

# Oak Harbor Clean Water Facility

Oak Harbor, Washington



## HISTORY

Established in 1915, Oak Harbor, WA is a destination of tourists around the Pacific Northwest. Situated on lovely Whidbey Island in the middle of the Puget Sound, Oak Harbor is home to 22,000 plus residents and is the largest incorporated city on the island. Oak Harbor flourished as a small country town until the building of the Deception Pass Bridge and the US Navy Base, which connected the city to the rest of the region and the world.

## PROBLEM

The previous wastewater treatment system, which consisted of two facilities, was older and nearing capacity. The equipment was difficult to maintain and was not suited to meet future water quality standards. In order to meet the Washington State Department of Ecology

regulations, the City of Oak Harbor needed to modernize its existing wastewater system. This would better protect the Puget Sound, specifically the waters of Oak and Crescent Harbors.

*“Skyline’s support during the design stage and their availability and service during sheet pile installation, was key to the success of this project.”*

— Condon-Johnson & Associates Inc.



CASE STUDY

## Oak Harbor Clean Water Facility



### PROJECT PARTNERS

Owner

City of Oak Harbor Clean Water Facility in Windjammer Park

General Contractor

Hoffman Construction Company –  
Seattle, WA

Sheet Pile Shoring Contractor/Designer

Condon-Johnson & Associates Inc. –  
Kent, WA

Geotechnical Engineer

GeoEngineers, Inc., Bellingham, WA

### PRODUCTS

Sheet Pile: 178 ea. SKZ 31 Sheet Pile Pairs  
45-65' (647 tons)

17,515 Total LF of Steelant Sheet Pile  
Sealant

### PROJECT TIME FRAME

January to April 2016

### SOLUTION

A nearly water-tight retaining wall was needed to be able to build the new water treatment facility. With that in mind, the design team at Condon-Johnson created a sheet pile and tieback system for the facility in Windjammer Park for the City of Oak Harbor, WA. The system was designed to hold back the surrounding soils and cut-off water in order to build the new structure 25' below grade in beach deposits. The project had a maximum water inflow requirement of 300 gal/min. Upon visual inspection, the new sheet pile and tieback walls were well below the maximum allowable inflow.

Nucor Skyline provided an extremely cost effective sheet pile solution using cold form sheets with Steelant sealant. The sealant worked well with the cold form sheet piles to create a water resistant barrier. Steelant is a memory material that adheres to steel, but remains pliable, and is made with organic materials so it is safe to use for potable water applications.