



## Advancing Permeable Pavement

### Why Treat Stormwater?

When it rains, oil and other pollutants are picked up in stormwater and can flow untreated into local waterways and ultimately Puget Sound. These pollutants have negative immediate and long-term impacts on surface water quality and fish habitat. Green stormwater infrastructure projects filter rain and stormwater runoff supporting healthy neighborhoods and a thriving Puget Sound.

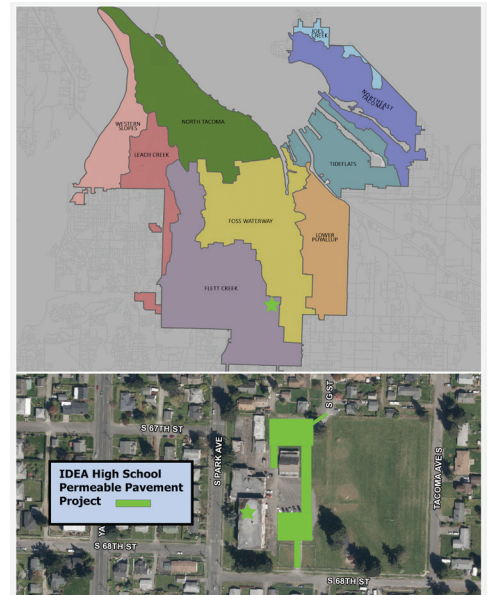
### Tacoma Public School IDEA High School

The Environmental Services Department partnered with Washington State University (WSU) and Tacoma Public Schools to complete the Permeable Pavement Standards Based on Lessons Learned Project at the School of Industrial Design, Engineering and Art (IDEA) site. The project field tested new permeable pavement mix designs and material testing procedures to further improve pavement durability, enhance permeable pavement standards, and increase confidence in permeable pavements.



### Location

School of Industrial Design,  
Engineering and Art  
6701 S. Park Ave



### Cost

Total Cost: \$592,320

### Partners

Department of Ecology  
Tacoma Public Schools  
Washington State University  
The Boeing Company  
Washington Green Schools  
Orcas Love Raingardens

**Design:** Skillings Connolly

**Contractors:** Miles Resources  
LLC



## Project Description

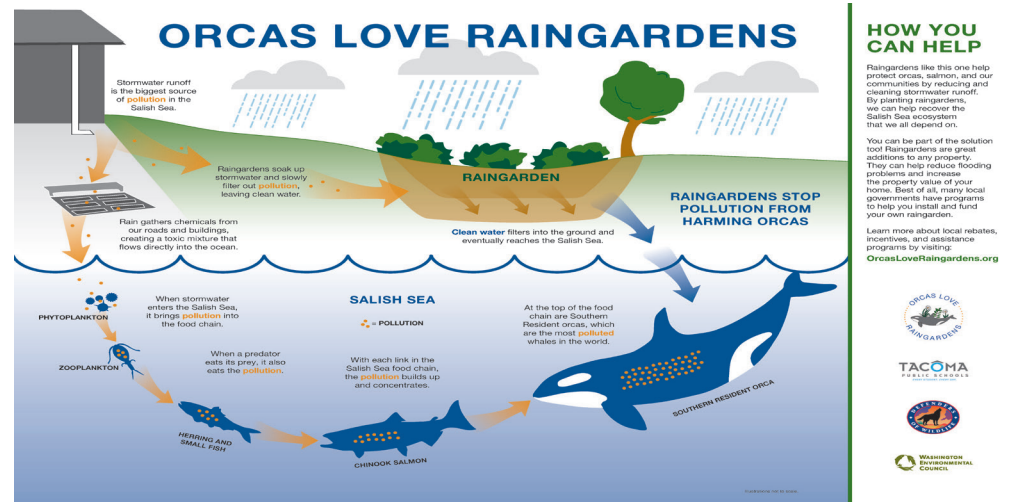


### Continuing Success

Permeable pavements have been proven to be a cost effective solution to managing stormwater while maintaining functioning roadways and parking lots. This technology has advanced rapidly over the past ten years and this effort aims to take industry standards even further.

Through partnerships this project provides students and their families access to educational, interactive raingardens, and will have opportunities to learn about the role of Green Infrastructure in protecting orcas.

The permeable pavement project designed and constructed permeable pavements and bioretention treatment facilities with specialized sample collection systems for water quality monitoring of the pavement by WSU, with support from the Boeing Company. The project is field testing new permeable pavement mix designs and new material testing procedures to further pavement durability, enhance permeable pavement standards, and increase confidence in permeable pavements. Kevlar fibers, carbon composite fibers, and recycled asphalt shingles are incorporated into the mix designs for testing. Tacoma Public Schools iDEA parking lot and access road, near South Park Avenue and South 68th Street, were chosen for this permeable pavement study. Washington Green Schools developed an engineering class curriculum for iDEA High School based on the project with support from the project partners, and funding from the Boeing Company.



## Project Benefits

- » Students at the School of Industrial Design, Engineering and Art (iDEA) learned about the engineering, and construction elements of the project and will be able to see first hand how to test water quality
- » Approximately 20,000 square feet of impervious surface will be disconnected from the stormwater system and infiltrated on-site
- » Increasing environmental stewardship through students engagement
- » 31 members from the permeable pavement community, extending across the globe, participated in a survey of existing practices to help shape the design approach
- » Improve standard specifications and recommend reliable material testing procedures that are imperative to the long term success of permeable pavements

### For More Information

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Permeable-Pavement.aspx