Schnitzer Steel Industries operates a scrap steel facility on the Hylebos Waterway in the Port of Tacoma, Washington. The existing timber seawall was failing and badly in need of repair. BergerABAM joined General Construction Company of Poulsbo as designer for the design/build team to refurbish the facility. Design and construction work included demolition of the 750-foot-long timber seawall and replacement with a braced steel sheet pile bulkhead. In addition, a new 400-foot-long by 85-foot-wide precast concrete, pile-founded marginal wharf was constructed to facilitate scrap steel loading operations. The wharf supports a 37 ton capacity dual-track, gantry-mounted whirley crane used for vessel loading activities. Design challenges included accommodating the effects of very large operating loads. The whirley crane imparted much larger loads to the wharf than typical container cranes because of its self-weight. The bulkhead also had to withstand higher than usual lateral pressure due to the surcharge from large piles of scrap metal in close proximity.

The fender system consisted of precast concrete fender piles. The two 100-ton capacity mooring dolphins were constructed using high-capacity steel pipe piles that support a cast-in-place concrete cap. Construction was completed in 1998. As part of the environmental cleanup efforts of the Hylebos Waterway, BergerABAM developed an environmental cap to contain the contaminated sediments. The sediment cap was a multilayered system that included geotextile fabric over the sediments with a filter blanket and riprap top layer. Follow-on work included monitoring of sediment cap performance.

BergerABAM’s extensive knowledge of marine structures and commitment to innovation provides our clients with cost-effective solutions for the modernization of existing port facilities for all manner of marine and cargo operations.