

# THE CONNECTION

A BIENNIAL PUBLICATION FROM COUGHLIN PORTER LUNDEEN  
REVIEWING ALL THINGS AEC AND PACIFIC NORTHWEST

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ED. NO. 13 | SUMMER 2023

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We make it a point to offer regular presentations to our clients and partners, sharing insights on topics our team is exploring as a collective. Browse the synopses of our current roadshow presentations including: the Latest in Concrete Code, Rethinking Healthcare Renovations, Civil Shared Coordinates, and Moving Forward with Mass Timber.

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**COUGHLINPORTERLUNDEEN**  
STRUCTURAL CIVIL SEISMIC ENGINEERING

CONTINUED LEARNING: OUR CLIENT PRESENTATION ROADSHOW

Coughlin Porter Lundeen makes it a point to offer education, resources, and support to our clients and partners. The latest iteration: our client presentation roadshow.

As we decipher code updates and explore the latest trends in structural and civil engineering, we are pleased to share our insights with clients and partners. Our client presentation roadshows allow us to present topics our team is exploring as a collective and field questions in real-time.

Determined to offer education, resources, and support to our partners and clients, we truly appreciate the opportunity to visit your offices and collaborate in-person. We see these presentations as an extension of our design team collaboration, sharing intel and insights so that together, we can create incredible projects in our Pacific Northwest home.

Our hope is that by sharing the synopses of our current roadshow list, you'll find a presentation that's a fit for your office or team.

LATEST IN CONCRETE CODE  
RETHINKING HEALTHCARE RENOVATIONS  
SHARED COORDINATES  
MOVING FORWARD WITH MASS TIMBER

1 THE LATEST IN CONCRETE CODE  
Exploring and Explaining Concrete Code Updates in IBC 2021

We're committed to not only keeping our finger on the pulse of changing code, but communicating those changes, and their consequences, to our clients and partners. We know it's important to understand how code changes affect projects and know it's incredibly valuable to have these updates presented in a clear, concise way. Our roadshow presentation aims to do just that: summarize what's happening and what it means for upcoming projects!



Matt Snook, P.E., S.E., Structural Associate Principal



Carson Baker, P.E., Structural Project Engineer



Zach Whitman, P.E., S.E., Structural Project Engineer

The most significant changes to the ACI concrete code in this cycle include revised concrete shear strength equations, access to stronger rebar options, and most drastically, changes to concrete shear walls. The major updates to concrete shear walls include requirements and changes originating from performance-based high-rise building design.

Impacts depend on each unique project, but the code updates translate to an increase of approximately 40 to 100 percent from what was required five years ago. While changes due to code updates are expected, and the industry expects effects to compound, this is an unprecedented jump, with buildings in the mid-rise zone seeing the biggest impact.

Impacts depend on each unique project, but the code updates translate to an increase of approximately 40 to 100 percent from what was required five years ago. While changes due to code updates are expected, and the industry expects effects to compound, this is an unprecedented jump, with buildings in the mid-rise zone seeing the biggest impact.

Code Update Summary:

- 1. Concrete shear strength equations are revised.** This means that large footings and multi-story basement walls are affected. Our team presents our approaches for incorporating these changes while minimizing the cost, carbon, and architectural impacts.
- 2. Higher strength rebar (Grade 80) is now available and codified for use in many applications.** Use of this new rebar can reduce cost and carbon, so we encourage its use where appropriate. Our team has already used this material on many jobs by applying for code exceptions, but now that this material is codified it will become even more mainstream.
- 3. Concrete shear walls are subject to major changes in this code cycle.** As high-rise design is being applied to all building types, these new requirements can have a large impact on wall thicknesses. Because implications for these changes vary based on building height, the roadshow presentation includes four case studies: peer review high-rise (>240 ft), non-peer review high-rise (~200 ft), mid-rise (~100 ft), and podium projects. The mid-rise category requires the most collaboration going forward. If a design approach remains unchanged, shear wall cost/Global Warming Potential (GWP) can increase by ~75%. Our team presents several options to counter these changes. From utilizing code exemptions to looking at newer lateral systems and smart shear wall layouts, our team is ready to face these changes head on.



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RETHINKING HEALTHCARE RENOVATIONS

Smart Healthcare Renovations Make the Most of What Exists

Healthcare “glow-ups” are not without their growing pains, but by making the most of what exists already, teams can create wonderful healthcare facilities. From rural clinics to Level 1 trauma hospitals and cutting-edge research facilities, the Coughlin Porter Lundeen portfolio includes 80 projects representing more than \$3.5 billion in the healthcare space.

While each program is undoubtedly unique, the projects in this market share an elevated commitment to serving and supporting those who use the final facility. There is true heart in these buildings. We understand the importance of creating a facility that houses discovery and research, supports front line workers and medical teams, and functions as an important step in so many patient journeys.

The commitment to care and learning isn’t all these projects share. The current healthcare market in the Northwest is faced with two primary challenges:

**1. Reinventing an existing building or campus.**  
How do we effectively revitalize and repurpose what already exists?

**2. Accommodating code and necessary upgrades.**  
How do we navigate the many new code requirements?

Instead of opting for new construction, many institutions choose to revitalize and repurpose what already exists. This can be a challenge, but we believe in this approach! It allows the hospital or facility to improve healthcare outcomes,

increase accessibility, improve resiliency, and achieve potentially significant savings compared to new construction. Implementing these updates triggers code requirements, particularly around structural and seismic upgrades. These triggers are dependent on many factors. In addition to the facility’s location and

type, the level of alterations, specs of an addition, and changes to the occupancy classification can determine which code requirements are activated.

The roadshow presentation walks teams through these activations. It also takes a deeper dive into what changes look like in different

scenarios including a large update of a critical care facility, MOB adaptive reuse, and fit-outs and TIs.

Images: Seattle Children's Forest B Building, Benjamin Benschneider

	GRAVITY UPGRADES		SEISMIC UPGRADES	
	Seattle	Washington & Oregon	Seattle	Washington & Oregon
CRITICAL CARE LARGE UPGRADE	Not typically triggered <div>●</div>	Not typically triggered <div>●</div>	MEP upgrades will likely be triggered <div>●</div>	Not typically triggered <div>●</div>
OUTPATIENT/MOB	Not typically triggered – don't add heavy weights to roof <div>●</div>	Not typically triggered – don't add heavy weights to roof <div>●</div>	MEP upgrades may be triggered <div>●</div>	Not typically triggered <div>●</div>
FIT-OUTS / TENANT IMPROVEMENTS	Local upgrades for large equipment only <div>●</div>	Local upgrades for large equipment only <div>●</div>	Local MEP upgrades or Extensive MEP upgrades <div>●</div> <div>●</div>	Not typically triggered <div>●</div>

Risk Key For Triggering Required Structural Upgrades

●

 Low 

●

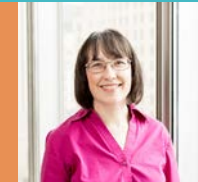
 Medium 

●

 Medium-High 

●

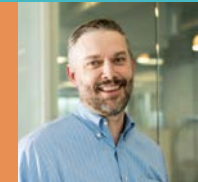
 High



Rebecca Hix Collins,  
P.E., S.E., LEED AP®,  
Senior Structural  
Project Manager



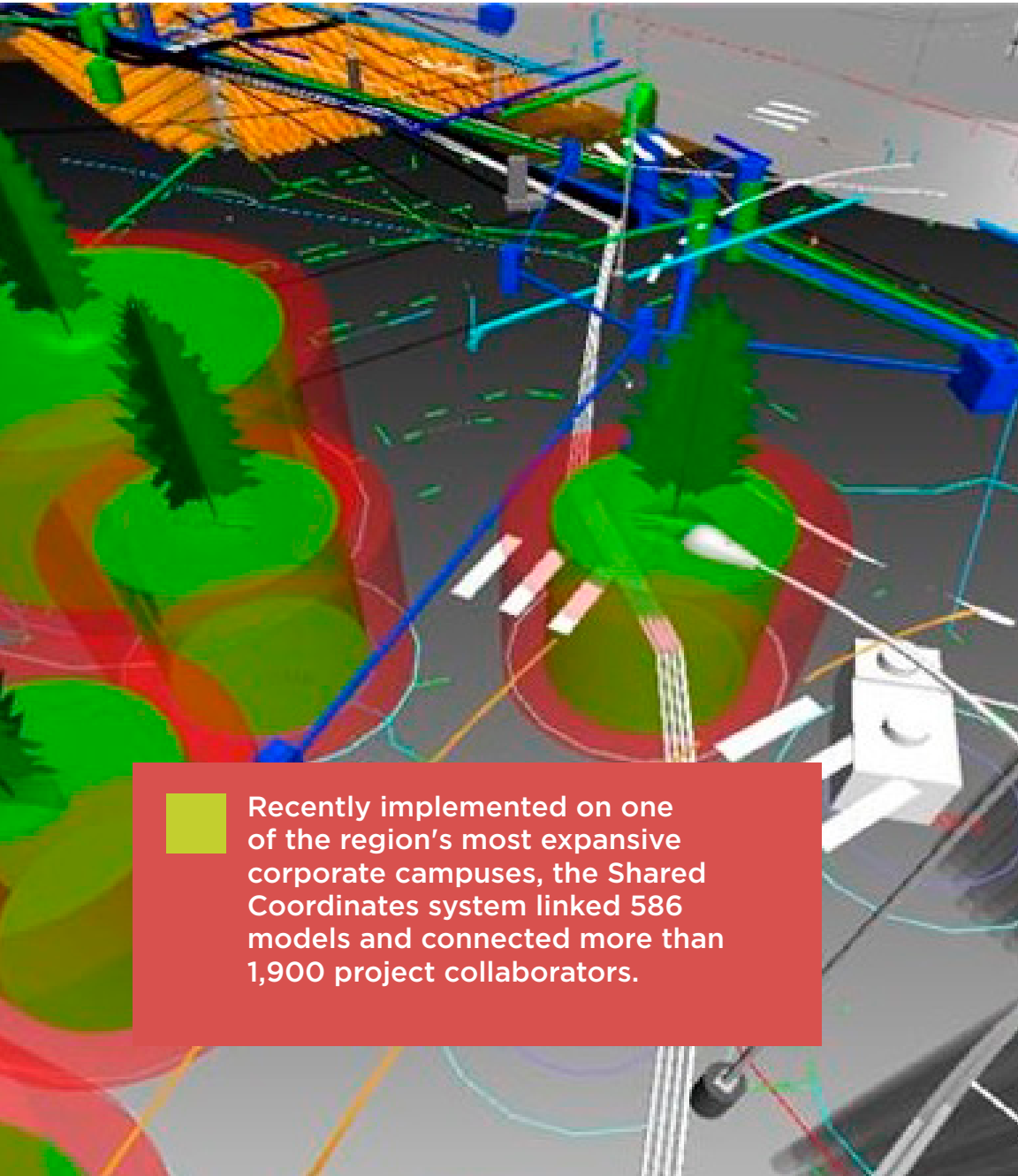
Matt Snook, P.E.,  
S.E., Structural  
Associate Principal



Bryan Zagers, P.E.,  
S.E., Principal

### 3 SHARED COORDINATES

#### *A Modern Take on Earthwork and Digital Sharing*



Recently implemented on one of the region's most expansive corporate campuses, the Shared Coordinates system linked 586 models and connected more than 1,900 project collaborators.

Shared Coordinates is a BIM modeling technology used to organize site and building models in the same digital space. It's a time, money and headache saver, and a game-changer when it comes to getting the team on the same page during the design process, getting the details precise and correct, and avoiding surprises and errors during construction.

Recently implemented on one of the region's most expansive corporate campuses, the Shared Coordinates system linked 586 models and connected more than 1,900 project collaborators. A testament to its effectiveness, every one of the models landed onsite exactly as it should. This system is powerful!

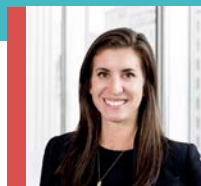
Using geolocation, a detailed coordinate system

is established from which a full project team bases its design models. Models are populated within the system where they're contextualized with precise coordinates that factor in local topographies, survey files and property line geometries. Neighboring projects, models, and associated infrastructure can also be linked. The shared coordinates "map" becomes more and more sophisticated as contributors add data.

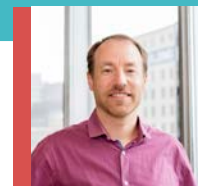
Our civil team initiates a BIM Execution Plan (BEP) for each project pursuit and champions early involvement during the schematic design phase. We use Shared Coordinates on all project types, big and small, simple or complex. It's become standard operating procedure at the firm, a system on which we rely.

#### Advantages of Shared Coordinates:

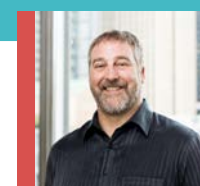
1. One-time setup at project start. No guessing at location/orientation and no special CAD export required.
2. Collaboration! Generates a single federated model for the team, as well as end-users.
3. Streamlines the clash detection process. Teams can better detect and resolve utility conflicts, establish footings and zones of influence, and design around shoring and tiebacks.
4. Provides Revit-friendly components for realistic visual presentation. There's no guessing at locations and/or orientations, and no special CAD export is required.
5. Increases ease of earthwork and excavation coordination. Civil teams have greater access to understand how foundation excavations will interact with the building and surrounding site. It gives us a picture of required slope cuts and how they interact with the building.



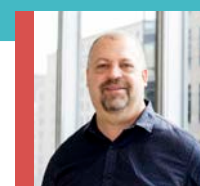
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## 4 MOVING FORWARD WITH MASS TIMBER

### A Material That Continues to Wow and Rise

At Coughlin Porter Lundeen, the Mass Timber Task Group is thriving, determined to keep the firm at the forefront of the mass timber wave. We've invested more than two decades into understanding and implementing this amazing suite of products, and today we collaborate with creative partners to design exceptional mass timber projects like The Gardens District, 35 Stone, Hilltop Heritage Elementary School, Avalon Bothell Commons, 5501 Lakeview, and WWU's Kaiser Borsari Hall.

The mass timber roadshow presentation refreshes some of the basics (the key mass timber products available in the Northwest, supply chain, framing systems, how mass

timber is used in various market types), but focuses primarily on the latest and greatest developments in mass timber, our team's lessons learned, and the mass timber items we're most excited to be exploring and implementing.

Of peak interest lately:

#### Construction types and fire ratings.

Exciting updates to Type IV-B regarding the amount of exposed timber are slated for adoption into the 2024 IBC. Locally, there are opportunities to pre-adopt these provisions for current design projects, solving a lot of design and constructability issues encountered in the current code.

#### Key lessons learned from past mass timber projects.

Whether big picture concepts and strategies, or the more tactical items (like precision connections, grid efficiency, moisture mitigation, tolerances, vertical penetrations and horizontal routing), we leverage our experience to understand the many factors that contribute to the success of a mass timber project.

#### Takeaways and trends from mass timber conferences.

We regularly attend mass timber conferences and events, both locally and nationally. Point supported (post and platform) framing systems were a hot topic and continue to be of interest for certain project types.

#### Research and learnings.

We're dedicated to continuous learning on the mass timber front. This means research, understanding of the greater market, and most recently, a trip to the TallWood site to observe ongoing tests and check in on our design contribution to the project.

[Schedule a presentation](#) with us to learn more!

#### Why mass timber? Here's our shortlist:

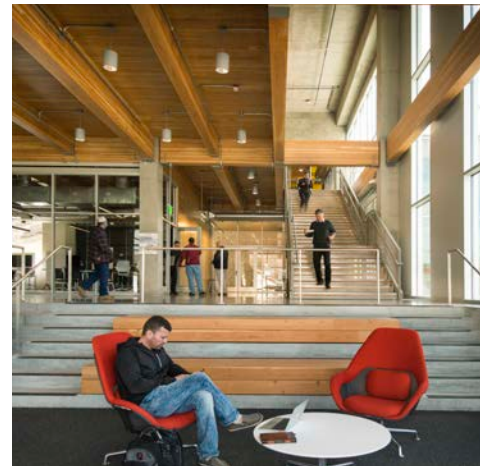
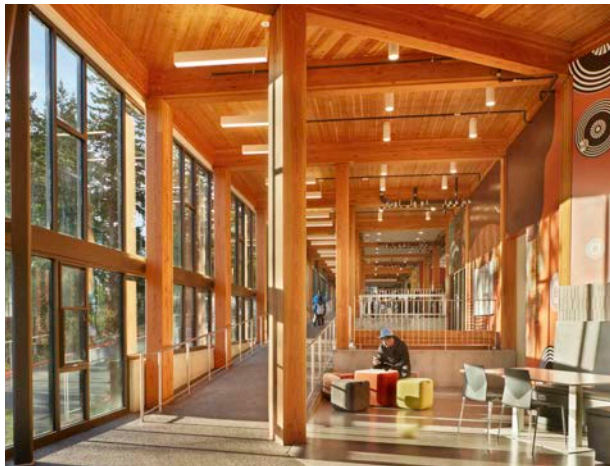
- Allows engineers to design material with excellent structural properties: strength and stiffness.
- Can be a cost-saving alternative to steel and concrete.
- Provides unique opportunities in otherwise unconventional situations.
- Supports architectural visions. It's so beautiful!
- Is fire resistant – timber can be exposed and achieve fire ratings where required.
- Contains lower embodied carbon compared to steel and concrete.
- Bolsters biophilic experiences with healthy interior spaces and potentially higher lease rates.
- Creates jobs and local economic growth.
- Contributes to construction schedule savings potential as a benefit of prefabrication.
- Uses simple equipment for installation, requiring less onsite labor and creating quieter jobsites.



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# Behind the Scenes

In our Q&A series, we take a candid look at projects, hearing from the engineers who bring them to life. In the latest round, Civil Associate Principal Jackie Sempel, Civil Project Manager Bailey Cook, and Civil Project Engineer Katlyn Christenson share insights from the Seattle Storm Center for Basketball Performance.

Owner: Force 10 Enterprises LLC.  
Owner's Representative: [barrientos RYAN](#)  
Architect: [ZGF Architects](#) & [Shive-Hattery Architects](#)  
Civil Engineer: [Coughlin Porter Lundeen](#)  
General Contractor: [Sellen Construction](#)



# Behind the Scenes with The Seattle Storm Center for Basketball Performance

*A first-of-its-kind development, we are honored to be on the majority women-led project team for the WNBA practice facility, the only one in the country dedicated solely to female athletes.*

***Tell us a bit about the project.***

**Jackie Sempel:** [The Seattle Storm](#) Center for Basketball Performance will be the first practice and training facility built exclusively for a women's professional athletic team. Not only does this project hold significant meaning for both the community and me as a former college athlete, but working alongside the design team made it one of my favorite projects ever.

This facility is a groundbreaking achievement and a significant milestone for women's sports in America. As the first of its kind for any professional women's sport, it serves as a symbol of progress and inclusivity in sports. It not only provides world-class training and resources for the Seattle Storm players, but it also fosters a sense of community and unity among the fans and supporters.

**Bailey Cook:** I absolutely agree with Jackie! Collaborating with the team to bring this training facility to life has been so exciting. As for the building itself, the facility will include training rooms, a pool, basketball courts, locker rooms, and offices. Our design included frontage improvements on three different streets, a detention pipe system to meet flow control requirements, bioretention planters, utility connections, and site design for a parking lot and entry plaza.

***How does this project impact the city and/or community?***

**Bailey:** This project will have a huge impact on the city and the community. From start to finish, the core of the project has been about creating a home for the Seattle Storm that can inspire young girls and the community, demonstrating that anything is possible if you have a dream, a purpose, and work hard.

**Katlyn Christenson:** This project shows that Seattle will foster women's athletics. It's incredible to see a professional women's team with so much support. As a

team with four WNBA championships under their belt, I can't wait to see what they do next.

***What makes this project different?***

**Jackie:** The design and construction team is primarily female! I never imagined encountering an AEC design team that consisted of 85% females. It was fascinating to witness how quickly we let our guards down, allowing the team to bond early on and resulting in one of the best collaborative environments of my career.

***What are some of the facility's unique features?***

**Jackie:** Efficiency was a big part of this project. We looked for anything that could function in more than one capacity. For example, the parking area to the north of the building will also serve as space for outdoor 3x3 tournaments. The Force 10 owners wanted to provide a space for this new Olympic sport while maintaining its function for building users. This proved challenging given the strict slope requirements for the courts while maintaining drainage.

**Bailey:** To make this design a reality, we worked with ZGF Architects and Walker Macy to meet the specific grading requirements that basketball courts need, while simultaneously keeping the courts clear of as many manhole covers as possible. However, since our detention system is located under the parking lot, we were required to provide maintenance access. For the manhole covers that we couldn't avoid, our team came up with a really fun solution.

Because the City of Seattle requires all stormwater manhole cover lids to display the word "storm," our team suggested that we design one-of-a-kind manhole covers that are installed along the baseline of the outdoor court area that say "Seattle Storm." It's such a fun detail that the entire team is really excited about.

***Do you have a favorite feature? Any engineering standouts?***

**Jackie:** The "Seattle Storm" manhole covers. The design

team went above and beyond to make the access lids of the detention system a unique site feature.

**Bailey:** I'm excited to see the frontage improvements. Since the project is in an industrial area, the site currently has no sidewalks or greenery. It will be great to see how the new frontage improvements transform the pedestrian experience for the Storm and the neighborhood.

**Katlyn:** My favorite features are the bioretention planters. Bioretention planters are great because they're functional as well as beautiful. These verdant features clean the roof runoff before entering the public storm system, which eventually makes its way to open waterways (where I swim!). Designed under the new 2021 Seattle Stormwater code, we worked diligently with the design team to meet the needs and intent of the building.

And a cool add-on: EV charging stations incorporated into the bioretention planter wall help ease tight space conditions.

***What was the biggest challenge the team faced?***

**Bailey:** Like Jackie mentioned, there's a good amount of grade change across the site and no sidewalks. Based on our experience working in downtown Seattle, we were able to identify early on what the required frontage improvements would be, the challenges with grading in the right-of-way, and how to make that align with the on-site grading for the entry plaza, parking lot, and loading dock entrances.

**Jackie:** Concrete vaults are typically the most efficient method for detaining stormwater for a site with space constraints. However, given the high groundwater present on this site, our civil team explored several detention options before landing on a CMP detention pipe system, and chose to locate it under the parking lot. This approach, along with input from Sellen Construction, not only helped to save the project money but will also reduce construction time.



“ From start to finish, the core of the project has been about creating a home for the Seattle Storm that can inspire young girls and the community, demonstrating that anything is possible if you have a dream, a purpose, and work hard.

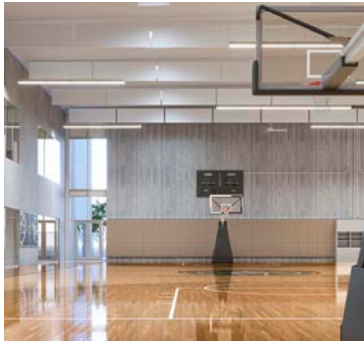






Image © J2G Creative

What was one thing you learned during this process?

**Bailey:** I learned a ton about methane mitigation. This site was previously contaminated, so we needed to prevent any methane from entering the building. Our sub-slab drainage system doubles as a way to get methane out from under the building slab.

**Jackie:** I also learned a lot about methane mitigation. This area was previously used as a landfill, so as organic material decomposes, we learned that it produces a variety of gases, methane being one of them. As Bailey mentioned, we were able to use our sub-slab drainage system in two ways: 1) to protect the building from groundwater and 2) to create a buffer from potential methane gas.

Why did you like working on this project?

**Bailey:** The team both internally and externally were great to work with. And the design team was 85% women which was really refreshing and unique. The team was very supportive and collaborative; everyone was on board with the shared goal of creating an amazing facility for the Storm team.

**Katlyn:** I have really enjoyed working with Jackie and Bailey. They are such great communicators and mentors. I’ve also learned a ton about Seattle standards through working on this project as well as learning from Bailey’s experience working in the

city. It’s been hard work but working with collaborative people makes it so much fun. And going to the groundbreaking was also amazing.

I liked working with ...

**Bailey:** The ZGF Architects team. The way they led the team created a very collaborative, supportive, and motivated environment that allowed us to identify issues early and work out solutions quickly.

**Jackie:** I second that. The ZGF team was exceptionally fun to collaborate with. They kept design meetings engaging and entertained suggestions from all consultants regardless of the topic at hand. This project was truly a team effort reflected by their leadership style.

What will it feel like to see this project complete?

**Jackie:** The satisfaction of seeing something tangible created by our work is truly rewarding. The successful completion of this site and building will be the result of an incredible amount of teamwork, and it will be a proud and gratifying moment for our Coughlin Porter Lundeen team as well as the entire project team.

**Bailey:** I will feel sincerely proud to have been a part of this project. I hope that this building will show the next generation of women that you can do anything you set your mind to, whether that’s being a professional athlete or an engineer.



Renderings and images designed by ZGF Architects and Shive Hattery, built by Sellen Construction

Go behind the scenes with some of our other favorite projects: [The Astor at The Washington Building](#), [WWU Interdisciplinary Sciences Building](#), [The Lodge at Saint Edward State Park](#), [The Little School Rivers Building](#), and [Mount Si High School](#).

A few quick-fires from Jackie:

**One word to describe this project:** Exceptional.  
**Project team member who needs a free lunch:** Megan Pryor from ZGF Architects kept every design meeting engaging and led the team to success.  
**When visiting, the first thing I will check out is:** The outdoor basketball courts.  
**This project has the best:** Manhole covers.  
**Next up, I can’t wait to design:** The new Inglemoor High School.

A few quick-fires from Bailey:

**One word to describe this project:** Inspiring.  
**Project team member who needs a free lunch:** Kari Lien. She absolutely killed it with drafting on this project.  
**When visiting, the first thing I will check out is:** The entry plaza with championship year markers.  
**This project has the best:** Manhole covers!  
**Next up, I can’t wait to design:** A commercial office project called 1305 Stewart.

A few quick-fires from Katlyn:

**One word to describe this project:** Rewarding.  
**Project team member who needs a free lunch:** Megan Pryor from ZGF Architects. She is so great at coordinating with all the disciplines and hearing everyone out.  
**When visiting, the first thing I will check out is:** The bioretention planters and detention system. But when the project’s completed, I’ll check out the pool. (Typical since I’m a swimmer!)  
**This project has the best:** Third vote for manhole covers!  
**Next up, I can’t wait to design:** My first Pk-12 project.





# The Sustainable Home Starter Kit — How to Transform Your Growing and Garden



*Sustainability is a pillar of the work we do at Coughlin Porter Lundeen, but it doesn't just feature in our projects, it's a concept we apply at home, especially in our backyards and gardens.*

*We're so lucky to live in the beautiful Pacific Northwest, where the growing season is prolific and the opportunities are endless. In this starter kit, we share sustainable ideas and how-to's for the kitchen, garden, and yard. All intel is from our talented team members, who make sustainable living a priority at home.*



## 1 in the yard

### Channel Your Inner Landscape Architect

We're strong proponents of "big picture" thinking at Coughlin Porter Lundeen, and our yards aren't exempt. Make a master plan so you have a good idea of the finished product. Sun pattern, existing growth, and elevations can all inform this plan. And have fun with it! There's so much inspiration to be found via Pinterest and social media. Create a collection of ideas and yard details that you love.

A great hack: source bark and mulch from tree trimmers via ["getchipdrop.com"](http://getchipdrop.com). Simply make a donation and they drop off a load in lieu of taking it to the dump.

### Select Native Plant Species

Opting for native plants has many benefits for both the environment and your own yard care. More likely to establish quickly and remain hardy, local plants are a great choice. In general, native plants have the benefit of being much lower maintenance too. A yard of local greenery means much less watering, mowing, fertilizer, and pesticides, and can prevent water run-off and improve air quality.

With the ability to pull and store excess carbon and support wildlife habitats in our backyards, these choices support the environment too. In addition to supporting pollinators such as bees, birds, and butterflies, local plants help create homes for small animals and microscopic organisms in the soil.

### Choose Chickens

Coughlin Porter Lundeen has quite a few backyard flocks! Besides the obvious benefit of fresh, incomparable eggs, chickens also serve the backyard by being great composters, soil aerators (turning your soil free of charge), and pest controllers. If just starting out, know that breed matters. We especially like Barred Rock and Rhode Island Reds – hardy hens and reliable layers. Your local hardware store should

have the water bottle, feed, and other items you need to get started. And perhaps the best piece of advice: leverage a neighbor! The chicken-owner community is a friendly one and we're sure your nearby owner would be happy to share and help get you started.

*The average American produces nearly five pounds of trash per day, but there are so many ways to make your home lower waste.*

## in the kitchen

## 2

### Commit to Compost

While most of us compost (especially since Seattle makes it easy with food and yard waste collections), there is always room for improvement. Our best chef tip: keep a large bowl on the counter as you work. It sounds simple but is life changing process improvement. Also, opt for a large compost bin with a lid. The right bin will make all the difference and will make you less likely to give up due to flies or smells. If you're maintaining your own pile, don't forget to turn it regularly, as aeration is essential to healthy compost. Compost pile favorites include: egg shells, coffee grounds, vegetable peelings, tea bags, grass clippings, paper, egg cartons, and fallen leaves.

If you're ready to take it to the next level, you could consider a [worm farm](#) like our own William Stone, who makes his own "worm tea," which can restore polluted soil, increase the soil's water-holding capacity, and add beneficial microbes to your soil.



### Rethink Your Recipes

Choosing to follow the rhythm of the seasons makes a big difference in the kitchen. While it's amazing to grow food for yourself, that's not the reality for most of us, at least not in full. But we can still choose to cook with fruits and vegetables that are sourced locally. Our area is known for nothing if not sensational farmers markets! You can find the full farmer's market schedule here: [seattlefarmersmarkets.org](https://seattlefarmersmarkets.org).

If you're looking for inspiration, we love farmer and cookbook author Andrea Bemis. She and her husband run six-acre Tumbleweed Farm in Oregon, and her blog, [Dishing Up The Dirt](#) is full of delicious season-driven recipes. We also love Erin Gleeson's [The Forest Feast](#) series. A Californian, her vegetarian recipes are delicious and emphasize fresh, local ingredients. And her cookbook is one of the most beautiful we've ever seen.

3

### Make Little Changes for Lower Waste

The average American produces nearly five pounds of trash per day. There are so many ways to make your kitchen lower waste. In addition to processing your scraps properly with composting, you can choose bulk groceries (sans packaging), and even upgrade your kitchen gadgets and tools. Opt for wooden handled dish brushes, reusable plastic bags (we love [stasher bags](#)), and glass storage. A great source for sustainable products and inspiration is [Package Free](#), a shop founded by Lauren Singer, "the girl with the jar" who went viral for fitting eight years of trash into one mason jar.

## in the garden

### Read Up

A little research goes a long way! Consider adding some garden-genre titles to your book list. When it comes time to plan our gardens and process our harvests, our top reference recommendations include:

- [Canning for a New Generation](#)
- [Carrots Love Tomatoes: Secrets of Companion Planting for Successful Gardening](#)



- [The \\$64 Tomato](#)
- [Sustainable Home: Practical Projects, Tips and Advice for Maintaining a more Eco-Friendly Household](#)
- [Pacific Northwest Month-by-Month Gardening: What to do Each Month to Have a Beautiful Garden All Year](#)

### Relish the Rain

Rain barrels are a great, easy way to improve your backyard's sustainability. If you don't have one already, it's simple to order one from [seattle.gov](https://seattle.gov).

Rainwater harvesting is also a great jumping off point to think about the cycle of your backyard. For example, plants can be grouped by water needs, and plants requiring additional summer water can be located nearer to the source.

They're also a gateway item that can lead to irrigation systems and other creative solutions. You should see some of the underground systems and rain gardens our crew has! In the Pacific Northwest, rock gardens with native plants handle the weather conditions especially well.

### Celebrate the Bounty

The Coughlin Porter Lundeen gardens are as varied as our team members. Their green thumbs manage everything from flowers and herbs, to robust vegetable gardens, fruit trees, and berry patches. No matter what their yard includes, each knows that even if things don't go perfectly or precisely to plan, the joy is in the process. There's magic and fun in the planning, planting, picking, and processing. This attitude and appreciation of the journey can make all the difference! Gardeners learn more each season, and build upon those lessons year after year.

*And we would be remiss, when talking garden design, to not talk garden center design! We've loved collaborating with Green Partners, GGLO and Graham Baba Architects to update the renowned Molbak's Garden + Home in Woodinville. Check it out on the next page!*





Early concept designs imagined extraordinary possibilities for sustainable redevelopment and pushed the boundaries of creativity with mass timber schemes, stormwater solutions, and immersive biophilic design.

Phase One of the multi-phased project will begin construction in Q3 of 2023 to build out three residential buildings and Molbak's new garden center. Structural features of the residential portion include exposed DLT floor panels, two heavy timber roof decks and amenity areas, and The Conservatory, a tenant amenity space that uses a heavy mass timber post and beam system.

At the podium level, Molbak's new garden center integrates a distinctive "Tree House" structure for its seasonal displays. Four heavy timber "trees" anchor the space, carrying loads for the roof, exterior walls, and glazing. Everything is hung in tension from the roof and

all steel exterior components are structural – allowing for the lightest weight and smallest profile members possible to create an exceptionally elegant and airy retail space.

The civil approach to the project minimizes environmental impact by integrating numerous autonomous and sustainable site solutions in concert with several stakeholders. Nearly 100% of the water will be infiltrated on site, a new public green street with bioretention planters will be incorporated, neighboring Woodin Creek and associated wetlands will be protected and enhanced, and a 30K gallon cistern will harvest water from Molbak's roof to irrigate its greenhouses. The project also includes design of two new public streets and a vehicular bridge spanning Woodin Creek. Master planning efforts for multiple future phases as well as coordination with neighboring developers were a large part of the initial design phase.

## Molbak's Garden + Home

*The Woodinville Gardens District will be an all-new business and residential hub with gardens, and Molbak's, at its center. Scope for phase one, which is scheduled to be completed in late 2025, includes 400,000-square-feet of residential space, 150,000-square-feet of commercial office space, as well as the Treehouse Building and Molbak's House.*

### Molbak's Garden + Home

Owner: Green Partners LLC & [Molbak's Garden and Home](#)

Architect: [GGLO](#) & [Graham Baba Architects](#)

Civil and Structural Engineer: Coughlin Porter Lundeen

General Contractor: [Sierra Construction Company](#)



## Learning through Interests: A Bellevue Big Picture School Internship

We wholeheartedly believe in giving students access to work environments and real world experience, and are happy to support Big Picture School’s unique curriculum.

Each student at Bellevue’s Big Picture School participates in the school’s [Learning through Interests \(LTI\) program](#) which encourages students to stretch beyond the classroom and secure an internship in their field of choice. After a memorable internship with a landscape architecture firm, junior Sam Bloom became interested in engineering. When he requested an informational interview and opportunity to intern, we were thrilled to help.



Sam has participated in project brainstorming, used a Seattle DSO (water and sewer) map to discover street right-of-way zones and allocations, and is actively working on a mock structural permit calcs package starting with system selection and framing out the building.

Every Thursday Sam is in our office, working with his mentors [Christen Sanders](#), Structural Project Manager, and [Amelia Drake](#), Civil Engineer, for hands-on learning about both disciplines. He’s participated in project brainstorming, used a Seattle DSO (water and sewer) map to discover street right-of-way zones and allocations, and is actively working on a mock structural permit calcs package starting with system selection and framing out the building.

Sam also spent time with other Coughlin Porter Lundeen team members. Senior Structural Project Manager [Rebecca Collins](#) introduced him to our historic renovation portfolio through an exclusive tour of Pioneer Square. He also job shadowed Structural BIM Coordinator [Reed Harvey](#), amazed at the speed and efficiency of a professional creating digital models! Structural Project Engineers [Javier Diaz](#), [Kelly Lowe](#), and [Katie Rand](#) have all sat down with Sam to pass on their knowledge.

January marked the halfway point of this semester’s internship and provided an opportunity to check in with Sam’s school advisor Dustin Abrahamson, parents, and fellow students. The exhibition included an energetic 20-minute presentation by Sam, reflecting on what he’s learned and how this work connects to the visions and goals he set at the start of his internship. A short Q&A time followed the presentation, then Sam’s advisor Dustin and his parents, along with Christen and Amelia, provided feedback.

While many of our team support student career growth through structured, large group programs like [ACE](#) and [Washington STEM](#), this internship encourages one-on-one mentoring. Sam is excited about the professional and personal learning he’s done while part of our team, and this internship may have just convinced him to consider engineering as a career!

## ON THE CALENDAR

UPCOMING INDUSTRY EVENTS, CONFERENCES, AND LOCAL FAVORITES.

**AIA SEATTLE COMMITTEE MEETINGS**  
Rotating Topics - [Event Info](#)

**GEOCACHING ADVENTURE LABS**  
Year-round, Washington State Parks - [Event Info](#)

**A4LE 2023 ANNUAL CHAPTER CONFERENCE “INSPIRED”**  
May 31-June 3, Blaine, Washington - [Event Info](#)

**SEATTLE UNIVERSITY’S COLLEGE OF SCIENCE & ENGINEERING PROJECTS DAY 2023**  
June 2, Seattle University - [Event Info](#)

**WASHINGTON STATE PARKS FREE DAYS**  
June 10–11, June 19, Sept. 23, Washington State Parks - [Event Info](#)

**GOLDEN GARDENS PARK WORK PARTY**  
June 10, Golden Gardens Park - [Event Info](#)

**TWO SPIRIT: PORTRAITS OF PRIDE**  
June 14-July 2, Bainbridge Island Museum of Art - [Event Info](#)

**NAIOP MONTHLY BREAKFAST**  
June 14, Hyatt Olive 8 - [Event Info](#)

**SEATTLE ARCHITECTURE FOUNDATION YOUTH WORKSHOPS: DESIGN IN THE MUSEUM**  
June 17, Frye Art Museum - [Event Info](#)

**COLUMBIA CITY NIGHT MARKET**  
June 17, Columbia City - [Event Info](#)

**FREMONT FAIR & SOLSTICE PARADE**  
June 17 & 18, Fremont - [Event Info](#)

**JUNETEENTH**  
June 19th, Various Locations and Events

**THE COLORS OF LIFE: AFRICAN AMERICAN ABSTRACT ART AND THE REGATHERING OF COMMUNITY**  
Through June 24, Northwest African American Museum - [Event Info](#)

**SEATTLE PRIDE PARADE**  
June 25, Downtown Seattle - [Event Info](#)

**THE TASTE NORTHWEST**  
June 30-July 2, Puyallup Fairgrounds - [Event Info](#)

**ULI BC: 2023 CASCADIA REGIONAL CONFERENCE**  
July 13-15, Location TBD - [Event Info](#)

**SEAFAIR MILK CARTON DERBY**  
July 15, Green Lake - [Event Info](#)

**DARRINGTON BLUEGRASS FESTIVAL**  
July 21-23, Darrington Bluegrass Music Park - [Event Info](#)

**WASHINGTON MIDSUMMER RENAISSANCE FAIRE 2023**  
Aug 5-6, 12-13, & 10-20, Sky Meadows Park, Snohomish - [Event Info](#)

**LANTERN CEREMONY AT GREEN LAKE**  
August 6, Location TBD - [Event Info](#)

**SOUTH LAKE UNION BLOCK PARTY**  
August 11, South Lake Union - [Event Info](#)

**DRAGONFLIGHT TABLETOP GAMING CONVENTION**  
August 18-20 - [Event Info](#)

**WASHINGTON STATE FAIR 2023**  
Sept 1-24, Puyallup Fairgrounds - [Event Info](#)

**BUMBERSHOOT ARTS & MUSIC FESTIVAL**  
September 2 & 3, Seattle Center - [Event Info](#)

**BIKE MS: DECEPTION PASS CLASSIC 2023**  
Sept 9-10, Mount Vernon - [Event Info](#)





**Kelly Lowe**  
Structural Project Engineer  
[kellyl@cplinc.com](mailto:kellyl@cplinc.com)

## SPOTLIGHT ON: URBAN LAND INSTITUTE NORTHWEST'S YOUNG LEADERS GROUP

With a meaningful mission, growing membership, and many upcoming events, we sit down with YLG board co-chair Marie Ternes and YLG board member Kelly Lowe to talk about the Urban Land Institute's (ULI) Partnership Forum Group and the Young Leader's Group.

### WHY ULI? MARIE AND KELLY WEIGH IN

With so many great professional organizations to choose from, narrowing down which to get involved in can be tough!

At Coughlin Porter Lundeen, we are fortunate to have two ULI Young Leader's Group (YLG) board members under our roof. Structural Associate Marie Ternes has been on the YLG board since 2020 and has been co-chair since 2022. Structural Project Engineer Kelly Lowe has been a member of the board since 2022.

When Marie moved to Seattle, she knew that she wanted to connect with more people in the industry. So, she attended different organizations' events and took a deep dive into their websites. "ULI's mission is what really stood out to me," Marie claimed. "I really connected with ULI's focus on sustainability and responsible land development." After regularly attending events, she met Martha Cox, an architect with PUBLIC47, who suggested that she join their Partnership Forum Group (PFG). Led by an industry leader, the PFG is a cohort mentoring program that meets monthly. "Between ULI's mission, the quality of their events, and the PFG, I knew I had found the organization that I wanted to grow with," says Marie.

*"Between ULI's mission, the quality of their events, and the PFG, I knew I had found the organization that I wanted to grow with."*

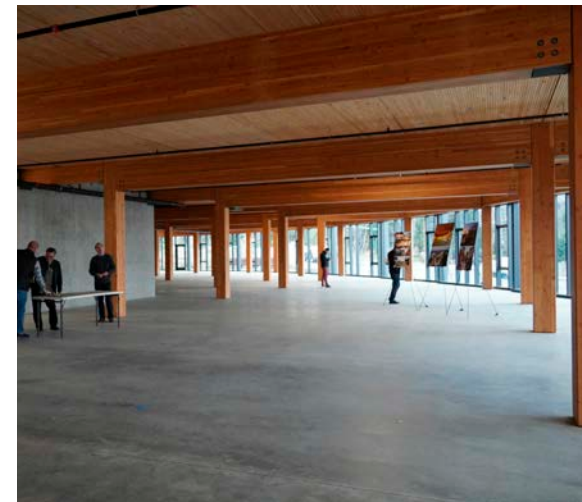
Kelly's interest in ULI came from her desire to understand where she fit into the big picture of development. Like many, she understood her day-to-day job and tasks, but wanted to understand more fully how her discipline fit

*A global non-profit with both local and regional chapters, the Urban Land Institute (ULI) is a real estate and land development organization supported by more than 1,000 public and private sector members. Membership represents real estate development, architecture, marketing, finance, urban planning, transportation, construction, public policy, and more. Designed to bring together professionals from all disciplines and levels, ULI strives to be "at the forefront of the land use and real estate industry, a steadfast leader in the best practices for a changing world."*

into the puzzle. ULI affords members this view. "With ULI, there are so many opportunities to connect with others, whether it be at events or within the PFG mentorship group. All those puzzle pieces started to fall in place. Joining ULI has allowed me to better understand how an engineering consultant fits into the big picture," said Kelly.

### THE YOUNG LEADERS GROUP (YLG)

One of the hallmark programs that the chapter coordinates is the Young Leaders Group (YLG). Consisting of ULI members



under the age of 35, the YLG connects young professionals via curated events, project tours, activities, and mentorship opportunities.

As the board strategizes and sets programming for the upcoming year, there's no outline or restrictions dictated by ULI. Instead, the YLG board has the autonomy to follow their own interests, and everything that's planned reflects that. The first project tour of the year featured our very own [5501 Lakeview](#) because a board member wanted to learn more about mass timber. "It's a very collaborative environment where everyone's leveraging their different networks to not only make the events happen, but also allow us as board members to grow and explore our interests," says Kelly.





While the programming may change year to year, the YLG board is consistent in how they begin each term: with a kick-off brainstorming session. Here, collaboration and imagination take center stage. Whether project tours, panel discussions, bi-monthly happy hours, conference planning, or fireside chats that were inspired by “Between Two Ferns with Zach Galifianakis,” every idea is met with acceptance and excitement.

Another important ULI pillar: the Cascadia Regional Conference (CRC). The annual conference rotates between Portland, Seattle, and Vancouver, and is open to the entirety of ULI. The four-day event is full of project tours, panel discussions, breakout groups, (and even a



Kelly summarizes it perfectly, saying, “My experience being on the board has made ULI and the industry in general, much more accessible. The more involved you become, the more connections you make with professionals from all walks of life. It’s an empowering feeling to know my network now includes both my young professional peers and individuals at the top of their careers. While the PFG gave me the skills to succeed, the YLG has shown me that even if I’m not yet a project manager or owner at my firm, I can still develop my own relationships and start networking.”

THE PARTNERSHIP FORUM GROUP (PFG)

Another ULI subgroup is the [ULI Northwest Young Leaders Partnership Forum](#) whose mission is “to foster an exchange of professional ideas, friendship, and expertise among young real estate professionals and industry veterans that are members of the Urban Land Institute.” The program matches young professionals from the Young Leaders Group with experienced professionals.

We all know how essential mentorship is to a career’s success, and the PFG provides an incredible opportunity to develop skills and grow a network in a safe and supportive setting. It’s a true differentiator of ULI. Marie participated as a mentee for one year and Kelly for two years before applying to be co-captains of the program. As co-captains, they’re responsible for coordinating the mentors’ schedules with their groups. “Becoming a co-captain is an excellent way to dip your toe into program leadership while still benefiting from mentorship,” says Marie. “I would one hundred percent recommend this program to anyone just starting out.”



ULI has many *exciting* events to look forward to!

To learn more about the YLG, PFG, or all things ULI, check out the website [here](#).

Images courtesy of PCL Construction



# OUR BEST BIKE ROUTES

In each edition of The Connection, we crowdsource recommendations from our team, everything from hikes and dog parks to road trip destinations and restaurants. This edition, we’re sharing our best bike routes!

## ELLIOTT BAY TRAIL



Recommended by: [Murray Longbotham](#), Civil Project Engineer

**Why I love it:** If you don’t have hulk thighs to attack hills, bike commuting around Seattle can be tough. After work, I will often bike north along Alaskan Way to the Sculpture Park, then continue along the [Elliott Bay Trail](#) to Elliott Bay Marina. It’s a short 10-mile route that’s flat and easy to get to from our office. And if you’re feeling it, I’d recommend grabbing a beer or burger at [Maggie Bluffs](#)!

**Pro Tip:** Skiing gloves are your friend during the rainy months.

Image Credit: AllTrails

## LAKE UNION TO GOLDEN GARDENS



Recommended by: [Kristen Smith](#), Structural Staff Engineer

**Why I love it:** My favorite route starts at Lake Union, taking the Lake Union trail up to Gasworks Park, then continuing the Burke Gilman through Fremont and Ballard and onto Golden Gardens. I love biking next to the water and seeing the different parks and people along the way. At Gasworks, there’s usually a big drum group practicing which is always fun to see. And then Fremont and Ballard are perfect for a more leisurely ride because there are a ton of restaurants, breweries, and farmers markets to stop at. Finishing up at Golden Gardens is the best for a swim! I couldn’t recommend this route more – it’s a perfect summertime weekend ride. And bonus, you can ride on true bike trails the entire way!

**Pro Tip:** Just have fun! I think this route would be a great way to get non-biking friends along for the ride. Plus, there are generally scooters and e-bikes along the way if they don’t have a bike or don’t feel like going that far without the help of electricity.

Image Credit: Seattle.gov

## CHILLY HILLY ROUTE, BAINBRIDGE ISLAND



Recommended by: [Andrew Ayling](#), Structural Associate Principal

**Why I love it:** It has a little of everything! Amazing views of downtown Seattle and the Puget Sound, lots of relatively easy hills, and very light traffic. And for all you Strava users, there are over 60 segments to chase along the way!

**Pro Tip:** While this route was made popular by the [Chilly Hilly Group Ride](#) in February, I would recommend riding it during the summer for better weather and no crowds.

Image Credit: Cascade Bicycle Club

## DUTHIE HILL MOUNTAIN BIKE PARK



Recommended by: [Sam White](#), Structural Project Engineer

**Why I love it:** [This mountain biking park](#) in Issaquah has a good variety of trails ranging from beginner to expert. For anyone wanting to learn how to jump their bike, this is a great place to do it. If you’re already comfortable jumping, there are plenty of trails with big jumps to hit. Overall, it’s just a great, well-rounded local spot to ride.

**Pro Tip:** Start small and ease into it to find where your comfort level is. Then work your way up from there!

Image Credit: Sam White



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## ABOUT THE CONNECTION

Published by Coughlin Porter Lundeen, The Connection is a biannual collection of the firm's news, perspective, and commentary on AEC industry topics. All content is curated and written in-house.

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## ABOUT COUGHLIN PORTER LUNDEEN

Coughlin Porter Lundeen is a civil and structural engineering firm. Focused in the Pacific Northwest, we partner with clients across markets to bring unique project visions to life. We were founded with the goal of exceeding the standards and services provided by engineering firms, and today, almost thirty years later, that vision continues to guide all that we do.

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