

# Industry trends

As another busy year for Seattle nears its end, Sellen's preconstruction and estimating experts Dave Ratzke, Chris Angus and Adam Lorenz explain why they don't expect this trend to be over anytime soon.

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**W**e are living in the fastest-growing city in the country, and if your lack of sleep this year hasn't yet proven that, these numbers will.

For the second year, Seattle leads the country in tower cranes with 58 cranes up this summer. According to Rider Levett Bucknall, that's around 60 percent more than any other U.S. city. What's more, the Downtown Seattle Association (DSA) reports there are around 150 projected projects in the pipeline from SoDo to South Lake Union, with about 50 of those starting in the next year.

In this market, Sellen's current and projected backlog is staying strong, but that doesn't mean we haven't been able to take time to reflect and evolve. This past year, our preconstruction team has spent precious time growing and improving in response to the ever-changing needs that the market has demanded. We have built a proactive, flexible structure with new tools and technologies to support it.

For example, we have a new database that helps our teams mine historical data and track trending costs among projects down to the productivity rate per manhour. We have hired experts who specialize in mechanical systems, document review and modeling.

One of our most exciting improvements has been growing our virtual design capabilities as we move toward model-based estimating and scheduling standards. This is part of our developing technology strategy that focuses on leveraging data, enhancing visualization, and improving worker safety and productivity. (Learn more on page 22.)

And perhaps most importantly, we are staying true to our first and longest-standing commitment: striving to be a true partner to our clients by understanding their businesses.

All of this is in an effort to go above and beyond — to ensure predictable outcomes and help our partners be successful. Because, especially in this busy market, when one partner is successful, the rest follow.

## Regulatory Changes

Progress doesn't happen without change, and there are some major regulatory changes in Seattle's future. Here's a few we're tracking.

### Seattle Energy Code

On Jan. 1, 2017, Seattle adopted the 2015 Seattle Energy Code (SEC), one of the most progressive energy codes in the country. While there has been much speculation, there have been few hard facts on how the code will affect future building trends — until now.



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Over the past year, Sellen has been working with PAE Engineers and MacDonald-Miller Facility Solutions to evaluate potential mechanical system solutions that meet the 2015 SEC and their associated cost impacts.

Led by Sellen's Preconstruction Sustainability Manager David Walsh and focusing on high-rise office and residential towers, the team used energy modeling to determine what it took to achieve the 2015 SEC when different mechanical systems and glazing percentages were applied. Using two recently completed Seattle buildings as a baseline, they calculated the mechanical cost premium to build the same buildings under the new code with the original percentage of glazing, as well as the cost premium to increase the glazing to 60 percent.

While the cost premiums differed as each new variable was introduced, in all cases the 2015 SEC caused mechanical systems costs to increase. The study found that the most significant jump occurred with office tenant improvement mechanical costs: in our modeled scenarios, the tenant improvement mechanical costs almost doubled when meeting the 2015 SEC. Compared to the previous energy code, the new standard will necessitate using different mechanical systems and anticipating increased build-out costs.

"Overall, we found that designing a building with glazing at 60 percent or higher is possible under the 2015 SEC, but it comes at a price," Walsh said. "The new code will challenge developers, engineers and design teams to find a sweet spot among increasing glazing, managing first and operational costs, and ensuring code compliance."

The team published a white paper on the study, which can be found on Sellen's website, [www.sellen.com](http://www.sellen.com).

### International Building Code

The 2018 International Building Code (IBC) approved a significant change to the seismic requirements that will affect the structural design of projects in the Puget Sound area, especially those found on softer soils. The new code requirements will be adopted by Washington state in 2020.

Two years ago, the American Society of Civil Engineers issued new requirements for the seismic design of buildings. Magnusson Klemencic Associates (MKA), a Seattle structural and civil engineering firm, began studying the new requirements and comparing them to current code provisions. MKA determined that current designs were underestimating the effects of earthquake ground shaking on buildings susceptible to "long-period motions" (earthquake ground movement longer than 1 second), which have a pronounced effect on softer soils.

"We need to continue to keep earthquake designs with the performance we want to achieve," said John Hooper, director of earthquake engineering at MKA. "If our understanding of how the ground shakes is changing, then our designs need to change with that."

MKA said the new codes may potentially affect buildings that are 75 feet or taller, and that most buildings taller than 160 feet will be affected. The premiums to meet the new code requirements could add \$4 to \$6 or more per square foot to a project. MKA recommends doing a site-specific geotechnical study to determine the specific soil quality of a site, which could help save half that cost or more.

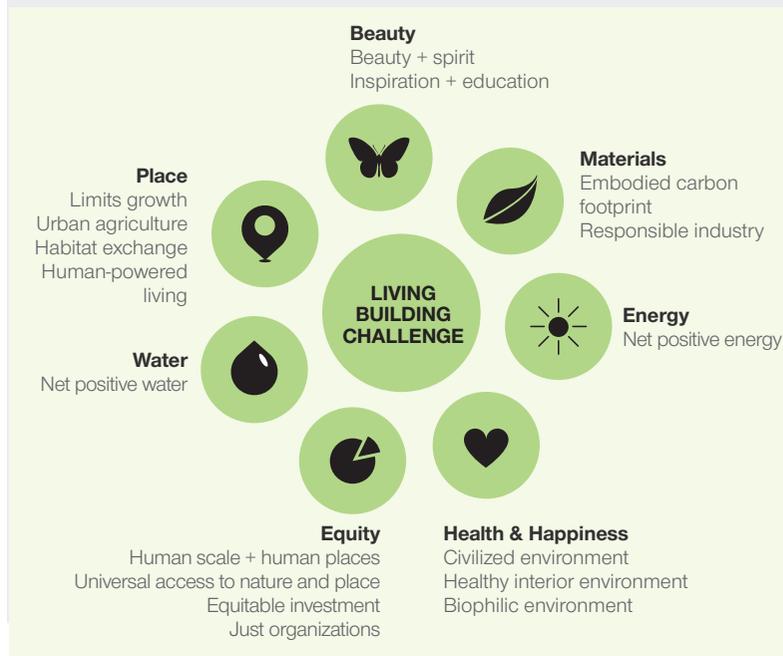
"The truth is, we don't yet fully understand the implications, both in cost and scale, of the new code requirements, but they shouldn't be discounted when planning future projects," Hooper said.

## Living Building Pilot Program

The City of Seattle recently renewed its Living Building Pilot program. The Living Building Challenge is a green building certification program based around the idea that buildings can give more to the environment than they take. Within the pilot program, developers can elect to achieve a partial or full certification. In both instances, owners can request departures from the Seattle Land Use Code, receiving height and floor area incentives.

Called the "Petal Recognition certification," the partial certification requires teams to achieve at least three of seven sustainability categories, or "petals," with at least one being energy, water, or materials. The other four petals are place, health and happiness, equity, and beauty. To achieve the energy petal, a building must reduce its total energy usage by 25 percent or more. For the water petal, they must use only non-potable water.

The materials petal requirement is complex but attainable. For this petal, building materials cannot contain any chemicals listed in the Red List™, which has been a major focus of research for Sellen over the past few years. Led by Sustainability Program Manager Jennifer Frey and Post Construction Manager Alexis Thompson, Sellen has coordinated with hundreds of manufacturers to obtain statements of products' compliance with the Red List™ so designers can make more informed product selections that achieve the materials petal. Our research continues to collect other environmental declarations to round out our focus on delivering healthy spaces, while also positioning clients to achieve credits in other sustainability certification programs, including LEED version 4.



## Market Trends

According to the DSA, around 70 major projects are under construction from South Lake Union to SoDo. Among them, we've seen some major trends.

### Mid-Century Upgrades

If you're wondering how Seattle is fitting all this new construction within

our geographic constraints, here's the simple answer: we aren't. One of the strongest trends has been the upgrading of office and public spaces in existing buildings. Owners in the central business district are recognizing the need for office space and responding to it by modernizing the public spaces in their mid-century

## Material Costs on the Rise in 2018

On average, material prices have gone up approximately 4 percent over the past year, with major spikes seen in lumber and copper. Owners can expect material costs to make up around 40 percent of overall job costs.

	<b>5%</b>	Copper
	<b>3%</b>	Insulation
	<b>10%</b>	Lumber
	<b>3%</b>	Roofing Products
	<b>3%</b>	Glass
	<b>3%</b>	Structural Steel
	<b>4-6%</b>	Concrete
	<b>3%</b>	Aluminum
	<b>2%</b>	Diesel Fuel
	<b>5%</b>	Rebar
	<b>5-7%</b>	GWB/Metal Studs



buildings. For example, Sellen Special Projects recently completed a lobby renovation in the 901 5th Avenue tower for Schnitzer West. This modernization has allowed the building to remain competitive with new construction, both in regards to cost and aesthetics.

### Close Construction Quarters

The city's window of buildable space is getting smaller and smaller. Building on sites that have a multitude of challenges has become the new normal — whether it's contaminated soils, a tight footprint, or lack of crane swing and tieback easements.

At the Stratus residential tower for GID Development, for example, a lack of a tieback or crane swing easement required that our team install internal bracing and use a luffer crane. As sites get tighter and tougher, they almost always come with a higher price to develop.

### Building Tech-Savvy

More and more tech companies are moving to Seattle, bringing with them a need for bright, open offices. We are seeing unique design trends in these spaces, such as an increased amenity program and higher densities. At Sellen, we've seen the changes that a spec shell and core building requires

to accommodate tech office needs. We're helping owners plan for these changes upfront so their projects are more marketable and more prepared to house Seattle's growing tech tenants.

## Labor Trends

The labor market supply doesn't match the high volume of work we continue to see in our region, and labor is tight in all trades. Tradespeople have been selective on which projects they choose to work, and they will continue to do so.

This year, the ironworkers; low voltage, sound and communication electricians; and concrete teamsters were up for negotiations, but they have all reached agreements. The trades that will be up for labor negotiations in 2018 will be:

- Carpenters/piledrivers
- Cement masons
- Electricians
- Insulation and asbestos
- Laborers
- Operating engineers (King and Pierce counties)
- Plumbers and pipefitters (Tacoma, Everett and Bremerton)
- Sheet metal workers
- Teamsters
- Operators – concrete suppliers

## Sub Trends

Labor and subcontractors will be the primary project cost drivers in 2018. This spring, Sellen sent a workload survey to many of our subcontractor and vendor contacts and received responses from approximately 250 firms. All responses trended in the same direction: the market is hot.

Here's some specifics:

- 82 percent reported workloads that were busier than average
- 73 percent reported a projected backlog that is higher than usual, with the majority claiming it was 10 to 20 percent higher
- 84 percent project that prices will rise next year, with the majority expecting them to rise by 3 to 5 percent

## The Big Picture

Taking everything within the state of the market into account, we next look to annual escalation, which we estimate to be at a rate of 4 to 5 percent. There are many factors that

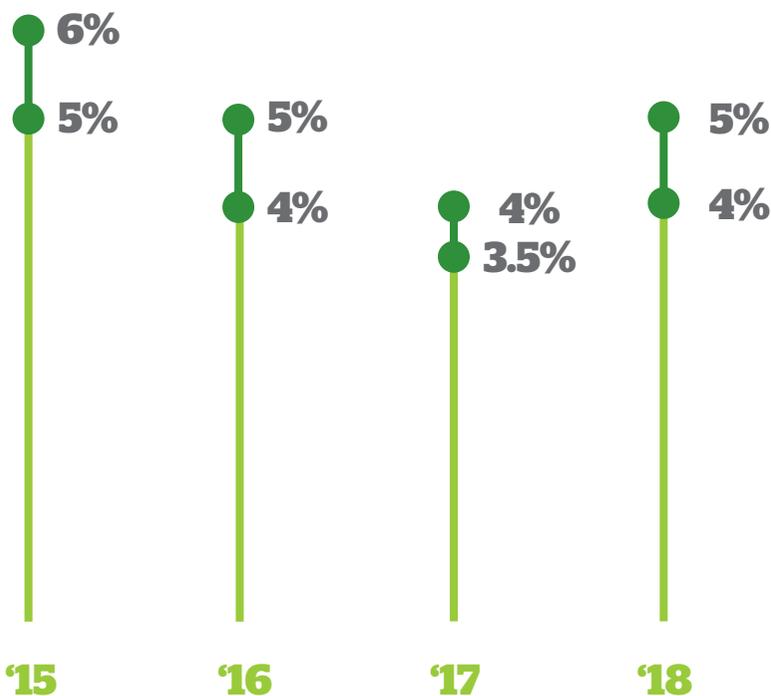
can influence escalation, and right now these include natural disasters such as the recent hurricanes and fires, as well as labor negotiations and the local market.

As we've mentioned, the local labor market is tight and a number of labor contracts expire in 2018. Overall, we can expect to see labor increases in the range of 2.5 to 3.5 percent per year. Material costs have not been a major factor this past year; however, with the recent hurricanes and fires there will be a demand to rebuild, and materials will increase in the range of 3 to 6 percent. Additionally, the local subcontractor market remains extremely busy. We expect to see subcontractor increases by 4 to 6 percent.

Overall, we should plan for an annual escalation rate of 4 to 5 percent. As we prepare for another busy year, Sellen continues to remain committed to the ever-changing needs of our clients and community by building a sustainable business and staying true to our values. ■

## Yearly Escalation Chart

Next year, the primary drivers for escalation will be a tight labor market and subcontractor costs.



## Subcontractor Prices Rising in 2018



**4-5%**

Steel Erection



**6-8%**

Earthwork



**4-5%**

MEP Trades



**4-6%**

Elevators



**4-5%**

Metal Siding



**6-8%**

Finishing Trades



**5-8%**

Windows/Curtainwall



**6-8%**

Concrete Formwork

## Talking LEED v4 with David Walsh

**Craft:** What does it mean that LEED version 4 (v4) is now the only LEED version available?

**Walsh:** Both LEED and the AEC community are at an inflection point — the new version will demand more from designers, contractors and owners as they work through the learning curve.

**What in v4 is the most far-reaching change?**

One of Sellen's biggest focal points has been the new disclosure requirements for the materials credits. For designers, this will necessitate more product research in design development, as well as

a retooling of specifications. During procurement, contractors will need to more carefully vet submittals and substitution requests.

**Has the demand for LEED-certified work changed since v4 took effect?**

It will take awhile for long-term patterns to emerge. Sellen has several v4 projects underway, and the demand stems mostly from a desire to remain an industry leader and to align new projects with commitments to healthier spaces, as well as the need for new buildings to be on par with existing portfolios.