



The entry building is the public face of Colman Dock, reinforcing the street edge with retail and overhead canopies.

NBBJ photos

## Elemental geometries steer design of Seattle's new ferry terminal

■ The architecture considers a simple, elegant and minimalist approach to reflect the project's function as an important transportation node.

By DAVID YUAN  
NBBJ

Colman Dock, the flagship terminal of the Washington state ferry system, is designed to be a gateway to the Olympic Peninsula and a portal to the city of Seattle.

elevated pedestrian connector, a large open space in a curved hourglass shape to allow ease of passenger movement. With seating areas and planned retail pop up spaces, it offers dramatic views of the waterfront to the south and the Olympic Mountains to the north. It also connects to a bridge providing access to a view platform and stairs and elevators down to the passenger-only ferry terminal.

To provide additional public open space and street level activation, two public plazas are designed along Alaskan Way: one at the terminus of Columbia Street directly south of the entry building; and one at Yesler Street.

space that offers dramatic views of the Olympic Mountains, Elliott Bay and downtown, including the Seattle Great Wheel. A wood ceiling extends from the underside of the exterior roof to become the ceiling of the waiting room, blurring the connection between the inside and outside. The broad roof overhang also protects and shields the passengers in the waiting room from the late afternoon sun.

Four triangular-shaped skylights bathe the room with natural light, reducing the demand for artificial lighting. Operable openings in the tall windows that extend from floor to ceiling along with large ceiling fans capture and circulate breezes from the water to provide free cooling and fresh air.

Unlike tall office buildings that are primarily perceived at street level, Colman Dock is also prominently seen via a high vantage point from downtown office and residential towers. Therefore, the roof of the terminal building is designed as a "fifth façade," expressed as a simple metal plane with wide overhanging eaves that hide the mechanical equipment tucked under the roof and provide weather protection for ferry passengers.

### WAYFINDING, PASSENGER MOVEMENT

Intuitive wayfinding was also an important goal for the project.

The design allows passengers to walk seamlessly from the new Marion Street pedestrian bridge through the entry building and proceed across the elevated pedestrian bridge directly to the terminal.

Passengers coming to the entry building along Alaskan Way are greeted by bright yellow walls



Triangular-shaped skylights bathe the waiting room with natural light, reducing the demand for artificial lighting.

### KEY BUILDING ELEMENTS

The 20,000-square-foot terminal building, which has three slips to accommodate ferries to Bainbridge Island and Bremerton, features stunning views from the walk-on passenger waiting room and is elevated above the car deck to enhance passenger safety.



Yuan

The entry building serves as the public face of Colman Dock along Alaskan Way and reinforces the street edge with active retail uses and overhead canopies. A wide stairway on the south end greets passengers arriving from the stadiums; a stair and elevators in the middle accommodate passengers arriving at the passenger drop off; stairs at the north end are used by passengers headed from downtown.

Connecting the terminal building and entry building is the

### BUILDING ARCHITECTURE

The architecture considers a simple, elegant and minimalist approach to reflect the project's function as an important transportation node. Elemental geometries were used for the form of the terminal building and entry building to exert a strong material and physical presence along the water and Alaskan Way that is larger than their physical size.

Key materials like perforated metal panels with a circular "bubble" pattern are carried over from the vertical screen walls of the entry building and repeated at the curved balcony railing panels that line the edges of the elevated pedestrian connector. Mock-ups of the perforated metal balcony panels were built by NBBJ in-house during the design phase to test the constructability of the system and the visual and operational aspects of the design.

### SUSTAINABILITY DRIVERS

Arriving at the ferry terminal waiting room, passengers are greeted by a large high ceiling



Bright yellow walls and signage direct passengers to the terminal building.

on both sides of the stairways and elevators that lead up to the terminal. Yellow walls also mark the sides of the three main entry doors to the terminal building to further identify the "front door." For the visually impaired, tactile maps and an 18-inch-wide tactile paver for cane detection is embedded in the concrete walking surface across the entry

building and elevated pedestrian connector leading to the waiting room in the main terminal.

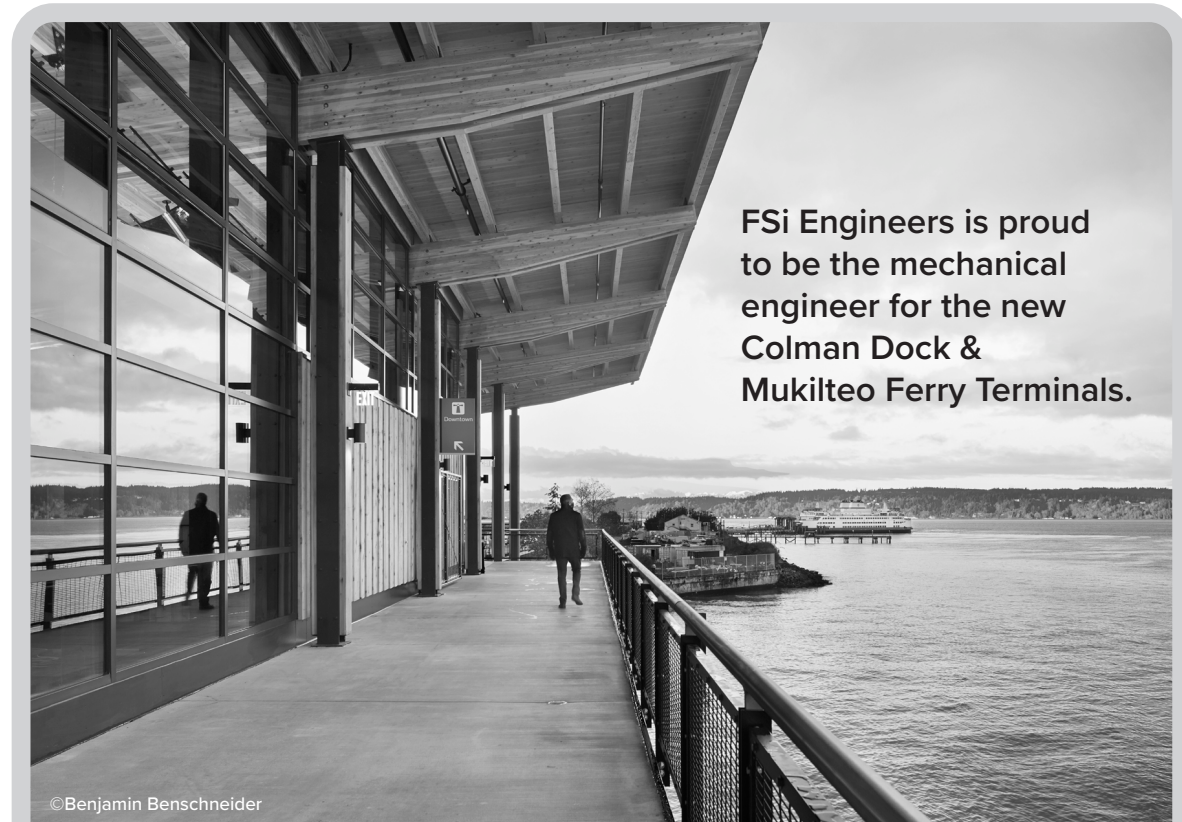
Passengers arriving at the terminal building from Bainbridge and Bremerton ferries are protected by the broad roof overhang and pass through portal gateways also marked with the yellow color.

They walk across the elevator

pedestrian connector and make their way to stairways and elevators framed by yellow walls that mark their arrival to the city of Seattle down to Alaskan Way or across the Marion Street pedestrian bridge.

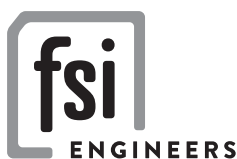
As the first building constructed west of Alaskan Way since the removal of the Alaskan Way Viaduct, the new Colman Dock project serves as an important transportation gateway that we hope will set the tone for future development along the new Seattle waterfront.

David Yuan is a partner/architect with NBBJ and project manager for Colman Dock.



FSi Engineers is proud to be the mechanical engineer for the new Colman Dock & Mukilteo Ferry Terminals.

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We're extremely honored and proud of the accomplishment on the **NEW Flagship Multimodal Ferry Terminal at Colman Dock Project**

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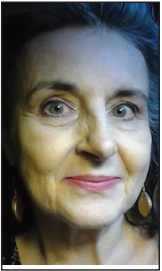
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## How computational fluid dynamics ensures optimal heating and cooling at Colman Dock

■ FSi used CFD and data on prevailing winds to determine the passenger terminal could use natural ventilation for passive cooling.

By RO FONDER REEVE  
FSi Engineers

Sustainability, innovation, and resilience are hallmarks of the values held by Washington State Ferries (WSF). The Colman Dock renovation modernizes the multimodal terminal, greatly improves its seismic resilience, makes great strides toward energy efficiency, and prepares the complex for future code requirements.



Reeve

“WSF has admirable goals for Colman Dock,” said Ola Jarvegren, principal at FSi Engineers. “They came to this project with really big ideas. It’s exciting to work with agencies who take sustainability on as a primary goal. That’s why it has been absorbing from our first work in 2013 to the phase we’re in right now.”

From the very beginning, the project presented unusual technical challenges. WSF needed the terminal to remain functional during the entire construction period, which required carefully planned project phasing to keep both foot and auto passenger

traffic flowing smoothly. The power source for the project also changed while the design was well underway, requiring the design team to pivot its approach. The location in an active seismic zone required exceptional levels of structural engineering.

### ROOTED IN PAINT HANGARS

With 10 million passengers annually and 70% of WSF’s total foot traffic, human comfort is another primary concern for the terminal. FSi used computational fluid dynamics (CFD) airflow modeling to ensure optimal heating and cooling. CFD provides information about the speed and temperature at which air flows through a given area. The modeler creates a variety of scenarios with variables such as the placement of doors and windows, building orientation, location of ventilation, and other factors.

FSi built its CFD expertise at an iconic Northwest aviation company designing paint hangars to optimize airflow, ensuring even coverage of the aircraft and to minimize waste and overspray. Through dozens of projects, performed over decades, FSi gained the skills to extrapolate the use of CFD to other applications.

For the Colman Dock project, FSi used CFD and data on pre-

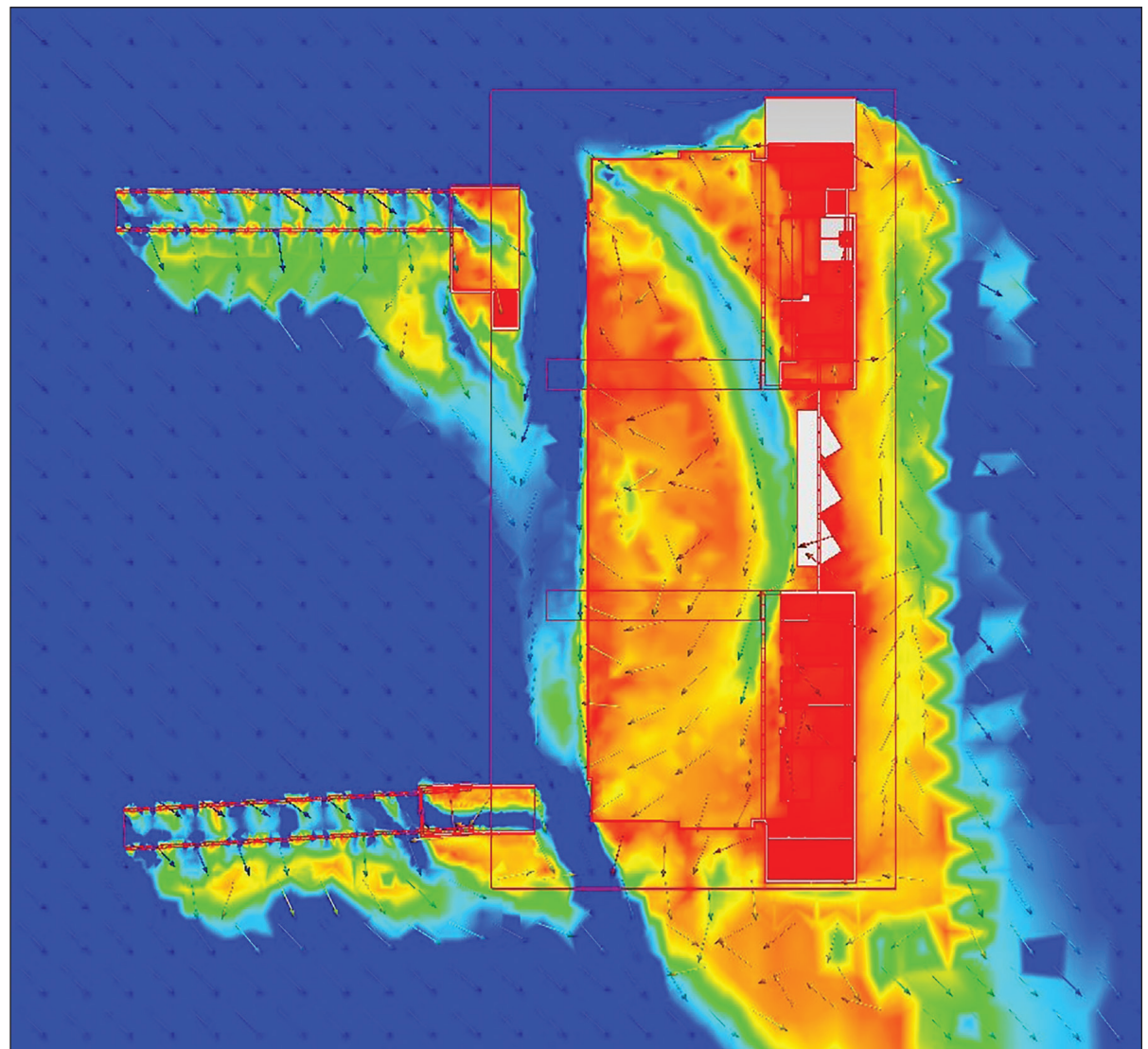
vailing winds to determine the structure could use natural ventilation for passive cooling. The facility’s operable windows take advantage of the cool breezes coming off the water, supplemented with high-volume, low-speed (HVLS) fans. This eliminates the need for mechanical cooling, saving energy and contributing to WSF’s sustainability goals while maintaining passenger comfort.

CFD verified that in-floor radiant heat would perform well in the winter. The models demonstrated radiant heat would outperform traditional HVAC by warming the people and fixtures rather than the air. Radiant heat is more effective at keeping the temperature comfortable, particularly in areas where doors open frequently as passengers enter and exit the facility. The HVLS fans play a part here as well, by moving warm air from the high ceilings back down to passenger levels.

### LEADING-EDGE INNOVATION

FSi started working on Colman Dock a decade ago. Since then Washington state and the city of Seattle have both implemented ambitious building and energy codes in their commitment to sustainability in building design. The AEC industry has embraced these code changes and continues to innovate, incorporating new technologies and using exist-

See FLUID DYNAMICS — page



CFD analysis demonstrated that natural ventilation would be an effective means of cooling the space. The red areas represent stagnant or slowly moving air, and the blue and green show where the air movement is faster. CFD models helped with placement, sizes and quantities of windows and doors.

FSi image

## Transformed dock is a symbol of progress, sustainability, community

■ Hoffman’s team had a significant goal of maximizing DBE opportunities.

By ANDREW POWELL  
Hoffman Construction

Hoffman is proud to have been a partner in the transformation of Seattle’s waterfront through the redevelopment of Colman Dock.



Powell

To maintain Colman Dock’s critical role as a regional multimodal transportation hub, we replaced aging and seismically vulnerable wood piles and trestle foundation with steel for strength and longevity, and demolished and replaced the ferry terminal and passenger facilities. Ultimately, this project added an overhead loading and walkway, an 8,500-square-foot King County passenger-only ferry building, and a new 23,000-square-foot terminal building for Washington State Ferries.

Despite myriad challenges encountered over the past couple of years, the redevelopment of Colman Dock has proven to be a highly successful and enjoyable project. Our crews and trade partners remained resilient through record heat, record rain, a pandemic, and a concrete strike. We are proud of our collaboration with WSDOT, Washington State Ferries, King County, and all the project stakeholders in navigating these challenges.

Despite these potential delays and challenges, the project opened on time. We are just finishing the key remaining structures: a new entry building and an elevated pedestrian bridge connector.

With over 10 million passengers a year, Colman Dock is the busiest ferry terminal in Washington and one of the busiest in the world, so maintaining uninterrupted service for passengers during construction was critical. We performed extensive preconstruction planning to develop comprehensive safety and “no disruption” phasing plans for the busy terminal.

A robust building information modeling (BIM) execution plan was a critical tool used to keep the facility operational and plan the intricate phasing. Early in preconstruction, our team performed a laser scan under the terminal. This scan was integrated with the terminal digital model to ensure the interface of the new beams with the existing pile caps was seamless. Our BIM team also developed a synchronized phasing model, linking the BIM model to the project schedule to minimize any potential issues or delays during the construction phase.

Our commitment to safeguarding water wildlife and minimizing environmental impact was also of utmost importance throughout the project. To achieve this, we implemented meticulous coordination of in-water work, carefully adhering to designated

“fish windows.” These windows were crucial for preserving the habitat and ensuring the safety of protected species, such as migrating salmon. Recognizing the potential harm that impact hammers could cause through underwater shock waves during the installation of steel piles, we took precautions to mitigate any risks.

In addition to ensuring the terminal remained active throughout construction and opened on time, our team had a significant goal of maximizing opportunities for disadvantaged business enterprises (DBEs). We are deeply committed to promoting diversity and leveling the playing field for small and disadvantaged businesses. To achieve this, we took a comprehensive approach, breaking down project scopes to align with the capabilities of the local subcontracting market. We carefully examined opportunities to divide these scopes into smaller packages, actively encouraging DBE participation.

Our dedication to supporting DBEs extended beyond simple outreach efforts. We actively engaged with the community by participating in various forums, such as the Regional Contracting Forum, Business After Hours, Tabor 100, National Association of Minority Contractors, First Thursday, and other local events. Collaborating with Platinum Group, we developed a DBE information session where DBEs from different disciplines could gain insights into the project, learn how to collaborate with our team, and explore upcoming bidding opportunities. To facilitate individual attention, Platinum



Part of the job involved working from the water side of the dock.

Photo from Hoffman Construction

arranged one-on-one sessions between the DBEs and our project team, enabling specific questions to be addressed.

We were has also involved in

WSDOT’s mentor-protégé program, which provides opportunities for participants to improve their business practices, grow their firms, and develop relation-

ships in the region. At Colman Dock, we have had the privilege of working with Alcantar, Bub-

See TRANSFORMED — page

## COLMAN DOCK TEAM

### DESIGN AND ENGINEERING

- WSDOT
- WSF Terminal Engineering
- WSF Terminal Operations
- WSP USA
- NBBJ
- KPFF Consulting Engineers
- Concord Engineering
- Dark Light Design
- FSi Engineers
- HBB Landscape Architecture
- Herrera
- Illum
- Obelus Design Group

- Osborn Consulting
- The Greenbusch Group
- Wood Harbinger

### CONSTRUCTION

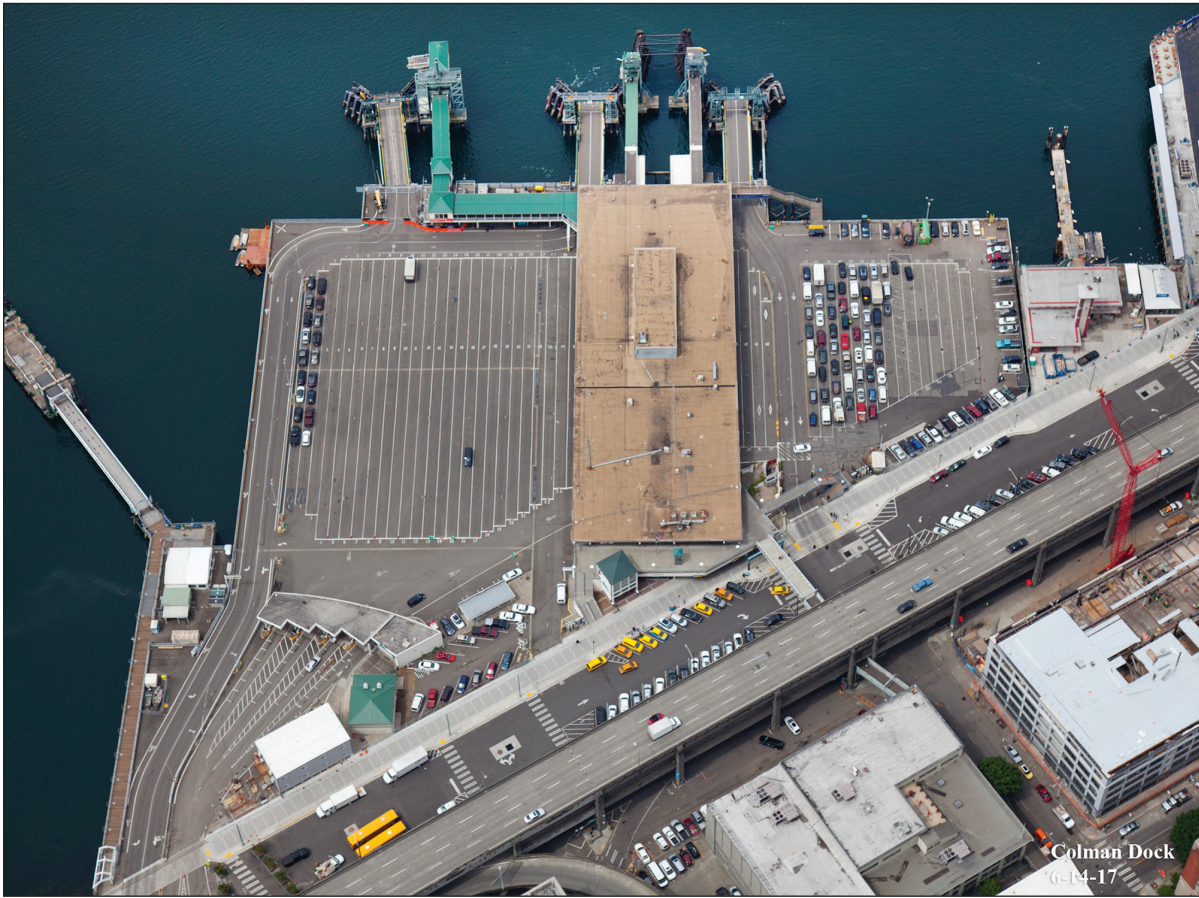
- Hoffman-Pacific Pile & Marine joint venture
- Holmberg Mechanical
- Valley Electric
- Hoffman Structures
- Kenco Construction
- Performance Contracting
- ADF International

Dark Light Design is proud to be part of the team bringing Colman Dock to life through the application of light



dark light

www.darklight-design.com



The old terminal, pictured in June 2017, faced away from the water. It was dark and crowded. Old creosote-treated timber piles, some dating from the early 1900s, were replaced by 500 steel and concrete piles.



The new terminal, pictured in June 2023, faces the water to the west and downtown Seattle to the east. North of the terminal (to the right), a bulkhead was removed and crews cleaned up the area, opening 180 linear feet of shoreline.

## New flagship ferry terminal restores salmon habitat, honors tribal history

■ The project includes a 6-acre containment cap covering harmful sediments.

By **DIANE RHODES**  
WSF Communications

For Washington State Ferries, replacing the aging and seismically vulnerable ferry terminal on the Seattle waterfront while maintaining service for two busy ferry routes has been a logistical feat since construction began in 2017. A delicate choreography of shifting passenger vehicles to nearby Pier 48 to free up space in the holding lanes for cranes, crews, machinery, and heavy construction work.



Rhodes

All this while keeping ferries safely running to Bainbridge Island and Bremerton as ferry

traffic steadily ticks up to pre-COVID levels. But this new ferry terminal isn't only for the benefit of the millions of ferry riders who use it each year. It includes elements to honor the tribes whose ancestors lived on these Salish Sea shores and fished its waters. And it's helping to restore vital salmon habitat near the Elliott Bay seawall.

### SHORELINE "BREATHING SPACE"

Built and opened in stages, the \$489 million Colman Dock project features a new passenger building — opened in November 2022 — a new concrete and steel trestle, entry building along Alaskan Way, and an elevated pedestrian walkway, the latter two opening in late July or early August. The gleaming new buildings are the most visible part of the project.

But outside along Alaskan Way more quiet changes are taking place.

North of the terminal where a bulkhead once sat is now 180 linear feet of open shoreline. Contractors removed 15,600 tons of fill material over the water and replaced it with 30,000 tons of clean sandy gravel and loose rock 2 feet deep. This containment cap covers 6 acres of sediments, which included metals and other things harmful to humans and the environment. Capping it this way prevents these sediments from spreading.

The open shoreline is a visual breathing space of sorts on a crowded waterfront popular with locals and tourists. Catch the best view of it from the balcony of the new entry building or along Alaskan Way.

The project also replaced the old timber trestle portion of the dock with a new concrete and steel trestle. Removing the old timber pilings — some believed to date back to 1910 when Colman Dock was first built — also

removed 7,500 tons of creosote from the water. Creosote is a cocktail of harmful chemicals that continually leach into the water, harming marine life.

"Rebuilding the terminal allowed WSF to improve the nearshore marine habitat along a highly developed shoreline and leave a functionally better habitat in a biologically active zone," said Marsha Tolon, WSF environmental and permitting lead.

Minimizing overwater coverage to allow marine plants and animals to thrive was a goal in the project. The new trestle increased the overwater footprint by approximately 5,550 square feet. To mitigate for it, we removed 5,590 square feet of an old trestle and piles from nearby Pier 48.

### TRIBAL ART AND PLAZAS

WSF consults with federally recognized tribes that have treaty rights where our projects are located. The Muckleshoot Indian Tribe and the Suquamish Tribe

have treaty rights to hunt, fish, and gather on the waters of Elliott Bay. We are working with both tribes to showcase work from their artists that tell their stories in creative ways throughout the site.

Inside the passenger building, three scaled-down versions of traditional tribal canoes from Suquamish artist Kate Ahvakana will hang in the space for waiting passengers to enjoy. Work from Muckleshoot tribal artists will be installed on the main entry doors to the terminal building to welcome visitors, as is tribal custom.

"We are working with talented Suquamish and Muckleshoot artists who are creating pieces with tribal cultural motifs to adorn this new space and remind visitors of the tribes' continuing presence here," said WSF tribal liaison Phillip Narte.

Coming soon, storyboards featuring tribal history and photos will line public areas such as the new elevated walkway and describe Coast Salish people,

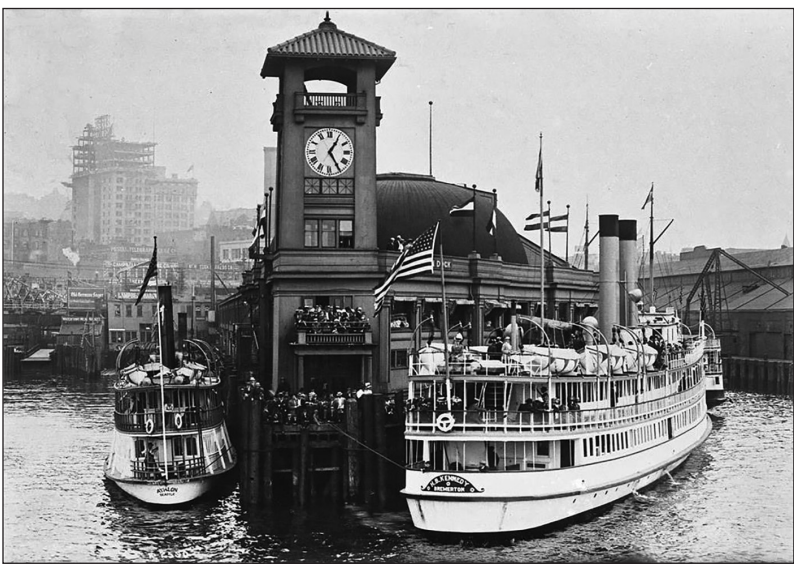
their life ways, and their continuing presence. These boards will include native Lushootseed language as much as possible to help keep the language alive in a place where it once flourished.

Later this year, two new tribal-named plazas will open along Alaskan Way honoring Muckleshoot and Suquamish history. The Suquamish Tribe named the north plaza (near Columbia Street) ululali, meaning "a place of traveling water." The Muckleshoot Indian Tribe named the south plaza (near Yesler Way) slu wil, meaning "a perforation for a canoe, a short cut, a canoe pass." Both plazas offer a place to sit, gather, and contemplate Coast Salish tribal history.

### BETTER EXPERIENCE FOR ALL

The terminal building itself has 4,230 square feet of windows squarely facing the water and downtown Seattle — a vast

See **FLAGSHIP** — page



Colman Dock was built in 1882 and has remained active over the years. Shown in 1911 is Colman Clock, which will be relocated inside the new terminal.

HistoryLink image

## 6-year rehab faced many challenges

■ The work was divided into five phases, with both below-trestle and above-trestle work.

By **ANGELA WHITE**  
Holmberg Mechanical

Colman Dock was initially constructed in 1882. A lot has changed since then, especially over the last 50 years.

The terminal was deemed "seismically deficient" in 2016 with concerns over how it would fare in the event of an earthquake. Entities involved, including WSF (Washington State Ferries), WSDOT (Washington State Department of Transportation), and others, capitalized on the revamp opportunity to create a more tourist-friendly terminal experience to provide a critical link for continued economic growth. That was a lot to



White

ask for from a ferry terminal. Two contractors partnered in a joint venture to tackle the terminal, which is expected to provide transportation for 10 million passengers annually in Puget Sound. Hoffman Construction and Pacific Pile & Marine combined forces and resources to bring the city of Seattle the most efficient and beautiful ferry terminal seen yet. The design was focused on how to enhance the passenger's ride from beginning to end.

During the six-year modernization with a nearly half-billion-dollar price tag (\$467 million to be more precise), the hurdles to overcome have advanced from its humble beginnings. This massive project started with the first of many challenges in that construction could not impede ferry service passengers that rely on Colman Dock annually. The work

See **CHALLENGES** — page



**Congratulations to WSDOT, Washington State Ferries, King County and all of the project stakeholders on the completion of the new Multimodal Terminal at Colman Dock! Hoffman is proud to have been your partner on this transformative and inspiring new facility.**



# Fluid dynamics

Continued from page 3

ing equipment in creative ways.

One example of innovative equipment use involved dedicated outdoor air system (DOAS) units. WSF does not allow air conditioning in its passenger facilities, making DOAS the ideal mechanical solution to decouple necessary ventilation from mechanical heating and cooling.

“It’s interesting to see how fast the leading edge of sustainability changes,” mused Jarvegren. “When we started this project, DOAS was innovative and unusual. Now, we see them on most of our projects. I think that comes from agencies like WSF that look ahead and set an example of building in new ways. They bring ideas to life by using them in public projects. Then other sectors follow along. That drives the equipment manufacturers to keep up with the trends, and soon it becomes the design standard. It’s a great upward spiral.”

## RESILIENCE UNDERNEATH IT ALL

Resilience is a key aspect of sustainability. WSP, which led the engineering team, provided vital features through its structural engineering. The dock is in a seismically sensitive area and requires deep pilings for support, and flexibility to withstand the wave action of earthquakes.

“The pilings have to be deep enough to penetrate two layers of liquifiable soil to find a solid foundation in the glacial soil. This means that the Colman structure is approximately 10 stories tall, but most of it is below the surface,” said Mike Wray, WSP senior vice president and project manager. “This is necessary to meet WSF’s goals of protecting occupants’ life safety and allowing safe egress post-earthquake.”

WSP designed 5 acres of new concrete trestle, supported by driven pipe piles and drilled shafts. The design is informed by the company’s advanced soil-structure interaction analysis, which uses numerical modeling rather than empirical approaches. The findings were peer reviewed.

## WSF TARGETS LEED SILVER

FSi is leading the LEED process, preparing the reports and coordinating with each discipline. Together, the ad hoc team is working to earn the maximum points possible to attain WSF’s goal of LEED Silver, under version 4.1 NC.

“The design team collaborated to incorporate sustainable design features across disciplines and significantly reduced energy and water consumption,” said Matthew Veloz, FSi energy analyst and LEED consultant. “Washington state is making a strong push toward decarbonization, and the hydronic system is well-suited for future electrification. Meanwhile, the savings gained from this phase make excellent use of their energy budget.”

The team gave WSF the sustainable, measurable results it wanted. The design achieved energy savings of 35% over the LEED baseline, a particular challenge in a non-standard facility like the main terminal. Projections also estimate a reduction in water use of 40% above the LEED baseline. Both energy and water are metered, giving WSF data to maintain these savings over time. The team also earned LEED points for indoor air quality, focused on filtration and CO2 monitoring. The project is on track to meet its LEED Silver goal.

## 150 YEARS AND BEYOND

First constructed in 1882, the Colman Dock, in its many forms, has served the people of Washington state for nearly a century and a half. It has a rich history as a part of Seattle’s working waterfront, serving a variety of commercial purposes. It burned in the Great Seattle Fire in 1889, was rebuilt, then extended in 1908. Successive rebuilds and improvements have kept it a vital part of both city and state economies. With the completion of this project, Colman Dock has the capacity and resilience to continue its legacy well into the future.

*Ro Fonder Reeve is in marketing communications and social media at FSi Engineers in Seattle, and is also a freelance writer.*

# Transformed

Continued from page 3

bers, and other trade partners to provide technical assistance and help them grow their businesses.

Furthermore, our commitment went beyond the contract award. We aimed to assist DBE firms in their growth and development by providing support in bonding, payment terms, administrative assistance, and training. Witnessing the success of firms like Steelkorr on the Colman Dock project, reaching a point where the firm’s size exceeded DBE requirements, brings us immense satisfaction. Seeing small firms thrive and prosper is ultimately what matters to us.

From the project’s inception, the Washington State Department of Transportation set a DBE goal of 9% of the project’s maximum allowable construction cost (MACC). Through proactive implementation of these DBE outreach initiatives, we are making significant progress and are set to achieve the goal.

The transformed Colman Dock now serves as a symbol of progress, sustainability, and community, thanks to the unwavering efforts of all the people involved and their collaborative approach to this remarkable project.

*Andrew Powell is vice president at Hoffman Construction Co.*

# Flagship

Continued from page 4

improvement over the old cavernous terminal building that had a serious seating shortage. The design flips the building’s orientation to take advantage of the views, adds more seating and space for future retail and food vendors, and gives people more room to spread out as they await the ferry. The entry building on Alaskan Way features two elevators and three staircases from the street level leading up to the elevated walkway and on to the passenger building.

Work remains on the project. The new Marion Street pedestrian bridge, being built by the city of Seattle, will open later this year. Retail and food vendors will open in the entry building and outside on the elevated pedestrian walkway. When Alaskan Way construction wraps up, all ferry holding will be moved back to Colman Dock and a new passenger and ADA drop-off and pick-up area will open. Bike storage lockers and other amenities are also on the way.

See the Seattle Multimodal Terminal at Colman Dock project website for more, at <https://tinyurl.com/WSF-ColmanDock>.

*Diane Rhodes specializes in construction communications for Washington State Ferries.*

# Challenges

Continued from page 4

has been divided into five phases with both extensive below-trestle work, but also above-trestle work that included multiple buildings: a new passenger-only ferry terminal, a new terminal building built in two phases not to interrupt passenger traffic, a vehicle passenger attendant crew building, an entry building that runs parallel to the new Alaskan Way, and an elevated pedestrian connector connecting the entry building and terminal building.

## WORKING AROUND TIDES

Holmberg Mechanical, a Puget Sound-based full-service mechanical contracting and engineering firm, was asked to provide the scope for the complicated long-term project and was chosen by WSF after several successful maritime upgrade projects, including the Elliott Bay Seawall project, Pier 62/63, Seattle Fire Department on Pier 59, and the Bremerton Naval Hospital.

In the early stages of the project, Holmberg Mechanical crews worked in the pitch dark to accommodate the tide schedule removing old pipes and replacing them with new piping systems under the trestle. Randy Hart, Holmberg Mechanical’s project foreman, created a safe working solution — utilizing pontoon boats and powered lift pods to adjust to the tide.

“Two types of lift pods were utilized; one took the crews up to a working height of 13 feet, the other to a working height of 19 feet, 6 inches. The first one was mostly used on the outside of the trestle along the sides, whereas the second was used primarily below the trestle for installing five miles of main utility piping and supports for the project,” said Hart.

“What inspired me was the need to work around the clock, with the tides and maximizing safety,” he said. “While working on the earlier seawall project, I observed far too much downtime waiting for tides and once the proper tide was achieved, the work had to be done as fast as possible to get the intended work complete before the water level was once again lost. All in all, safety was my main driver for dreaming up such a plan. To add a lift pod to a workboat has not only worked to perfection but since has been adopted by Valley Electric and we worked closely together on the project. The in-house design team allowed us to now work continuously from a plus-level tide down to a minus tide of 1 foot.”

Another consideration that added layers of complexity was that the project had to remain open with uninterrupted service regarding traffic for vehicles and pedestrians, as well as other enormous construction projects occurring at the same time, like the removal of the viaduct. Crews on each job worked as one team to ensure safety and efficiency.

To create the foundation of the new trestle for current and future vehicle holding, 7,500 tons of creosote-treated wood was removed

from the water and replaced with 500 new steel piles and concrete to meet seismic and operating requirements. About 12,000 cubic yards of concrete was poured for the holding lanes on the trestle, which can now handle 611 vehicles, 185 more than before.

The terminal building now faces the water with 4,200 square feet of floor-to-ceiling windows looking towards Elliott Bay and the city of Seattle. While passengers wait, they will enjoy 20,000 square feet of space, with room for 1,900 people maximum. There are four bathrooms with 24 stalls. A total of 1,400 cubic yards of concrete was poured for the new terminal building. The total amount of piping installed by Holmberg Mechanical was 27,000 feet.

“I am proud of the team and the finished product we installed. It was a challenging project and Hoffman was a great GC for our success,” said Kelly Peterson, project manager for Holmberg Mechanical.

There are two plazas with the new Colman Dock. According to the WSF, the agency asked two local tribes to name them. For the south plaza near Yesler Way, the Muckleshoot Indian Tribe named it sluwil — meaning “a canoe shortcut through the reeds.” The Suquamish Tribe is calling the north plaza by Columbia Street ululali — meaning “a place traveling by water.”

## AWARD-WINNING PROJECT

Seattle Multimodal Ferry Terminal at Colman Dock recently received regional recognition in the 2023 America’s Transportation Awards, winning the Quality of Life/Community Development, Large Category.

“This has been one of my favorite Holmberg projects to watch our teams build together,” said Jeff White, CEO and president of Holmberg Mechanical. “The complexity of the work, including all of the external factors we don’t normally encounter. The team navigated wildlife including whale migration, working on skiff boats at night, dealing with inclement weather, and within specific tide schedules. All this and they maintained the critical path, stayed on budget, and delivered this project to Hoffman and PP&M with an award-winning safety record. This is something that makes me incredibly proud of everyone involved.”

The new Colman Dock is part of the projected increase in tourism while also serving transportation needs for businesses and commuters. It will continue to aid as a maritime extension of the state’s highway system.

*Angela White is the marketing and public relations manager for Holmberg Mechanical, a 74-year-old full-service contractor in Bellevue. Holmberg Mechanical engineers and constructs large-scale commercial projects such as high-rise, transportation, hospitals and hotels.*