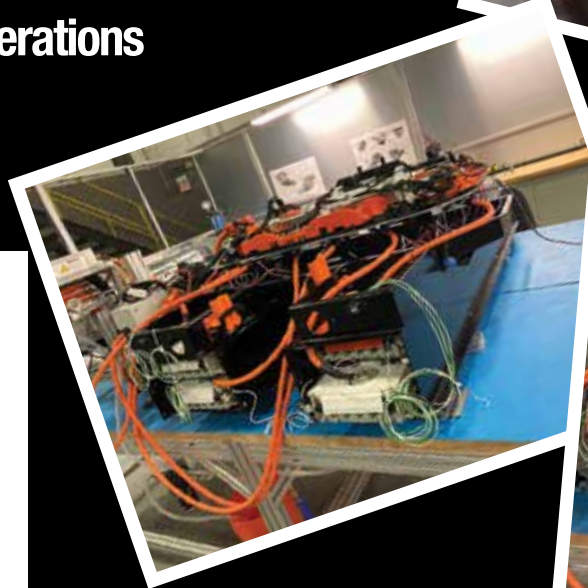
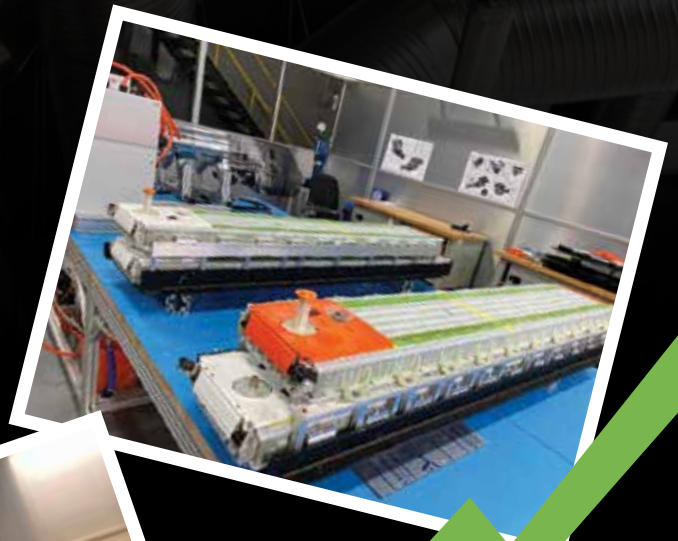
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British Columbia

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PROMOTING GROWTH AND STABILITY IN OUR INDUSTRY

Formed in 1969, the British Columbia Sheet Metal Association (SMACNA-BC) was the first international chapter of the Sheet Metal & Air-conditioning Contractors National Association (SMACNA). Founded in 1934, SMACNA traces its history to the National Association of Sheet Metal Contractors established in 1910, and has 2,300 members worldwide.

SMACNA-BC is a member-driven association representing unionized sheet metal contractors in the Mainland of BC, and suppliers to our industry. It promotes the growth and stability of the members and industry.

OUR MANDATE

- To improve the financial stability and business conditions of the sheet metal industry, and to develop and promote methods to improve managerial proficiency
- To improve quality, efficiency and productivity of this industry, and to implement high standards of work
- To establish and maintain high ethical standards of conduct between members of the Association, and between members and owners, architects, engineers, other contractors, and the public
- To study and help in the development and enforcement of governmental codes and regulations, and such legislation as may be necessary for the best interest of the public and the sheet metal industry
- To promote harmony in labour relations
- To exchange technical, professional, and educational information with other contractor associations in the sheet metal industry and its allied trades in Canada and other countries
- To affiliate as a Chapter with the Sheet Metal & Air-conditioning Contractors National Association, Inc.



[BC Sheet Metal Association \(SMACNA-BC\)](#)

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SEE YOU NEXT YEAR—ALREADY

I know I say it every year, but even after 14 years of publishing *Sheet Metal Journal*, I still feel flabbergasted that the last issue of the calendar year approaches so quickly and with such gusto. One minute I am revelling in my autumn suntan and carving pumpkins, and the next I am filing construction outlook stories, writing the annual survey, and harassing Bruce for his last editorial of the year. It's kind of double trouble, too, because we try to get ahead for January so we can take a much needed break over the holidays. I hope that is your plan, too.

This issue's cover story looks at Northwest Sheet Metal's work on part of a powertrain system for electric vehicles. The ability to grasp new projects and tackle the challenges that come with thinking outside the box is essential to surviving in any climate. Check out page 8 to see how Northwest tackled that project and what they attribute to its success.

When you think of the keys to a prosperous business, certain things come immediately to mind—cash flow, a skilled workforce, favourable market conditions—but what about good mojo with your business partner? Cindy Pugh and Mike Davis have been working together for enough years to know that finding a solid business partner can make business, especially in tough times. Find out on page 10 how they have made their business thrive.



By / Jessica Kirby
Editor, Sheet Metal Journal

And finally, there is never a bad time to set up a mentoring program in your business. Coaching and mentoring in any industry, but especially construction, is an important confidence- and skill-building strategy and helps to address the labour shortage in a holistic way. See more about coaching and mentoring on page 12.

If you haven't already, please visit [surveymonkey.com/r/NWLWHKD](https://www.surveymonkey.com/r/NWLWHKD) and fill out this year's Sheet Metal Industry Survey. It is comprised of ten questions and takes about three minutes to complete. If you prefer, I will take your data and run, or if you want to contribute more I can give you a call to discuss further and include your comments in the winter feature story. Either way, the data forms the basis of our Winter 2021 Construction Outlook report for the sheet metal industry and informs SMACNA-BC's Board of Directors and Bruce Sychuk as they establish a budget for 2021-22. It also provides important information on manpower loading and availability for the industry.

The holidays are going to be strange this year. If they aren't a total wash, they are going to be smaller, quieter, more thoughtful. For some (like my husband) this will be a godsend but for others it will be difficult. Be sure to look out for one another and reach out in different ways to stay safely connected with those who need it most. For everyone, this will be an opportunity to take inventory of the people, things, and values that mean most and hold those close, and an opportunity to practice optimism and stillness as we look forward to a brighter 2021. Until then, be well and happiest of holidays to you all. ■

Happy Holidays! We wish you a wonderful season and the best for 2021.

*~ Jessica and Lara,
Sheet Metal Journal*

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PAY IT FORWARD

COVID-19 & daylight savings time both suck! Hopefully both will be ending soon.

SMACNA-BC Christmas Party – CANCELLED

Due to the obvious, we have had to cancel our annual Christmas party at the Pan Pacific Vancouver. COVID-19 restrictions limit functions to 50 people, which is a far cry from the 300 guests who attended last year’s event.

How about we put a positive spin on this? For all of those who have attended this event over the years, you have always generously supported our charity of choice, Helping Families in Need Society, which SMACNA-BC has been recognizing for well over 25 years. Usually you are asked to bring a toy for under the tree and given the option to provide a cash donation. The party is off this year, but these families are still in need. How about you take the cash your company was going to spend on the great party at the Pan Pacific and donate a portion or all of it to Helping Families in Need Society?

Ray Abernethy, president of Helping Families in Need Society, which he started 35 years ago, is the gentleman who would come to the SMACNA-BC Christmas party to gather all of the gifts and donations. He would thank all of you for your generosity and extend holiday wishes to you and your families from the families who are not as fortunate. Ray is now retired from his “day job” but continues to work full-time (for no pay) with the society.

To take a look at all that Helping Families in Need Society does and to make a generous cash contribution, please visit helpingfamiliesinneed.org/

(Tax deductible receipts are available on request. Charitable organization #86350 5657 RR0001)

SMACNA Launches System Air Leakage Testing Standard

SMACNA has officially launched the First Edition, *System Air Leakage Testing Standard*. This must-own publication will be an immediately welcome addition to SMACNA members’ resource libraries.

SMACNA member firms and chapters are each entitled to one free* copy of this new standard. An email went out earlier to chapter executives and member primary contacts (owners, presidents, CEOs) with a promo code that can be used to order either one PDF download or one hard copy book. Please refer to that email for information on how to get your free* copy of this standard.

Since 1965, SMACNA has included a procedure for leakage testing of ductwork (*HVAC Duct Construction Standard & HVAC Air Duct Leakage Manual*). This process, like many others developed by SMACNA, has evolved over time based



By / Bruce Sychuk, Executive Director, SMACNA-BC

on research and feedback from the industry, resulting in changes to both the pass/fail criteria and the application of testing.

The culmination of that feedback and research is this standard. SMACNA’s *System Air Leakage Test Standard* goes beyond the duct and includes procedures for any item included in a forced air system. This standard addresses leakage testing of any portion of, and up to, the entire forced air system.

The pass/fail criteria are based on sound research specific to testing conditions and distributes the responsibility of system performance equitably. The testing process is reliable, practical, and based is on decades of experience.

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*Each SMACNA chapter and member firm is entitled to one free copy of the *System Air Leakage Testing Standard*. This free copy is limited to either one PDF download or one hard copy book. Hard copy book orders will be subject to a shipping fee.

Edge Session On-Demand for Those Who Register(ed)

Have you heard the positive buzz about so many Edge Conference sessions? Wish you registered, or wish you attended the ones you missed? No problem! People can still register to view sessions on demand, and registered attendees who missed any session during the Edge Conference can view them on-demand via the conference site smacna.org/annualconvention between now and January 11, 2021.

If you are a SMACNA-BC Contractor Member and did not register for The Edge Conference but would like access to the recorded sessions, contact the SMACNA-BC office at 604.585.4641 / smacnabc@smacna-bc.org

If you have questions or are having difficulty logging in, contact the SMACNA Meetings Department at meetings@smacna.org.

Adding Attendees

If you signed up for all-company access and would like to add

employees to your registration to allow them to access the on-demand recordings, please contact the SMACNA-BC office. 604.585.4641 / smacnabc@smacna-bc.org

Additional employee access to the on-demand recorded sessions can be added through January 11, 2021, at which time the recorded sessions will no longer be available.

Contractor Operations Manual: Managing a Remote Workforce

In response to the pandemic, many contractors have decided to have their employees work remotely. While there are obvious aspects of construction that require in-person presence on a jobsite, there are many that can be done remotely.

Unlike industries where remote work has been being adopted for years, construction has been considered an in-person job. That's begun to change.

In the latest Contractor Operations Manual, *Successfully Managing A Remote Workforce: How to Maintain Productivity and Engagement*, SMACNA explores the influence and impact of the pandemic; generational expectations; the advantages of remote work; how to lead, communicate and incentivize behavior; the impact of this shift on organizational strategy and culture.



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CONTENT OVERVIEW

- I. **The Influence and Impact of the Pandemic**
Demands of the Technology Generation
The Major Advantages of Remote Work
- II. **Use of Technology for Speed and Transparency**
- III. **Tools, Metrics, and Reporting to Effectively**
Manage Remote Workers
Transparency of Performance
- IV. **Best Practices in Managing Remote Meetings**
Do Not Multitask During Meetings
Develop These Habits for Successful Remote Meetings
- V. **Leading, Communicating, and Incentivizing Behavior**
Enabling Remote Employees
Create a Recurring Daily Check Meeting
Allow Different Communication Options
Recognize the Challenges of Remote Work
Allow for Flexibility
- VI. **Cultural Impacts**

Visit smacna.org/store/product/successfully-managing-a-remote-workforce for more information. Read other SMACNA Contractor Operations Manuals by logging in to your SMACNA National account.

SMACNA-BC Contractor Industry Hour Update

Some of you might be thinking that with all that we have been going through this year, that the industry is suffering. I just wanted to let you know that SMACNA-BC Industry Hours relative to the same time period in 2019, are down 3.8%. Keep in mind that those are hours worked do not provide a snapshot of what the productivity rates are relative to profits. So as you see, the industry is not doing that bad. However, in an effort to continue this trend, all of you must impress upon all of your personnel to stay the course re: COVID-19 protocols. We must keep our people and their families safe and employed.

Stay safe! ■

Do you have an interesting article idea? Sharing it is easier than you think. Projects, news, and profile suggestions are welcome in SMJ.

Reach out to our editor, Jessica, at 250.816.3671 or email jkirby@pointonemedia.com



British Columbia Sheet Metal Association (SMACNA-BC)

Providing products and information related to the Sheet Metal Industry, including technical manuals and guidelines.

The unmatched technical and managerial expertise of SMACNA-BC Contractors is enhanced by the talent and skills of the workforce they employ. SMACNA-BC Contractors employ only Red Seal Certified Sheet Metal Journeymen and Registered Apprentices.

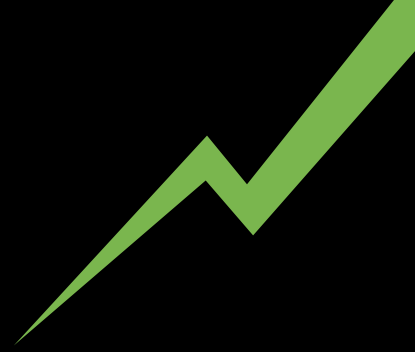
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The Electric Future

Northwest Sheet Metal had the human powered expertise and state of the art technology to pivot in chaotic times

By / Jessica Kirby • Photos courtesy of Northwest Sheet Metal



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The words “agility,” “nimble,” and “pivot” have become commonplace these past several months, and in conversations about a new project from Northwest Sheet Metal this is no exception.

The Surrey-based contractor took on construction of battery and engine boxes for an electric vehicle powertrain prototype designed by powertrain engineering firm Litens Automotive, which is headquartered in Toronto, Ontario. The system was constructed as a one-off research and development platform that will be used to test new electric vehicle-focused products in the areas of thermal and battery management. University of Toronto will also use this vehicle as part of a joint battery research project.

“Today, everything is controlled by software, which is protected and would require source code and modification in order to do the kind of adaptation that we need,” says John Antchak, vice-president of Litens Automotive. Antchak is related to the owners of Northwest Sheet Metal but not affiliated with the company. “With this project,

we started with an open source vehicle controller and built out from that. Everything in the vehicle is controlled by it, including the interior functions, lighting, steering, and others.”

The ultimate goal was a modern, first-class OE level electric powertrain, and the results have been outstanding. The ET187 is an all-electric truck built in house by the Litens’ engineering team. The prototype will start off as a new Ford Ranger 4x4 minus the standard powertrain and associated life support systems, which will be replaced by the electric system.

The heart of ET187 is a fully engineered low center of gravity lithium-ion battery system delivering 80 KWh capacity mounted under the floor between the frame rails. Muscle is provided by two three-phase AC PM motors in series taking in 400V through two inverters and delivering 840 Nm of torque to a single gear reducer and out to the original transfer case and rear axle system.

Keeping the simple and effective driveline was one of the developers’ targets and ultimately resulted in the unique and



innovative battery case design that accommodates the propeller shaft running through it.

Northwest Sheet Metal fabricated the battery case, battery management housing, and vehicle mounting system for the prototype. Four six-foot-long Tesla battery modules were extracted from a Tesla underfloor battery case and re-engineered to fit under the floor of the Ranger with the driveshaft for the rear wheels running down the center. Together, the batteries weigh 1,000 pounds.

“The battery case is complex with many precise dimensions to properly support the batteries and to fit into a very tight package between frame rails, rear axle, and transfer case,” Antchak says. “This required hard adherence to tolerances and precise craftsmanship.”

Considering road loads (bumps), cornering, potential impact, and stress from acceleration and braking, the battery system is under tremendous stress, which means it had to be fully validated through extensive computer modelling and simulation.

“The welding and forming have to be professional level to match the strength predicted by the computer models,” Antchak says. “The design and fabrication of this system was the hardest part of the truck project.”

Gord Gohringer, shop superintendent at Northwest Sheet Metal and Local 280 member, says because the project was a brand new idea, Litens essentially gave the team at Northwest a series of concept drawings that the team had to rework and confirm with the client.

“They weren’t exact, so we couldn’t just download them and begin fabrication,” Gohringer says. “We had to redraw the part and put it into the system to see if it would work. They knew the size and what they wanted, and we had to make it happen.”

The prototype’s uniqueness and the fact that it had zero tolerances presented a challenge for the team. “In CAD, the drawings are given sizes and allowances,” Gohringer said. “There was none of that. We had to make sure that the samples

would work. It required special tooling, and eventually we had to make a bunch of samples to make sure we could even make it with zero tolerance.”

Having a cohesive, skilled labour and management team is what makes it possible to complete this kind of one-off, completely outside of the wheelhouse job, Gohringer says. It is what allows contractors to pivot on a dime.

“Because we are working in a union environment and trained by the union, we have the skilled workforce and management to adapt on the fly,” he says. “Without that kind of team, we couldn’t even begin to tackle something like this.”

Another factor is Northwest Sheet Metal’s readiness to adopt new technologies, making it one of the province’s most advanced in that capacity.

For starters, the company has a 20’ laser metal cutting table, complete with fully automatic 4 coil line feed, capable of cutting 1” thick steel with absolute precision. It runs a Full Iowa Precision 5’ coil line, a Vulcan Waterjet Table, which provides a green initiative by reducing waste by over 80%, a 20’ Vulcan plasma table, and several other state of the art innovations.

“Northwest has invested in itself heavily with CNC technology, which opens doors that were never available before,” says Bernie Antchak, business operations manager for Northwest Sheet Metal. “We believe in it so much that we are looking to expand our detailing department even further.”

Northwest uses BIM and detailing on almost every project in some way—in fact, the company gets hired by other contractors to perform this task, as well, Antchak adds.

“We have all the latest in software and drawing programs and the talent here to use it all to its highest potential,” Gohringer says. “The more doors we can open with technology that gets us moving out of the same old routine, the more work and opportunity we can offer our union members.”

“It also helps to be connected to two guys who are not afraid to tackle tough jobs,” John Antchak says. “Many vendors

continued on page 19



Cindy Pugh, Mike Davis, and previous owner of Samson Metals, William Howel, on the day Pugh and Davis purchased the company. Photo credit: Samson Metals.

Samson Metals Ltd.

Sheet Metal is in Their Blood

By Natalie Bruckner

In many ways, the sheet metal industry and in particular steel buying sector here in Canada has, over the past two years, seen some of its biggest shifts in history. First there were the steel tariffs imposed under the Trump administration, and then along came COVID-19.

For new business owners in the industry this could have been make or, more likely, break time, and yet, for Mike Davis and Cindy Pugh, co-owners of Samson Metals Ltd. in B.C., they took it in stride, rolled with the punches, and have come out the other end smiling.

That's quite something for the duo who, back in 2018, decided to take the plunge and purchase Samson Metals Ltd. from long-time owner William Howel.

"Cindy and I have a history of working together that goes

back to 1996 when I started with Mercury Metals," Davis says. "Cindy's dad was my boss at the time and had a big influence on my career. Cindy joined the company in 2000, and while we went our own ways for a while, our paths kept crossing. Eventually we ended up working together again for Bill. She's like my sister in so many ways."

When Howell decided to retire from the business, he offered to sell the company to Davis, who approached Pugh with the idea of becoming co-owners. "Cindy could cover one side of the business with accounting, and I could cover the other in the shop," Davis says. "It was a perfect mix."

It's obvious when you speak to Davis and Pugh that they have a certain synergy. Combine that with their passion for the industry and you have the recipe for success.

Sheet metal is in their blood, both coming from a long line of sheet metal workers. “My dad was the foreman out in the shop and before that he was a journeyman/foreman in the field,” says Pugh. “He was very involved with SMACNA and Local 280 as well. I grew up with it. I remember being 12 years old and helping my dad install a roof on my house.”

For Davis, sheet metal was always his path, too. “I started in the Mercury shop and was trained in the union’s apprenticeship program,” he says. “My brother and I both started with Mercury at the same time. I went into the shop and he went into the field and ended up at Apollo Sheet Metal after that. It was a coin flip, really, who went into the shop. It worked out great for both of us. I am glad I ended up where I did, as my path led to being co-owners of Samson with Cindy.”

Today, Davis and Pugh run one of the leading businesses in the manufacture of metal roll-formed products and structural sections. Alongside their team of about a dozen employees, they run a highly unique and specialized business.

As you can imagine, their portfolio of projects is vast and varied. From the YVR expansion to a daycare centre, and one project that Pugh is extremely excited about—her old elementary school that is currently being rebuilt. But for Pugh and Davis, the industry is about much more than the projects. It’s about being part of something bigger, something more akin to a family, whether that’s their own team or SMACNA, with which they are both incredibly involved.

“When we took over Samson, joining SMACNA-BC was one of the first things we did,” explains Pugh. “There is so much knowledge within, and there is also something special about being part of a community like that. SMACNA has just always been a common name in our lives, and it provides such great networking opportunities.”

Davis currently sits on the SMACNA-BC’s Joint Conference Board, because, as he says, “It’s great to just be involved, and as I’ve always told my kids, if you don’t vote you can’t complain!”

While it’s fair to say that, due to external factors, the road hasn’t exactly been smooth for Davis and Pugh in their first two years as business owners, they are enthused about the future and having the right support around them to continue to grow.

“It’s been a challenging time recently, but we were fortunate to not really have been affected by COVID,” Davis says. “We are, however, looking forward to things going back to normal. Zoom calls are great, but even when you are at a meeting face-to-face it is afterwards, when you go for a bite to eat, that the real networking begins . . . I’m looking forward to that again,

For Pugh and Davis, the industry is about much more than the projects. It’s about being part of something bigger, something more akin to a family, whether that’s their own team or SMACNA, with which they are both incredibly involved.

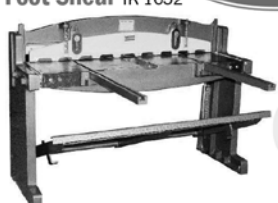
being able to travel on some of the SMACNA trips, have a beer with my friends, and watch the Seahawks!”

Pugh is also enthused about what 2021 will bring, but for now she is enjoying running the business with Davis, and when she has time, getting out on the water in her kayak and helping as a volunteer district deputy commissioner and as a unit guider and treasurer with the Girl Guides.

Having navigated through these times, what advice would Pugh and Davis give to anyone considering buying a business in the industry as they did? “For us, the transition of buying the company was easy as we were running it long before that, but what we learned early on was take care of the people that work for you, and they will take care of you,” says Davis. ■

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SPANNING GENERATIONS

Reciprocal mentorship and coaching programs are key to strong labor-management partnerships

By / Jordan Whitehouse

At the 2020 *Partners In Progress* Conference, SMART General President Joseph Sellers, Jr. took to the stage to talk about leadership. While the forum touched on a range of themes, Sellers underlined the importance of mentorship. “Our personal challenge is leadership and mentoring,” he said, stressing that mentorship is key in affecting positive change across the industry in the United States and Canada.

It was an interesting comment, and not one typically heard today, when in-class, online, and apprenticeship learning usually take precedence over any type of one-on-one mentoring or coaching. But there are signs that’s changing, or at least that more personal forms of training are considered important tools in developing competent, capable workers and future leaders. In a study titled, “Mentoring and Coaching Practices: Developing the Next Generation,” published by The New Horizons Foundation, 87% of executives and managers surveyed said they would “possibly” or “definitely” participate in a mentoring or coaching program.

So, if mentoring and coaching programs are so important today, why? What does good mentorship even look like? And how can labor and management work together to implement these programs?

The New Horizons study tries to provide some answers, and it begins by distinguishing between mentoring and coaching, which are sometimes used interchangeably. While both offer one-on-one guidance, the mentor is usually inside the organization, while the coach is usually an expert outside of it. Coaching is also generally focused on developing specific skills that could be applied to many companies, while

mentoring is more about developing relationships that might help the mentee navigate her specific company.

One thing coaching and mentoring do have in common, though, is their lack of popularity in the sheet metal industry. The New Horizons study found that over 80% of respondents’ organizations had neither a mentoring or coaching program.

There are likely a few reasons for that, particularly in recent years, says Guy Gast, president of Waldinger’s – Iowa division and past president of SMACNA. For one, the generation retiring from the industry is taking with them the soft skills they developed over the years that are necessary for good mentorship, he says. At the same time, the recent technological shift across the industry puts many at a similar level of understanding. “While we can certainly see older workers adopting technology readily and quickly, the comfort level that people develop from mentoring programs comes from honing lifelong skills,” he says.

That doesn’t mean there aren’t excellent reasons for developing mentorship programs, he adds. In fact, they may be needed now more than ever to deal with the types of major technological and generational challenges the industry has seen in recent years.

One of those challenges is finding competent, capable workers—especially younger employees, the ones critical to the long-term success of the industry. But as the New Horizons study points out, mentorships may be one good way to attract those younger, Millennial employees because mentorships can help people find greater meaning in their work, something very important to this generation. SMACNA President Angie

Simon agrees, and says those mentored employees could even be your best recruiters. “This is a generation that, if you can include them and mentor them, help them, pay attention to them, they’re going to share that story with their friends who are maybe working at a restaurant or wherever,” she says. “They’re going to share the story that this is a pretty cool place to work.”

Another upside of developing mentorship programs is that they can help foster good working relationships between labor and management. “It’s something that labor and management can and should partner on,” says Gast. “Not all training has to be delivered in a bricks-and-mortar environment. Anything that we can do to partner more in a local marketplace to universally deploy training is good because our people do move around from shop to shop. Part of the attraction of a union workforce isn’t just the availability or the skillset, but it’s the experience a customer has.”

So, to ensure successful mentorship programs? The New Horizons study suggests establishing clear goals and objectives between the mentor and mentee at the outset, monitoring mentee progress throughout the program, and evaluating the mentorship program regularly.

Angie Simon also believes collaboration between management and labor is key. At Western Allied Mechanical, Simon has regular mentoring sessions with future stockholders in the company who, in turn, mentor junior employees. That program proved so successful that Western proposed it to their partners at Local 104 and now every foreperson mentors a junior employee in the field.

Simon also believes that good mentorship starts with a firm commitment from the top. “Top management has to say they want to be involved, and they have to make it happen. They have to say to themselves, ‘I have an hour set up here for mentoring, and I am not going to miss it come hell or high water.’”

But Simon has also found that mentoring doesn’t always go one way, and says that because we are in a time of such profound technological change, younger employees comfortable with that technology can guide older generations making the mentorship reciprocal. Joseph Sellers, Jr. echoed something similar at *Partners In Progress*: “It’s amazing what you learn as a mentor. It’s a two-way street. I have learned throughout the years how to be better from others and from being a mentor.”

Bottom line, said Sellers, nimble training is so important across the industry right now, and mentorship and coaching programs can be a key part of that training. “We want to make sure our members are well prepared when the call for work comes in.” ■



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FIVE THINGS I BET YOU'VE LEARNED THIS YEAR

In early April or so, I remember seeing someone on Twitter suggest keeping a pandemic journal. If I'd taken that good advice, I bet I'd have a fascinating record. What I thought was possible, important, interesting, worrying, likely... and also what I didn't think about at all (yet). I'm sure it would be illuminating to read now.

It's likely that you didn't keep a journal either, but I bet there are things that you have learned over the course of this year—maybe without even realizing it. Here are five things I'm willing to bet you've learned, to some degree or another.

#1 – You can make decisions faster than you would have predicted

So many organizations have had to just move. Boards and staff teams have had to make significant and high-stakes decisions with limited information and even less time. Dithering wasn't an option. Punting wasn't either.

Decision-making doesn't always have to be done at dizzying speed, but it's good to know you can when you need to. (Especially if usually you have a tendency to move at a snail's pace.)

#2 – Virtual can do more than you realized

Were you expert on Zoom before this all started? Was your organization already fully digital? Did you offer a full suite of hybrid or virtual meetings before March of 2020?

I'm guessing not.

The general learning curve on virtual was extremely steep for almost everyone, and it's worth reflecting on how far you've come. Educational events, board meetings, office operations, finances... even if you've returned to the office, chances are you've broken through into a new normal when it comes to virtual/digital operations.

#3 – You can innovate in more ways than you expected

Not all the innovations have been about going virtual, although obviously that's been huge.

I'm willing to bet you've been trying all sorts of new things, both technology-related and not. Did you roll out anything new for your members? Have you started communicating more quickly and frequently? Did you test any new initiatives? I've been hearing about webinar series, town halls, hangouts, COVID-related newsletters, brand-new advocacy campaigns, whole new employee/team processes, and on an on.

Lots of spaghetti has been thrown against the wall. Don't just



By Meredith Low

look at what's sticking; look at how you've gotten better at the throwing.

#4 – You have a deeper understanding of your value

There's so much more going on than a pandemic, and so much more going on than a recession. It's both, and so much more besides. What exactly the durable impacts will be remains to be seen, and these depend on how the next few years go by.

So, questions of organizational sustainability being asked aren't just about single sources of revenue; they go deeper than that, to questions of fundamental value, which go back to your mission. What is your purpose? Why do you exist? Who benefits from your existence? How can you induce people to contribute to your work both financially and otherwise; that is, share those benefits with you?

How are all of these elements going to be impacted by the ongoing pandemic and all that goes with it?

A crisis drives us back to the fundamentals, and I think this is no exception. I'm sure you've had new insights into the answers to these questions for your organization—or at the very least, you're more clear on the right questions to ask.

#5 – You are far more attuned to organizational risks

Yes, we'll all make sure we put "pandemic" into risk frameworks now. But going farther, I think we have all internalized a sense of risk in our operations. Overlearning this lesson, of course, will make us all too cautious. But I think it's more likely that we'll just go forward with a deeper understanding of the risk profile that accompanies our work, like a shadow that we cast.

And so, onward

What have you learned that you wish you'd learned years ago?

What have you learned that you want to bake into your practices going forward, so your organization doesn't have to learn it again?

And what are you going to learn next? ■

If you'd like help figuring out where to take your organization, please get in touch at <https://meredithlow.com/>.

HEALTHY VENTILATION RATES TO COMBAT COVID-19

Transmission of respiratory infections through the air is classified as direct contact or airborne. In 2003 with the SARS-CoV-2 it was never established how long the virus remained infectious in the air. Because viruses generally have a minimum dose at which they cause infection, health risk is related to concentration in air and duration of exposure.

As the novel COVID-19 continues its global spread, the importance of ensuring healthy indoor air quality is paramount to helping lower the curve of infections. Studies have demonstrated that higher ventilation rates have a direct impact on lowering the spread of microbials in workplaces and other occupied spaces. ASHRAE Standard 62.1, *Ventilation for Acceptable Indoor Air Quality*, specifies minimum ventilation rates and other measures for new and existing buildings.

Demand control ventilation (DCV), which adjusts outside ventilation air based on the number of occupants and the ventilation demand for those occupants create, is seen as a convenient solution to satisfy ASHRAE 62.1. However, this type of control is often left to the end user with few guidelines to calculate correct ventilation rate. This may create levels that are ineffective.



By Norm Grusnick, P.Eng.

The benefit of higher levels of outside air intake is that it will help slow the rate of microbial growth—including viruses such as COVID-19. Outdoor air intake is one of the most difficult air measurements to take properly. System designs are typically 500 feet per minute for 100% outside air. However, end users typically want to reduce as low as 10% to save costs. At the lower rate the velocity of 50 fpm is very difficult to measure accurately.

When CO₂ levels are being measured in the return air as opposed to in an area near people breathing level, it will show a lower CO₂ indication than what occupants are breathing. Outside air CO₂ levels continue to rise in North America and measuring these as well as indoor levels are critical in maintaining PPM calculations. When only indoor levels are used for differential calculations based on an assumed outdoor level, the effect is less outside air is being introduced to the space. Building owners and facility managers should review their operating sequence to safeguard occupant health and safety. For example, if a building has a target CO₂ setpoint of 1100 PPM or more above background, consider reducing so to facilitate introduction of more outside air.

Building operators should regularly check outside air intakes, outside air dampers, filters to be sure they are free of obstructions. These efforts may increase energy costs to the conditioned spaces but it is the most socially responsible way to keep schools and businesses free from the spread of unwanted viruses, including COVID-19. ■



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YOUR NEXT IDEAL SUPERVISOR MUST INCLUDE THESE TRAITS

A supervisor who cares about their team, cares about their safety. A 20-year trades ticket or 20 years of job experience essentially becomes useless the moment a frontline employee becomes a supervisor. Not that 20 years of experience will no longer be needed, but largely, a supervisor does not do the frontline work anymore. They now supervise frontline work, and that requires a completely different skillset.

Effective supervisors need coaching skills, communications skills, people skills, management skills, and leadership skills. Eighty percent of a supervisor's day is spent coaching, communicating, managing, leading, and dealing with people.

So, when companies promote one of their frontline employees into a supervisory position, are they setting that supervisor up to win?

Clarifying Questions to Select a Supervisor

Before you select your next supervisor, ask yourself and your organization these questions:

- Are we clear on the specific skillset that we want our ideal supervisor to possess?
- Have we articulated that skillset and committed it to a selection process to hire the right supervisor, and not the longest-tenured employee?
- Has the candidate already demonstrated leadership, teamwork, work ethic, and the ability to communicate well?
- Are we prepared to support our existing supervisors in acquiring the skills and character traits to help them meet a higher standard?

When it comes to selecting the right supervisor, serious thought is required. Since the supervisor is the company spokesperson at the frontline, a frontline supervisor needs to align with the company values.

A frontline supervisor needs to embody the traits, skills, and image that the organization would like to project to their employees.

Below are five of the most necessary skills and traits an ideal supervisor should possess.

Respect

If the other members of the organization do not respect the candidate, promoting them to a supervisor will not improve that. In fact, it may likely degrade the culture of the organization. And if a candidate has difficulty giving or demonstrating respect (to others, to co-workers, to the company), they are simply the wrong choice.



By Kevin Burns

Focused on Others

Supervisory is not about how good the supervisor used to be at the job. It is about how good employees are going to be able to perform with that supervisor leading the team.

The role of supervisor is not to be the hero. The role of the supervisor is to be the guide. The best supervisors are focused on helping each individual member of their teams to continuously improve and achieve.

Safety Gene

When someone is others-focused, it is impossible to not own the safety gene. Safety is how we show that we care for our teams. A supervisor who cares about their team cares about their safety. A supervisor with strong safety values will convince others to do the same.

No one in the organization has more influence over the behaviours of frontline employees than a frontline supervisor. Employees do what their supervisors do. Supervisors need to own the safety gene.

Quality

There is no pride in work unless special attention is paid to the quality of your work. When quality becomes a mindset, there are no shortcuts anymore. There are no do-overs because it gets done right the first time. And if the result of the job is going to be right, how you do the job is also going to be right. A right mindset results in quality outcomes. Where there is quality, there is pride. And where there is quality and pride, there is safety.

Approachability

Employees rarely leave a job because of the company or the senior leadership team. An employee leaves most often due to a malfunctioning relationship with their immediate supervisor. Employees want to be able to approach their supervisors to ask questions, offer suggestions, and know that the supervisor stands up for them and the rest of the team. Management and the safety department also want to be able to approach a supervisor without getting pushback and attitude. A supervisor who cannot be approached does not lead a team. Overwhelmingly, employees want to feel valued and valuable. An approachable supervisor facilitates that.

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STANDARD FORM CONTRACTS AND THE MYSTERIOUS AMENDMENT

Many contractors appreciate the importance of utilizing written contracts for their construction and renovation projects. Standard form contracts such as those developed by the Canadian Construction Documents Committee (the “CCDC”) can be particularly useful when employed correctly.

There are risks, however, with blindly using standard form contracts that do not conform to the actual expectations of the parties involved. There are also dangers with failing to clearly delete inapplicable sections, as evidenced by the recent case of *Anway Construction Ltd. v Hunte*, 2020 BCSC 601.

The Facts

In that case, the defendant homeowners hired the plaintiff, Anway Construction Ltd. (“Anway”) to demolish their existing house in Vancouver, B.C. and build a new, energy-efficient ‘passive house’ in its place.

The parties executed a written agreement using a standard template CCDC 3-1998 cost-plus contract that contained a guaranteed maximum price option (the “GMP Option”). The GMP Option, if utilized, effectively set the maximum price that could be charged under the contract. However, given that



By Matthew T Potomak, and
Jeremy S. Koch, Kuhn LLP

Anway apparently never set fixed prices for their work, the guaranteed price option was left blank.

As a requirement for the owner’s financing, the owner’s lender (“BMO”) insisted upon a copy of a signed contract detailing the total expected cost of construction. Given that much of the details pertaining to the house were still undecided, the parties had only discussed general estimates.

When BMO was provided with a copy of the signed agreement that failed to articulate the anticipated costs, BMO communicated to the owners that they would not be able to provide financing if the costs of construction were unknown.

In some mysterious fashion, BMO acquired a copy of the contract with the figure \$925,000.00 written in the spot for the GMP Option. Interestingly, the only copy of the contract produced at trial which stated this maximum price was the copy on file with BMO.

Anway demolished the old house and began construction of the new one but did not complete. After experiencing some issues with financing and paying Anway nearly \$1 million, the owners refused to pay anymore, taking the position that the contract had a guaranteed maximum price of \$925,000.00. As a result, Anway abandoned the project and demanded payment for the work that they had completed.

Eventually, Anway sued the owners for their unpaid invoices, totaling \$132,989.37. The owners counterclaimed for \$1.46 million for the cost of hiring another contractor to complete construction and other damages.

The Decision

Much of the court’s analysis examined whether there was, as the owners alleged, a guaranteed maximum price in the contract.

The owners claim that Anway verbally communicated a maximum price of \$925,000.00. Anway denied this representation, stating that they never provide a fixed price.

At summary trial, no one was willing to admit that they added the amendment. It appeared that there was an irreconcilable

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SMART Local 280 /SMACNA-BC Partnership



Left: Jud Martell, Local Union No. 280 President.
Right: Bernie Antchak, Northwest Sheet Metal Ltd., SMACNA-BC President.



Labour & Management
“Embracing the Challenge”
 - B. Flaherty, Cornell University, Syracuse, N.Y.

THE ELECTRIC FUTURE

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were afraid to tackle this job due to tolerances and quality expectations.”

At the time of writing, the project had run eight months through the COVID period and involved the collaboration of over 60 people in different disciplines working on subsystem teams: battery, powertrain, chassis, and design. The result is a testament to the talent, commitment, and adaptability of this immense team and a nod to the future. ■

CONTRACTORS 101

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Do Not Make this Mistake

This is not an exhaustive list. There are so many other traits, skills, and characteristics that could bolster frontline teams. It is important that your company decides for themselves, the traits, skills, and characteristics they would like to see coming from all supervisors.

New Call-to-Action

Now here is where an organization must be careful. When determining the characteristics, traits, and skills of your ideal supervisor, do not view these through the corporate lens. View them through the eyes of your frontline employees.

- What are the skills, traits, and characteristics that frontline employees would want their supervisors to have?
- What would cause employees to respond favorably in their daily interactions with their immediate supervisor?

Employees who look favorably at their workplace are more willing to work as a team and remain loyal to that workplace. When employees care about their workplace, they are willing to stand up and protect it, and good safety performance results.

Since all initiatives, policies, process, and procedure are facilitated through the supervisor, including safety, the supervisor needs to embody the values of the organization. ■

IT'S THE LAW

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conflict in the evidence on the question of how the \$925,000.00 figure first came to be placed on the copy of the contract in BMO's file.

After weighing all the evidence, the court determined that it must have been someone from Anway who sent BMO the amended contract.

The court concluded that there was a guaranteed maximum price of \$925,000.00 and Anway was in breach of their contract for billing the owners in excess of the guaranteed maximum price. The court dismissed Anway's claim and granted judgement in favour of the homeowners and against Anway in the amount of \$836,944.03.

Lessons Learned

1. Exercise caution in using standard form template contracts. Ensure you are using the most suitable form of contract for the specific project and one that conforms to your standard business practice. If you are unsure, seek legal advice in advance.
2. It is good practice for handwritten amendments in a contract to be initialed by both parties. While in this case the court found that the handwritten amendment was valid despite the lack of initials from both parties, this will not always be the case. Initialing handwritten terms can improve certainty and help avoid costly disputes.
3. If a term of the contract is not being used, it is good practice to delete it or clearly strike it through and have both parties initial the deletion. Leaving sections blank can be risky. ■

This article was written by Matthew T. Potomak, lawyer, and Jeremy S. Koch, articulated student, who practise in construction law with the law firm of Kuhn LLP. This article is only intended as a guide and cannot cover every situation. It is important to get legal advice for specific situations. If you have any questions or comments about this case or other construction law matters, please contact us at 604-864-8877 (Abbotsford) or 604.684.8668 (Vancouver)

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