



#### HIGHLIGHTS

- P4 Sustainability starts here
- P6 Lessons in reducing embodied carbon
- **P9** Maximizing marketability with amenities

# PERSPECTIVE

VOLUME 12 | SPRING | 2024

#### Saving the planet one building at a time

H BY NICOLE SPANGLER

#### Chief Leschi Schools ESCO K-12 Performance Contracting

Chief Leschi Schools recently partnered with MacDonald-Miller to pursue funding sources for the design and installation of an energy efficient HVAC system. Through this partnership, Chief Leschi Schools successfully obtained a \$25,000,000 direct allocation from the Washington State budget to replace existing HVAC infrastructure. These upgrades will result in a healthier environment not only for the children and employees of the school, but for the greater community and the entire planet! This summer, crews will remove the overhead ceiling tile and grid to gut the existing system and install a new, variable refrigerant flow (VRF) mechanical system. MacMiller is championing this extensive process and the challenging work across the **200,000 SF campus in just one summer!** We are committed to the near impossible task of executing **50,000 mechanical labor hours** 

and coordinating with **20 subcontractors** to ensure that this work is complete before the start of the next school year in September.

Read more about the positive impacts this project will have on page 8!



#### Always making buildings work better...

I'm proud to see how much building efficiency work is happening for our customers - as well as our own work to reach our company sustainability goals. We've always known it's a worthy cause to make buildings work better!

We're off to a running start in 2024 with a few people and project highlights. Welcome to our new CFO, Christian Geismann. Stephanie Gebhardt will assist Christian through September and remain on our Board of Directors into next year. Congratulations to Pat Cabe, our new Director of Healthcare Sales, after eight awesome years with the team. Lee Pyfrom was recently awarded Safety Professional of the Year by the Mechanical Contractors Association of Western WA. I'm proud of our commitment to safety, and how the industry sees us as the gold standard.

Snogualmie Casino, Clackamas Courthouse, and Swedish Hospital are busy in the pre-construction stage. Our Performance Contracting team is preparing to attack the Chief Leschi Schools project this summer – an amazing effort to retrofit the entire school in 100 days! Kudos to the major projects team for winning the \$40M Inglemoor High School project. We've also landed three biotech jobs with Sonoma Biotherapeutics, Seattle Genetics, and Bio-Rad Laboratories, totaling \$20M altogether.

Our Smart Building Services (SBS) team surpassed \$1M in contracts for analytics, reporting and remote monitoring, a big milestone for the future of building performance. Our Building Services team excels in guiding clients through recent WA State Clean Buildings legislation. SBS, Energy Engineering, Special Projects and Controls Services are collaborating to provide custom compliance solutions.

I hope you find time to enjoy some PNW sunshine in the coming months. Stay safe in all your work and recreational activities.

You Be You!

Jun Jun A

**Gus Simonds** CEO

# GIVE IT UP FOR GIVING BACK (II)

#### Mark Krewedl, Vice President of Operations **American Heart Association – Teen of Impact**

The American Heart Association (AHA) is known for its significant contributions to cardiovascular research, education, and advocacy. In an effort to amplify youth voices, they launched the "Teen of Impact Initiative." This program spotlights a select cohort of teens nationwide who are honored for their commitment to advancing cardiovascular health. Nominees use their networks to spread the word on heart health, raise funds for life-saving research, and advocate for the well-being of all individuals.

Mark Krewedl, Vice President of Operations at MacDonald-Miller, has a personal connection to the cause. Mark's niece, Mili, was nominated to be a Washington Teen of Impact through the AHA, given her advocacy for the heart and mental health of children born with a Congenital Heart Defect (CHD). Mili's journey, marked by her own battle with a CHD since birth, paints a picture of resilience in adolescence. "We were grateful that there was medical technology available for her to receive this care. So much of this would not be possible without funding to support research from the AHA," says Mark.

Mili's determination, with support from the Giving Fund, meant that she could spearhead her campaign to transform the community's health. Mili was able to join fellow changemakers and learn about fundraising tactics, how to take charge of their health, and advocate for changes in policy.





» To learn more about MacMiller's Giving Fund contact Robert.Gibson@macmiller.com.

# AWARUS

Congratulations to two of our MacDonald-Miller leaders who have been recognized for their incredible contributions to our industry and to the Mechanical Contractors Association (MCA) of Western Washington community this past year.





Lee's dedication to safety is unmatched. Not only does he lead the MacDonald-Miller safety program, but he also extends his expertise to our industry peers via MCA.

Lee's enthusiasm for safety is most evident when he teaches the MPM-1 program safety module class or serves on the MCAA National Safety & Health Committee, which organizes the annual safety and health conference. When we think of a Safety Superstar, we think of Lee Pyfrom!

Lewie Thomson Associate Principal **Rising Star** Award 



Since joining the MCA instructor group in 2021, Lewie has consistently demonstrated a true talent for connecting with students and making learning fun! Lewie has shown exceptional creativity as an instructor for the HVAC Engineering for Non-Engineers Program. Whether it's refining course materials, crafting learning tools, or nurturing collaboration among students, Lewie's commitment to enriching the learning experience has set him apart.

The high praise and appreciation from students echo Lewie's effectiveness in presenting complex technical concepts in an engaging and easily understandable way. Congratulations, Lewie! 🚥

#### Our plumbing talent runs deep

Our diverse plumbing services team is always ready to take on any challenge from minor leaks to major plumbing system emergencies. MacDonald-Miller provides top-notch plumbing services tailored to your needs. Here's why you can trust us to keep your plumbing systems running seamlessly:

- 24/7 Emergency Service
- Plumbing Leak Repair & Pipe Replacement
- Drain Cleaning & High-Pressure Hydro-Jetting Service
- Specialized Drain Cleaning Maintenance Programs
- Camera Inspection & Underground Pipe Locating/Tracing
- Domestic Water & Underground Sewer Repairs
- Sewer/Storm Pump Lift Station Maintenance & Repair
- Backflow Testing, Repair & Replacement
- Commercial Water Heater/Boiler Repair & Install
- Pump Maintenance, Repair & Replacement
- Pipe Freezing on Live Plumbing Systems
- Plumbing Fixture Repair and Replacement
- Diagnostics on Low Water Pressure/Temperature Issues
- Natural Gas Troubleshooting & Repair
- Medical Piping & Equipment Repair





### We're zeroed in on carbon neutrality.

At MacDonald-Miller, we support building projects at every stage of their sustainability journey. As a full-service mechanical contractor with a worldclass engineering team, we are proud to shape projects that influence and enhance our local communities in Washington, Oregon, and beyond. We design, build, and optimize mechanical systems that lower energy use without compromising performance.

We hear the demand. We're tuned in to what our clients are asking for. There's a growing call for robust sustainability solutions in building design and operations. This demand has only intensified since the inception of Leadership in Energy and Environmental Design (LEED) nearly three decades ago, alongside the rising prominence of Environment, Social, Governance (ESG) initiatives aimed at risk mitigation. We understand that a truly resilient company goes beyond the basics, offering comprehensive services that prioritize environmental health and set ambitious sustainability goals of our own.

We lead by example. As of 2023, we have joined both the Climate Pledge and the MEP 2040 sustainability commitments. As a proud signatory, we are pleased to be able to share our findings publicly with our employees, peers, and customers.

We bring solutions. MacDonald-Miller Facility Solutions isn't just a name; it's a promise. We're uniquely equipped to offer innovative solutions that address the challenges posed by our evolving climate and building codes. Whether you're navigating stringent state building performance standards or simply aiming to cut down on energy costs, count on us to deliver tailored solutions that meet your needs.



## **MACMILLER** BY THE NUMBERS

**145+** active buildings with sustainability goals

**3** projects pursuing the Living Building Challenge

Provided **59** buildings with rebates and over **\$1M** in annual ongoing energy savings.

**38** tons of CO<sub>2</sub> avoided by performing **4,646** remote service calls versus sending a vehicle (Smart Building Services)

**146,674** tons of CO<sub>2</sub> was avoided at customer sites due to running buildings more efficiently.

#### **RECOGNIZED CLIMATE LEADERSHIP:**

CLIMATE

PLEDGE



# SUSTAINABILITY STARTS HERE

**In December of 2022** we committed to net zero emissions in our facilities and operations by 2040 by becoming a signatory for the **Climate Pledge**. Our benchmark data from 2022 is the first step to regular reporting, carbon elimination, and understanding credible offsets that will help us meet our goals.

# SCOPE 1

#### **Direct Emissions**

Greenhouse gas emissions (GHG) affiliated with building natural gas and vehicle fleet.

#### **MMFS CARBON EMISSIONS: 202**







Gas-powered passenge vehicles for one year.

\*Per national averages proposed by EPA GHG Equivalencies Calculator.

Now that these benchmarks are established we can begin working toward our goals!

# **SCOPE 2**

#### **Indirect Emissions**

Greenhouse gases affiliated with generation of purchased electricity for the buildings we occupy.

# **SCOPE 3**

#### **Value Chain Emissions**

Wind turbines

running for a year

needed to offset

these emissions.

Greenhouse gases affiliated with **upstream and downstream** activities. Our biggest GHG emissions stem from capital goods, which is typically comprised of equipment, pipes, valves, fittings, sheet metal, and electrical materials.

<b>2 BASELINE YEAR</b> [Metric Tons CO <sub>2</sub> Equivalency (CO <sub>2</sub> e)]										
>>	15,000	»»	20,000	» 2	5,000	<b>&gt;&gt;</b>	30,000	>>	35,000	»»
ilding de HG emis	sign and constru sions, including	ction indus third party	try to demonstr evaluated Scop	rate leadership e 3 emissions.						
Fuel	<mark>=</mark> Builc	ling El	ectricity	Valu	ıe Chaiı	n (upstre	eam & down	stream s	upply chain)	
							11		0	

5,527

Homes' energy use

for one year.

Note: Assumed refrigerant leakage and jobsite offices/trailers energy use is not included.



#### Lessons in reducing embodied carbon **# BY MARISA ZYLKOWSKI**

#### 7200 Woodlawn, Seattle, Construction Special Projects (CSP)

The expertise of our CSP field team has expanded to facilitate initiatives aimed at reducing embodied carbon, exemplified by our work at 7200 Woodlawn, a two-story, 120-year-old masonry structure situated in Seattle's Green Lake neighborhood. Termed a "living laboratory" by owner Don Davies, this project served as an opportunity to inquire into and meticulously track the carbon footprint of all materials used on-site.

What is embodied carbon? While most projects with sustainability goals focus on energy and water conservation, embodied carbon considers energy and fuel use in the manufacture and transport of materials to the jobsite, including jobsite vehicle and equipment emissions prior to occupancy. There are two ways to gather embodied carbon information on building materials:

#### Request Environmental Product Declarations (EPDs) from suppliers

#### Provide a list of material types and quantities (weight)

As a first step for this project, we requested EPDs from our vendors, of which we received a dozen. If no EPD was available (which is often the case in the MEP industry), we then provided the list of materials for products without EPDs to the team and Don estimated their weights for input into a Life Cycle Analysis calculation.

Why does this matter? "MEP (Mechanical, Electrical, and Plumbing; A1-A3, excluding refrigerants) systems may contribute roughly 10-25% of a new building's embodied carbon, and could be 50% or more of the embodied carbon on a renovation," according to LMN Architects and peer reviewers of Blog #14, Path to Zero Carbon Series.

What is our approach? As Don recently shared, "We all need plumbing, but there's no magic carbon neutral system for piping." For this project, cast iron pipe was chosen for its longevity and durability, as opposed to PVC. It's no shock that this project prioritizes minimal use of materials like PVC, which is recognized for its adverse effects on human health and the environment. The installation of roof-mounted solar panels will offset a portion of the low energy consumption. This project also uses Variable Refrigerant Flow configurations alongside Dedicated Outside Air System units, but this refrigerant type will be phased out by 2026. Most commercial HVAC refrigerant is high carbon footprint material, even with minimal usage. This raises concerns about pressure-testing and the need to capture and reuse refrigerant gases, which is the focus of WA State Department of Ecology's Refrigerant Management Program.

In the mechanical environment, we usually focus on system design that aims to balance emissions during a building's operational phase. However, we appreciated this chance to think critically about those generated before. Although this approach isn't yet common, embracing a holistic perspective on the lifespan of a building, from planning and design stages onward, could soon be the norm.

# **TO THE CREW!**

Mike Contreras, Sheet Metal Journeyman **Ron Jacobs**, Plumbing Foreman Joe Sparks, Refrigeration and Startup Foreman Jeremy McCoy, Senior Project Executive Victoria Klyce, Project Coordinator

Thanks for meeting the unique challenges of this build head-on and bringing new solutions, and to our suppliers who supported this effort!



#### Meydenbauer Center: Stepping it up for efficiency

#### **Bellevue Clean Buildings Tier 1 Early Adopter**

Phase 2 of our scope of work for this project will take the remainder of the year and includes the **Eight Energy** Efficiency Measures in the chart below. These measures will help the client achieve their target EUI (Energy Usage Intensity) for the Clean Buildings Program.

#### 86.8 PRE-PROJECT EUI

#### **1 5** ESTIMATED POST-PROJECT EUI

Well above the State Mandated Target EUI, the Center qualifies for Early Adopter Incentives up to \$129,000 in addition to Pay-4-Performance Incentives up to \$445,680.

#### **Energy Efficiency Measures**

EEM 1	Smart building analytics with fault d
EEM <b>2</b>	Lighting and lighting controls upgrad
EEM 3	Optimize barrel roof insulation
EEM <b>4</b>	Roll-up door air curtains
EEM 5	Insulate bay doors
EEM 6	Window film modifications
EEM <b>7</b>	Domestic hot water system upgrade
EEM 8	Water source heat pump (WSHP) rep

etection
le
lacement

We have undertaken eight energy efficiency measures to help reduce our facility energy usage this year with the help of the MacDonald-Miller team, and the experience has been great. Our Project Manager, Julio Rangel, makes the process easy. We trust that the work is going to come together in a timely manner, and on or under budget. Additionally, MacMiller has a thorough measurement and verification plan to help us understand how these measures contribute to Clean Buildings Standards compliance. Their work has alleviated some of the pressure on our organization to ensure compliance with the new law.

Sara Waltemire, CMP, CVP Chief Operating Officer Meydenbauer Center (City of Bellevue Clean Buildings Ambassador)



#### Chief Leschi Schools, continued from page 1

We know that increased comfort correlates with increased learning for these students and are excited for the additional benefits this new HVAC system will bring which include:

- Year-round comfort with improved system reliability and increased air filtration.
- More places to learn by utilizing all shared rooms/classrooms during hot weather.
- Energy cost savings with future lighting upgrades.

#### **PROJECT TEAM:**

John Van Hersett Performance Contracting Manager

**Nicole Spangler** Performance Contracting Project Manager

**Dan Whittier** Performance Contracting Project Manager

John Sammis Mechanical Project Manager

Erik Sutcliffe Mechanical Project Manager

**Paul Tannerhill** Sheet Metal Foreman

**Russell Roulette** Refrigeration Foreman

Andrew Cuttright Pipefitting Foreman

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#### FACES OF SUCCESS

#### Nicole Spangler

Performance Contracting Project Manager » With MacMiller for almost one year

"My background running large projects in New Construction will bring strong financial management, perspective of preplanning, and an understanding of urgency to quickly find solutions to conflicts with existing infrastructure. I am most excited to work with our strong Performance Contracting and Construction Special Projects teams."



# The new VRF HVAC system SAVES 295 METRIC TONS OF CARBON which is equivalent to:

TT, TUU TREES PLANTED



SCHOOLS

27,000

**GALLONS OF** 

#### Maximizing marketability with amenities

**∺** BY ISOBEL POWELL

#### Tenant Improvement trends for commercial office buildings

Recent years have seen a rise in vacancy rates of commercial office buildings. While some contractors may find this trend concerning, MacDonald-Miller's Construction Special Projects team considers this shift an opportunity for new spaces and customers. Transforming conventional building spaces into dynamic, marketable environments is familiar territory for us! Our West 8 Common Area project in downtown Seattle exemplifies our commitment to modernizing commercial properties with innovative amenities.

The focus is the upper lobby, 4th floor, and 4th floor deck to align systems with proposed space and occupancy changes. While these may be key for mechanical and plumbing design teams, input will be provided throughout other areas to provide a collaborative effort for any unforeseen, existing, or non-existing, mechanical, or plumbing related items.

Keeping on trend for updates to public spaces, scope for this project includes HVAC and plumbing design services for the main lobby, ground floor exterior, level 2 bike room, and the garage entry and departure.

Having overseen the original shell and core construction for West 8, MacMiller's expertise in engineering and design laid the foundation for subsequent TI work. This ensured seamless integration of new features, including variable air volume (VAV) boxes and fan powered boxes.

The final project will offer upscale amenity spaces, including a large conference room, fitness center, locker rooms, ADA bathrooms, and kitchenettes. Our efforts will ensure a clean, seamless look for tenants to enjoy.

At 1201 Third in downtown Seattle, the 55-story skyscraper and longtime MacMiller customer is near completion of its multi-phased controls upgrade – *during occupancy!* The focus will now shift to amenity improvements to retain current tenants and attract new ones.

Downtown Portland also shows a notable trend of high vacancy rates in commercial office buildings, prompting efforts to enhance the amenities within these spaces. Newer buildings are drawing in fresh tenants and constructing speculative suites. The migration of companies away from the downtown core is opening opportunities in neighboring areas such as Lake Oswego, Tigard, and Vancouver.





#### TO ALEX TORRALBO, KENNEWICK

"I just wanted to say thank you for sending Alex Torralbo out today. My construction manager spoke very highly about his professionalism and careful examination of the system. We are looking forward to being able to give the Columbia River Health Clinic his report and the quote to get these repairs done. I will recommend that they have you be their HVAC maintenance contacts from here forward. I think they will also be thoroughly impressed and eager to have you fix their system."

Bob Bendocchi, Pioneer Communications Group



## TO PETR KRYLOV AND SERVICE PLUMBING, GREATER SEATTLE

"MacDonald-Miller Service Plumbing is a top-notch team and always does a great job handling all the plumbing requests for the building. Petr Krylov is an amazing plumber, he knows the building, and is always willing to help with any of the plumbing repairs at Aspira. Petr makes my job easier because I can trust him with the building while repairs are occurring while I am away."

Andre Buchanan, Aspira Apartments

#### TO THEODORE GARCIA, TACOMA

"I just want to make it known that Theodore Garcia has gone above and beyond keeping my boss and I in the loop of what is going on, what he is doing, and what he is planning to do. He also took the time to explain some more technical HVAC issues so we could better understand why a unit isn't working properly and why we have hot/cold spots in the building. Thank you for having great staff at MacDonald-Miller!"

Danielle Neel, Consejo Counseling and Referral Services



#### **PROJECT HIGHLIGHT**

#### Pacific Northwest | NEW CONSTRUCTION

#### The Eight (NE 8th)

Bellevue, Washington

**GENERAL CONTRACTOR:** Skanska

**PROJECT TIMELINE:** 

June 2020 – April 2024

**PROJECT SCOPE:** Design-Build, Plumbing, Fitting, Sheet Metal, Controls

#### **PROJECT DESCRIPTION:**

The NE 8th project (also referred to as "The Eight") is nearing completion for an early spring delivery. MacDonald-Miller is working hand-in-hand with Skanska and other trade partners to deliver a final product that we can all be proud of. This project has been a journey marked by unique challenges for the team. We prioritized early procurement and long-term equipment storage to combat market escalation. Conducting work in the City of Bellevue came with special attention to both craftsmanship and documentation to ensure that all scopes met the city standards. Alongside the challenges came unique opportunities, as we are currently going through the process of installing our first Firefighter Air Replenishment System as a company. The construction team has worked diligently to ensure that all work is performed with the end-user in mind to ensure a seamless transition. This office space has already made great traction in finding tenants in the heart of Bellevue, with the recent announcement of Pokémon Company International set to occupy nearly 75% of the office building. Major shout out to all craft labor and supervision for operating at such a high level!



#### FACES OF SUCCESS

Brian Johnson Sheet Metal Journeyman » Years with MacMiller: Four

"I love MacMiller because I can be independent, but also feel like part of the big picture. This company values and supports people, knowledge, and growth. Working with the team at NE 8th made this very clear."



Inland Northwest | DESIGN-BUILD

**CO9 Data Center** 

Quincy, Washington

**PROJECT SCOPE:** Design-Build, HVAC, Plumbing

#### **PROJECT DESCRIPTION:**

This 36,550 SF space is a data center in central Washington. This project boasts impressive numbers, including 2,400 ft of industrial-treated water (ITW) copper piping, 2200 ft of plumbing copper piping, and 1,300 ft of underground PVC piping. 28 direct evaporative cooling (DEC) units were installed, each weighing 31,000 lbs. Major equipment also includes electrical house heat pumps, exhaust fans, split-systems, generator stacks with bellows, and heat tracing.

#### **UNIQUE CHALLENGES:**

The remote location of this site posed a challenge in mobilizing crews, putting huge emphasis on accurate scheduling and work timelines. The systems within the data center required duct leakage testing, which was an in-depth process to assess air leakage and ensure air quality.

#### **INTERNAL PROJECT TEAM:**

Chad Murphy/Project Manager, Keith Anderson/Sheet Metal Foreman, Matt Logan/Plumbing Foreman, Jon Sigmund/Account Executive, Richard Condrey/Project Executive, Jacob Hackl/Project Engineer 🚥



Matt Logan Plumbing General Foreman

» Years with MacMiller: Three

"CO9 was a challenging, yet fun project that taught me a lot about teamwork. This project was a success due to having a great crew – from logistics and detailing to our fabrication shop and safety team, to all the vendors that supplied materials for this project."



**GENERAL CONTRACTOR:** Capital Power Group (CPG)

**PROJECT TIMELINE:** December 2021 – March 2024

#### FACES OF SUCCESS



#### **TO JAYLA CURETON, EVERETT**

"In our recent quarterly meeting with a significant commercial building portfolio, Jayla Cureton's exceptional skills and unwavering commitment were not only acknowledged but celebrated. Her prowess as a technician played a pivotal role in securing over 20 new buildings under a maintenance agreement. It's moments like these that showcase the true impact our team can have, and Jayla's contribution has been nothing short of outstanding. Her technical expertise, coupled with a relentless drive for excellence, has not only impressed our clients but has also solidified MacDonald-Miller as a top choice in the industry."

Chris Diehl, Service Area Operations Manager

#### TO MATT LOGAN, KENNEWICK

"I wanted to let MacDonald-Miller know how much I appreciate Matt Logan and the work he continues to do. His transparency and professionalism instilled a trust that I have found to be rare in construction. When there is a problem or discrepancy, he takes the initiative to resolve the issue, always sharing what he has found and how he is addressing the issue. No doubt he has been critical to the success of this installation. I'm very grateful to have him as a major team player on this site and would never hesitate to recommend him on future projects."

Trevor Laughter, Bonneville Power Administration

#### IN THIS ISSUE

- P1 Saving the planet one building at a time
- P2 Letter from CEO, Gus Simonds
- P2 Give it up for giving back
- P3 Awards
- P3 Our plumbing talent runs deep
- P4 Sustainability starts here
- P6 Lessons in reducing embodied carbon
- **P7** Stepping it up for efficiency
- **P8** Chief Leschi Schools, continued
- **P9** Maximizing marketability with amenities
- P10 Shout outs
- P11 Project highlights

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Clackamas County Courthouse, Oregon City Engineered for no on-site fossil fuels in pursuit of LEED Gold, with a

focus on sustainability and resiliency.

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