



CLIMATE PLEDGE ARENA

SETTING NEW MARKS FOR SUSTAINABILITY, INNOVATION, FAN EXPERIENCE

Populous' design centered around revitalizing the landmark arena, honoring its original 1960s design intent while activating and enhancing a pedestrian-focused plan.

The arena's moniker enlists the facility in The Climate Pledge, committing signatories to net zero carbon across their businesses by 2040.



IMAGE COURTESY CLIMATE PLEDGE ARENA

The team from global design firm Populous was approached with this challenge: Take Seattle's historic 1960s Century 21 Coliseum, a registered landmark locally and federally, and transform it into the industry's leading sports and live entertainment arena.



BY GEOFF CHEONG
POPULOUS

Here's what that involved: Fit a 17,000-seat seating bowl under the historic roof (which sits only 20 feet above the ground at the corners) and place it within the compact 360-foot-square

footprint of the original building; attract the highest profile corporate sponsors and brands from the Pacific Northwest; infuse the experience with the latest technology and digital displays, both inside and outside; design it to be the most sustainable arena in the world; design it to be authentically Seattle; and get all this approved by both the local and federal landmarks boards.

Easy, right? Well, the odds were stacked against us, but last week, Populous' newest designed arena was unveiled to the world.

Climate Pledge Arena is a transformational project and one of the most significant private investments in Pacific Northwest sports and enter-

WE'RE ON YOUR TEAM!

When you work with Star Rentals, you add powerful players to your project team—pros that are skilled, knowledgeable, and easy to work with.

Star Rentals employees are the most experienced in the industry. From our extensive training and safety programs to our equipment expertise, you can count on us to deliver the goods. We make sure you get fast, responsive service, and headache-free billing.

Do we think it's important to be a team player? Absolutely.

100+ Years of Outstanding Service.

Star Rentals is the oldest, largest and most reliable independent rental company in the Pacific Northwest.

STAR RENTALS
Preferred Supplier  to the West's Best Contractors



www.starrentals.com

Bellevue • Bremerton • Eugene • Everett • Ferndale • Hillsboro • Kent • Longview • Olympia
Pasco • Portland • Salem • Seattle • Spokane • Tacoma • Vancouver • Wenatchee • Yakima

tainment history. As architect of record, Populous was engaged by owner and developer Oak View Group and the city of Seattle to transform the former Coliseum (more recently KeyArena) into an entirely new live entertainment experience boasting industry-leading innovation, sustainability and fan experience.

Located in Seattle's Uptown neighborhood and on the western edge of Seattle Center, the arena serves as the home venue for the National Hockey League's Seattle Kraken and the Women's National Basketball Association's Seattle Storm. A multifunctional venue by design, Climate Pledge Arena will also host many concerts and other events year-round, with a seating capacity for up to 18,600.

Climate Pledge Arena offers many "firsts" and unique aspects. The arena's moniker enlists the facility in The Climate Pledge, committing signatories to net zero carbon across their businesses by 2040. Climate Pledge Arena is also poised to become the world's first International Living Future Institute-certified zero carbon arena.

A major challenge throughout construction was preservation of the 59-year-old historic roof atop the former KeyArena. All new construction required the roof — designed by Paul Thiry, the father of architectural modernism in the Pacific Northwest — be temporarily suspended above the site. To increase the size of the arena to 750,000 square feet — approximately twice the size of the former venue — and give the venue 360-degree pedestrian access,



The arena's ice is created from rainwater harvested from the roof.

IMAGE FROM POPULOUS

it was necessary to dig 16 feet deeper than the previous 1995 renovation that bottomed out at 38 feet below ground level, and significantly expand the below-grade building footprint in all directions.

Populous' design centered around revitalizing the land-

mark arena, honoring its original 1960s design intent while activating and enhancing a pedestrian-focused plan. The original building was a flat-floor, column-free pavilion with an entirely glass facade allowing visitors to see inside. Populous' redesign for Climate Pledge

Arena preserves the character-defining features of the original building, including the glass curtainwalls, roof and roof support structure, and restores the original relationship between building and surrounding plazas that was altered in the prior KeyArena renovation.

The historic glass curtainwall was disassembled, catalogued and stored during construction. After the original lead paint was abated, the curtainwall steel frames were refinished, then reassembled to

NEW MARKS — PAGE 7

INSIDE

- Setting new marks for sustainability, innovation, fan experience 2
- What it took to build the 'greenest' arena ever 5
- Transforming Seattle's historic KeyArena 8
- Reimagined precinct brings back World's Fair magic 10

ON THE COVER

Climate Pledge Arena opened Oct. 19 with a benefit concert by Foo Fighters and Death Cab for Cutie. The \$1.15 billion project was finished after nearly three years of construction. PHOTO BY JOHN MERGANZ

CLIMATE PLEDGE ARENA TEAM

SECTION EDITOR: BENJAMIN MINNICK • SECTION DESIGN: JEFFREY MILLER
 WEB DESIGN: LISA LANNIGAN • ADVERTISING: MATT BROWN



The remodel retained the historic roof designed by Paul Thiry.

IMAGE COURTESY CLIMATE PLEDGE ARENA

SEATTLE DAILY JOURNAL OF COMMERCE

by Marriott, at 19608 International Blvd. in SeaTac, sold for a bit over \$51.1 million, according to King County records.
The seller was RI SeaTac Property LP, associated with Texas Western Hospitality of Dallas, which acquired the land in 2016 for about \$4.2 million, then developed it. Jensen Fey was the architect. The buyer was M2 SeaTac LLC, associated with MCR

The new development might start this fall, but owner Retail Opportun' hasn't yet announced a groundbreaking.

224 Crossroads units Bellevue clear SEPA hurdle

The most useful resource for Northwest businesses

Locally-owned, the DJC has been serving the construction community for over 100 years. Publishing Six days a week, the DJC covers areas of construction, architecture, engineering, consulting, commercial real estate, government, urban planning and law.

- Construction reporting
- Jobs out to bid
- Contracts awarded
- Upcoming Projects
- Sub-bids Wanted
- Rosters
- Fed Bizops
- Building Permits
- And More!

Many options for you to choose from, the most popular are...

Online \$210 annual Consultant Package

Stories and Public Notices plus all architectural, engineering and other professional services projects, RFPS, proposals opened and awards

Online \$350 annual Construction Package

Stories, Public Notices, plus all construction contracting projects, RFPS, bids opened and awards

Online \$440 annual All Access Package

Everything in Consulting, Construction and Real Estate Packages, plus new statewide business licensing, bankruptcy data.

In print \$220 annual NEWSPAPER DELIVERY

All access only in print

AND FOR PLANS...

Online \$325 down plus an additional \$50 per month plan view charge

PLANCENTER.COM

Access to plans and spec books and much more!

To get access to all this online, in print, or both
PLUS online plans from PlanCenter.com

Visit WWW.DJC.COM

Over 1,100 craft workers put in 9,000 hours a day during the height of construction.



PHOTOS FROM MORTENSON

WHAT IT TOOK TO BUILD THE 'GREENEST' ARENA EVER

Mortenson had to pivot 15 months into construction, when plans changed to create the world's first net-zero-carbon arena.

As we counted down to opening day of Climate Pledge Arena on Oct. 22, people around the region were excited to welcome live music, National Hockey League's Seattle Kraken and Women's National Basketball Association's Seattle Storm to Seattle. But few people know what it took to build the first International Living Future Institute-certified net-zero-carbon arena in the world.



BY CHRIS ALLEN
MORTENSON

Being chosen by Oak View Group, a Seattle public-private partner and developer, to redevelop Climate Pledge Arena into a brand-new, best-in-world venue — all while keeping its historic landmarked

roof intact — has been one of Mortenson's most challenging and rewarding undertakings.

As if this alone wasn't enough of a challenge, a whole new bar was set when Jeff Bezos from Amazon posted on Instagram in June 2020: "I'm excited to announce that Amazon has purchased the naming rights to the historic Seattle arena previously known as KeyArena. Instead of calling it Amazon Arena, we're naming it Climate Pledge Arena as a regular reminder of the urgent need for climate action. It will be the first net zero carbon certified arena in the world, generate zero waste from operations and events, and use reclaimed rainwater in the ice system to create the greenest ice in the NHL. #ClimatePledge."

When Amazon bought the naming rights to Climate Pledge Arena — with the idea of making it the most progres-

sive, responsible, and sustainable arena in the world — the Mortenson team had already been under construction with the original design for more than 15 months.

In order to keep our commitment of quickly delivering the arena by October (in an already-challenging setting), the team had to fast-track sustainability elements to meet the goals of offsetting 100% of the energy used to operate the building — while disclosing and off-setting all the embodied carbon emissions associated with the construction and materials, as well — in record time.

100% RENEWABLE ENERGY

Climate Pledge Arena is the first arena in the world powered only by renewable energy, which meant Mortenson had to conduct a major redesign effort

to change the original design from gas to electric. Since the arena runs solely on electricity for daily operations — and has the first all-electric dehumidification system in the NHL — Mortenson had to change construction planning for natural gas to electrical systems. From kitchen systems and concessions to air handling units and building conditioning, all systems are served by electrical energy instead of natural gas — resulting in the facility venting zero combustion gases into the atmosphere. Even the Zamboni is electric powered.

Changing out the plan for gas distribution piping to electrical substations, which significantly increases demand for the amount of electricity coming into the building, required more electrical equipment with increased utility service. This called for critical early and frequent collaboration with Seat-

tle City Light and Seattle Center, a key element to successfully making this transition.

Important changes were made at the procurement and fabrication stage, and the custom electrical equipment production merged with the project's aggressive schedule. One of the most challenging aspects of switching gas to electric was the food service equipment. While commercial electrical boilers and water heaters are more commonly available, operating food service concession equipment entirely with electrical components was almost unheard of — and sourcing these specialty items that didn't yet have commercial demand required long lead times that had to be factored into the overall schedule.

Next, situating the additional electrical gear and transform-

GREENEST ARENA

CONTINUED FROM PAGE 5

ers presented a real conundrum with space utilization. Mortenson and the design team needed to determine where the equipment was going to live. The entire construction and design team needed to find the best location that was cost- and schedule-efficient and required the least amount of rework. The team narrowed and evaluated three sets of options for optimal locations, positions, and configuration to best fit the facility's program.

HARVESTING RAINWATER

Overall water usage is critical to limiting energy use and sustainability goals. Climate Pledge Arena harvests rainwater from its iconic roof, stores it in a 15,000-gallon, below-grade cistern and filters it as needed for the first "rain-to-rink system." This innovative system will capture and purify enough rainwater annually for more than seven times the volume of water required for the arena's ice sheet — and will maintain the "greenest" ice in the NHL. Other water-saving systems include waterless urinals and low-flush fixtures, ultra-efficient showers, significant on-

site retention tanks reducing stormwater runoff, and using electrical boilers for domestic water (for handwashing and drinking), and water bottle filling stations throughout the arena.

HARNESSING SOLAR ENERGY

Photovoltaics were another issue to be addressed. Due to Climate Pledge Arena's historic status, the team couldn't install solar panels on the arena's iconic existing roof — however, on-site solar arrays were placed at the venue's associated aspects: a newly built atrium in front of the arena, an adjacent parking garage, and a training facility in Northgate (that facility has a separate load of around 2 megawatts). Panels at the atrium roof are flush-mounted next to large skylights, which allow incredible daylighting into the multi-story space outside the arena bowl. The parking garage features canopy solar at its rooftop level.

THE IMPORTANCE OF TECH

While this article only covers a portion of what it took to build Climate Pledge Arena, it's

worth noting that more than 6,000 people have performed work at the arena in the three years it took to build, and at the height of construction we had more than 1,100 craft workers working 9,000 hours in a day — that's more than four equivalent worker years in every day.

The amount of coordination necessary to successfully complete this groundbreaking project demanded that the construction and design team use several tools to ensure design, construction and marketing efforts dovetailed together to create a seamless project delivery.

Mortenson used 4D building information modeling as a basis for multi-trade coordination and scheduling — and the entire building was constructed virtually to aid with major trade system coordination. For instance, the team completed a laser scan of the existing roof and structure to overlay design and construction planning to integrate new work with original. The steel team used the model to track fabrication and installation tasks, and color coding was used to aid schedulers



The new arena is served by a 25-foot-wide tunnel, which provides enough room for two passing semi-trucks.

while tracking procurement, upcoming tasks, and completed work. Using the 4D model, the mechanical, electrical, plumbing and fire protection systems were modeled to not only assist in clash detection (field installation coordination) but also in prefabrication efforts.

CARBON NEUTRAL ARENAS

Climate Pledge Arena is a big step towards a sustainable future — and through intense teamwork,

top-down collaboration, and digital tools to simulate the built environment — it proves that even big, complex projects that have a lot of physical infrastructure (in this case an 800,000-square-foot arena with 18,000-plus seats!) can (and should) use climate-friendly energy sources to reduce carbon emissions.

Chris Allen, DBIA, LEED AP (BD+C), was Mortenson's MEP executive for the Climate Pledge Arena project.

To our team members and trade partners involved in planning and building what others said couldn't be done...
 To our skilled tradespeople who persevered through a pandemic to complete this climate-centric landmark...
 To Oak View Group, the Seattle Kraken, and all our design partners...
 To our City of Seattle partners and inspectors...
 To the residents of Seattle and neighborhoods of Lower Queen Anne and Seattle Center...
 To the spirited Seattle Kraken fans filling the arena with your loud cheers...

THANK YOU!



NEW MARKS

CONTINUED FROM PAGE 3

match the historic condition. On the arena's north end, the curtainwall engages the seating bowl, celebrating views to the north plaza through this historic cathedral window, and blurring the boundary between interior and exterior.

At street level, containing the new arena under the existing roof and within the historic curtainwalls allows the site to be transformed into a 360-degree urban pedestrian park in the heart of the city. The site is universally accessible throughout and has no operational "back door," vastly improving on the previous condition and promoting a new green gateway into

Seattle Center from the west.

Sixty-seven mature London Plane trees that also hold landmark status from the 1962 World's Fair have been preserved around the perimeter of the site. The trees maintain a massive canopy and connect the dense neighborhood to the expansive Seattle Center campus with a broad, shaded pedestrian corridor. They also provide a visual buffer along the edges of the site, allowing the expansive historic roof to sit humbly within the Uptown neighborhood.

Climate Pledge Arena certainly lives up to its name, setting a new standard for sustainable design and operations. There

will be no fossil fuel consumption in the arena for daily use. All facility mechanical, heating, dehumidification and cooking systems were converted to all-electric systems. A "rainwater-to-ice" system has been implemented to harvest Seattle rainwater from the historic roof, collect it in an underground cistern, then purify it for use in ice resurfacing machines to create the "greenest ice" in the NHL. Solar panels are integrated on the new entry atrium and adjacent existing parking garage, and these combined with off-site renewable energy sources will help the venue achieve its zero-carbon certification.

Unlike any other arena video display, Climate Pledge Arena features the industry's first dual suspended scoreboards. Behind this new design lies a thorough analysis of on-ice and on-court action for hockey and basketball, spectator and athlete sightlines, and flexibility for shows and concerts. The result is a pair of distinctly shaped video displays that places video content in an ideal location for spectators and improves the atmosphere and connection between fans on opposite sides of the seating bowl. Setting this forward-thinking design innovation under the historic roof honors the legacy of the build-

ing, which was to showcase futuristic ideas and exhibits as part of the "World of Tomorrow" theme of the World's Fair.

Together, alongside our partners at Oak View Group and the city of Seattle, we have created the world's best live entertainment building. By marrying an intentional process of preserving and celebrating an iconic Seattle landmark with industry-leading venue design, Climate Pledge Arena is the new benchmark.

Geoff Cheong is an architect and principal at Populous, and served as lead project designer for Climate Pledge Arena.

CARPENTERS BUILD EVERYTHING

INCLUDING SEATTLE'S NEW CLIMATE PLEDGE ARENA

Union carpenters have access to:

- On-the-job training
- Family wages and benefits
- Debt-free education
- Worker rights
- Professional mentorship
- Free college accredited courses
- Unique career pathways
- Equal pay for equal work

Learn more online at nwCarpenters.org

@nwcarpenters TF/mc:opeiu#11-afl-cio

TRANSFORMING SEATTLE'S HISTORIC KEY ARENA

Designing and constructing a new steel-framed arena below a temporarily supported roof and around a temporary perimeter shoring was much like building a ship in a bottle.



BY MATTHEW FARBER & BRIAN MORGEN
THORNTON TOMASETTI

The Seattle Center Coliseum has a long history of hosting major sports and cultural events. Originally constructed for the 1962 Seattle World's Fair, the venue served as home to the Seattle SuperSonics basketball team for more than 40 years and played host to everything from one of the Beatles' final stage performances to the NBA All-Star Game.

Renovated and rebranded in 1995 as KeyArena, it has seen its ups and downs over the years, including the loss of the Sonics franchise. But the arena's latest transformation is truly one for the books. After an extensive renovation and expansion, Climate Pledge Arena is a state-of-the-art venue worthy of the city's newest sports team, the Seattle Kraken. The new 800,000-square-foot, below-grade arena holds more than 17,000 fans for hockey, basketball, concerts, and other events, along with a new below-grade parking garage and tunnel to access the loading dock.

As concertgoers and Seattle Kraken hockey fans filled the arena for the first time last week, they likely appreciated its new look, amenities, and high-tech features without giving much thought to the work that went into it. Oak View Group's renovation of the arena presented several complex challenges for the architect Populous and structural and construction engineer Thornton Tomasetti.

To truly understand the feats of architecture and engineering required to complete this one-of-a-kind transformation requires knowing a little history and background. The original venue was built at-grade (plaza/street level) with a capacity to host up to 13,200 spectators. The 1995 renovation lowered the event floor elevation by approximately 38 feet and added amenities, such as concession stands and club-level seat-

Transforming KeyArena into the new Climate Pledge Arena required the near-total demolition of the old structure and construction of a new one while keeping the roof and facade intact.



IMAGES FROM THORNTON TOMASETTI

PROJECT TEAM

Owner:
Oak View Group

Owner's representative:
CAA Icon

Architect:
Populous

Structural engineer:
Thornton Tomasetti

Construction manager:
Mortenson

ing and approximately 3,000 seats. Two decades later, additional upgrades were needed to meet or exceed other NHL and NBA facilities.

THE CHALLENGE

In fall 2017, KeyArena was classified by the Seattle Landmarks Preservation Board as a local landmark. This distinction required that the Paul Thiry-designed roof, curtainwall and exterior concrete elements be preserved as part of Oak View Group's plans for the arena.

A new catwalk and rigging grid are supported from the existing roof.



To achieve the project goals and increase the building footprint beyond the exterior curtainwall at the plaza level, the project team not only had to dig deep below the landmarked existing roof, but it also had to dig deep into the construc-

tion playbook for solutions. Most notable among these was determining how to demolish the existing structure and excavate 680,000 cubic yards of soil to make space for a new below-grade arena, all while temporarily supporting the

400-by-400-foot historic roof structure above.

PRESERVING A LANDMARK

The ability to support the existing roof while work went on below drove nearly all fac-

ets of the project's design and construction. The original roof was supported vertically by 20 concrete Y-shaped columns on shallow foundations spaced approximately 60 feet apart around its perimeter. The lateral loads, from seismic and wind, were resisted by a tripod of sloping concrete legs at the center of each side, serving as a buttress aligned to the roof's steel arch truss.

TEMPORARY ROOF SUPPORT

Since the foundations supporting the existing 44 million-pound historic roof would be undermined by the excavation for the new event level, a temporary roof support (TRS) system would need to support the vast majority of the roof's gravity load as well as resist wind and seismic lateral forces during construction. Essentially, the roof would need to temporarily float above the construction site while the excavation and construction of the new below-grade seating bowl went on below. The 3,700-ton temporary steel framing for the TRS was fabricated and installed by LeJeune Steel and Danny's Construction, the same team that would construct the new arena. The TRS included shoring pipes that were socketed some 85 feet below existing grade to support and maintain the integrity of the roof during construction.

SHIP IN A BOTTLE

Designing and constructing a new steel-framed arena below the temporarily supported roof and around the temporary perimeter shoring was much like building a ship in a bottle. The arena, which is the first net-zero-carbon-certified venue in the world, consists of a new event level 15 feet below the existing undersized event floor elevation, four complete arena levels at and below the surrounding grade (upper concourse, suite level, main concourse and mechanical mezzanine), and two levels above the surrounding grade. All levels extend to or beyond the perimeter of the existing roof.

On the west side of the arena, a new press-level bridge float-



A view of the project from the south end of the site, showing the existing roof fully supported by a temporary shoring structure.

ing above the seating bowl is supported by two trusses spanning 275 feet between the new steel-framed elevator cores. The elevator core towers also support the existing corner roof trusses to facilitate the removal of existing corner columns. Slide bearings were provided between the new elevator core steel and the existing roof structure to seismically isolate the roof from the new bowl structure below.

In addition to seismic retrofits to the roof, other measures included strengthening the steel roof trusses and their connections to bring them up to current code requirements and supporting the additional loading of the new structure. The roof is now able to support two 30-ton video boards along with hoisting equipment, a new catwalk, and rigging grid with 100 tons of rigging capacity to accommodate modern concert touring and award shows.

A STRONG TEAM

In sports, you need a strong team and an effective strategy to be the best. The same can be said for complex projects like Climate Pledge Arena, which necessitated an integrated

approach to solving challenges. All stakeholders, including the owner, architect, engineer, construction manager, and steel contractor, provided timely input and feedback to produce innovative, practical, constructable, and cost-effective solutions.

Bringing a local landmark into the modern era is no simple task, especially when all of Seattle is watching. And while it may look familiar from the outside, make no mistake that Climate Pledge Arena is an entirely new world-class sports

and entertainment venue.

Matthew Farber, PE, SE, is a principal at Thornton Tomasetti. Brian Morgen, Ph.D., PE, SE, LEED AP, is vice president and Seattle office director with Thornton Tomasetti.

**MORE
RESOURCES.
TRAINING.
WORK.**

**BUILD YOUR BUSINESS AT
NORTHWEST-IMPACT.COM**

Searching spec books has never been easier. **PlanCenter** covers the Great Northwest with projects located in **Washington, Idaho, Oregon and Alaska.**



PlanCenter.com
Send us your plans, we'll post them.

PUBLIC AGENCIES POST FOR FREE

REIMAGINED PRECINCT BRINGS BACK WORLD'S FAIR MAGIC

The project makes the western edge of Seattle Center whole again, with sloped planes offering multiple paths through generous plazas and gardens.



BY BARBARA SWIFT & GARETH LOVERIDGE
SWIFT COMPANY

The transformation of Climate Pledge Arena embodies the very best of stewardship and civic commitment to the community. Seattle and Oak View Group have acted and implemented a vision! The 1962 Seattle World's Fair landmark is transformed as an 18,100-person venue under its great parabolic roof.

The magic of the World's Fair is back with plazas wrapping the restored glass walls of the arena. You, too, can take pleasure in seeing in and through the arena facade, leaving your mark with a nose print! The northern glass wall lets you view both — in from the plaza above, and out from the seating bowl to the landscape beyond — a true reimagining of Paul Thiry's arena in the classic Northwest tradition.

Seattle's community "heart," the Seattle Center campus, has more space for the over 1,400 events it hosts per year. The arena plazas create a multitude of gathering spaces for events, people watching, and the celebration of community life — including the Seattle Storm and the new home team, the Kraken. The surrounding communities of Queen Anne, Belltown and South Lake Union, with their commitment to increased density, now have generous plazas and gardens of all sizes for the intimate moments of daily life.

This western precinct of Seattle Center is reimagined, extending the campus grounds to the streets and sidewalks. The design recaptures the full site for public use — replacing the loading and service areas with public spaces full of trees, seating, leaning walls and areas to linger.

In Seattle, topography can be a barrier and a central objective of maximizing ease of access. This drove a core design strategy, creating a level platform at the arena entry level. The reimagined site ties into the surrounding city and center with sloped planes offering multiple paths through generous plazas and gardens, allowing people to



Plazas wrap the restored glass walls of the arena.

PHOTOS BY GARETH LOVERIDGE

easily find their way and wander as they like.

This objective maximizes the site for intuitive circulation and gathering, instead of losing precious space to stairs and ramps. Where stairs and walls occur, they're used to create overlooks for people watching and gathering nooks. With careful grade manipulation, ADA access is ubiquitous, and barriers are removed. Places that are easy to use and where you can focus on people and activities instead of where to move your feet make for a more generous place. This is good for the full community, creating comfortable places to stop and linger with a commitment to leveling the playing field for all.

The arena precinct is a place of magic and memory comprised of the great legacy Plane trees that envelop the site, the reimagined DuPen Fountain (opening in 2022), the Northwest Rooms with their collection of critical community organizations (like KEXP, VERA and SIFF), and the arena itself, with many new publicly accessible art installations. Each is part of a larger composition and integrated into the site design with the goal of treating each piece with equal importance and as part of a larger whole. This is what good design should do.

When you visit — stop and

relax — you should feel as if the whole place was designed as one with seamless transitions between old and new. This is the challenge of transforming legacy civic spaces, and the project embraced the challenge of making this western edge of Seattle Center whole again. The result is what makes Seattle Center Seattle's heart. The design creates the stage for the daily life of the city, and a central meeting place of celebration and ritual — a place of demonstration and protest. This is what stewarding the past for the future is all about.

How does this happen? It requires vision, commitment, conviction and dogged hard work. It takes a nimble team committed to a vision with the will to make it real.

It takes a team committed to building smart green strategies and optimizing the opportunity of a project of this scale. The subtle use of rainwater sheeting into tree wells and gardens captures and optimizes what will be precious water in the future. Approximately 50% of the 1-acre plantings are on structure and the capture of rainwater in garden areas puts the water to great use. This is a high impact and low-cost move.

The rigorous protection and maintenance of the spectacular legacy Plane trees from the

1960s coupled with the addition of over 170 new trees will double the long-term tree canopy of the site. This will mitigate

the heat island effect, increase air moisture, support habitat and sequester carbon. Using the street for multiple activities



Proud Partners in the Successful Completion of the Climate Pledge Arena

BUILDING ENCLOSURE SPECIALISTS

Building Performance | Sustainability

600 Stewart Street, Suite 200, Seattle, WA 98101
seattle@morrisonhershfield.com

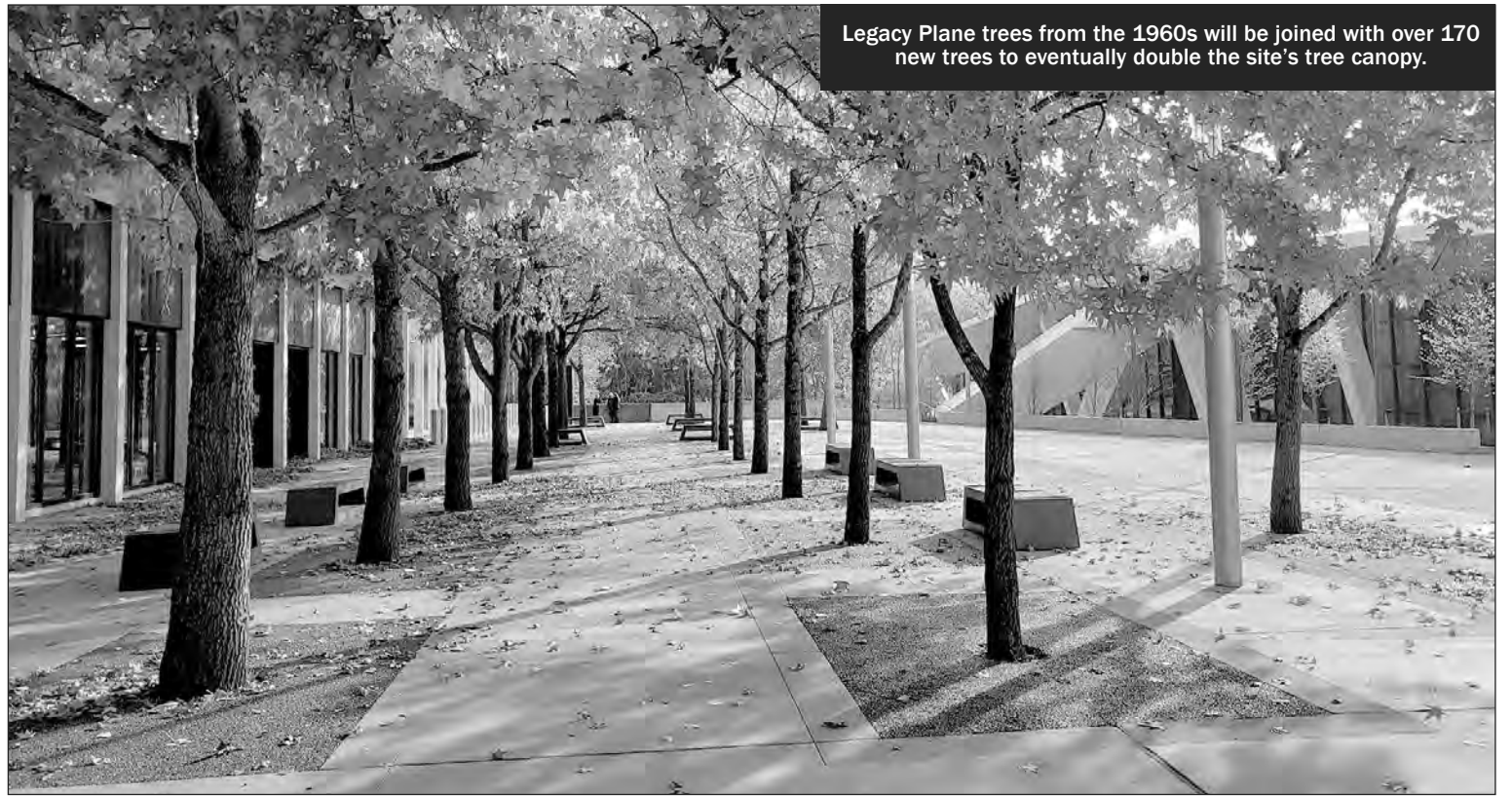
including festivals means the streets (29% of the city) serve more than just cars. These simple big and small moves are critical for our future.

Working in a place which is sacred to the city and its history requires careful work. The consistent and thoughtful attention to historic landmarks and working with the city of Seattle Department of Neighborhoods Landmark Preservation Board and Design Commission means that the integrity of the arena, the DuPen Fountain and the overall site is retained and upgraded.

For the DuPen Fountain, it means Everett DuPen's original intention of creating a touchable place that speaks to the importance of science and the source of life carries forward in the future. It means that the 1962 experience of walking up to the windows of the arena for direct human access is recreated. It means that the artwork panels by Paul Thiry are preserved and integrated and that the great tree alignments designed by Richard Haag continue as part of Seattle's urban forest.

Equally, the future is brought to play, continuing Seattle's groundbreaking tradition of integrating public art into our civic spaces, each speaking with a different voice, reflecting the diversity of the community.

In the end, the experience should feel so logical and apparent as to seem natural and whole. When you walk through the Seattle Center



Legacy Plane trees from the 1960s will be joined with over 170 new trees to eventually double the site's tree canopy.

grounds in the evening, the arena is a beacon with people strolling, gathering for pregame events, listening to buskers, all in a precinct with an open feeling creating a place of generosity in the city.

On a summer afternoon, the great legacy trees and their younger partners will offer shade and respite. Children will continue the 60-year-old tradition of leaping in DuPen Fountain. Music will pour out of KEXP and evening SIFF movies will occur on the plaza. On winter mornings, frost will gather

on the DuPen sculptures and light will glisten on wet paving. The constant changing events of Seattle Center will invite you to join your larger community and enjoy the spectacular events in the arena. This is the vision of the reimagined Climate Pledge Arena in Seattle

Center — the making of community.

Barbara Swift, FASLA, Hon. AIA, is the founder of Swift Company and has built a practice focused on the public realm and the development of civic spaces serving community. She

is the principal-in-charge and lead landscape designer for Climate Pledge Arena. Gareth Loveridge is the project manager and lead for landscape design for the arena, and has 22 years of experience in landscape architecture and urban design.

Public spaces have seating, leaning walls and areas to linger.



SWIFT COMPANY LLC

We are thrilled to be part of the team and see this project vision realized!



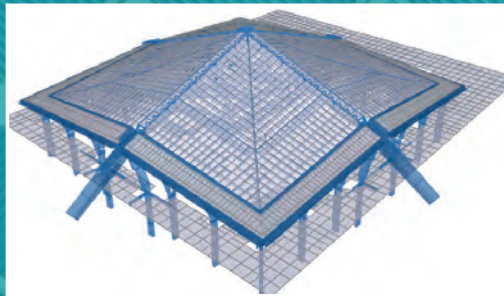
How do you engineer the makeover of a Seattle landmark?



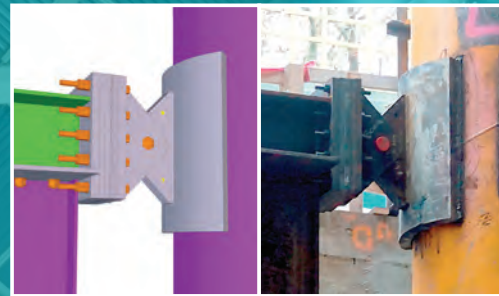
Design temporary supports for a 44-million-pound seismically upgraded historic roof



Raise the roof to allow a 600,000-cubic-yard excavation



Apply advanced analysis for performance-based seismic design



Deliver intelligent models on-time and on-budget with Advanced Project Delivery (APD)™

Thornton Tomasetti

Offices Worldwide

1500 4th Ave. Suite 450
Seattle, WA 98101
+1.206.336.4100

ThorntonTomasetti.com