

# CASE STUDY



## WESTMINSTER PRESBYTERIAN CHURCH

Portland, Oregon

<b>Jurisdiction</b>	<b>Solution</b>
City of Portland DES	(2) Maxwell Plus - Double Well
<b>Developer</b>	<b>Stormwater Volume</b>
Westminster Presbyterian Church	5,733 CF
<b>Civil Engineer</b>	
VLMK Consulting Engineers	

As part of a soil investigation for the Westminster Presbyterian Church in Portland, Oregon, Torrent Resources, an Oldcastle Infrastructure company, was awarded the contract to develop and manufacture a storm water capture and infiltration system using the MaxWell Plus drywell. Oldcastle was able to showcase its ability to develop a greener and customized solution to converting the church parking lot using low impact development (LID) principles, that saves the client effort, time and money. Torrent Resources' MaxWell drywell allowed the client to reinforce and improve their existing infrastructure for a reliable solution.



## CHALLENGE

**The soil investigation for the Westminster parking lot found that the site was underlain by at least 30 feet of clay and silt.** As a result, this was creating unideal conditions for infiltration and LID designs.

**Oldcastle was selected for the contract to complete the church parking lot update.**

A second inspection beyond 30 feet was required to gather new geotechnical information to ensure the MaxWell Plus drainage system was the right infiltration BMP.

## SOLUTION

**The client installed the MaxWell Plus drainage system to provide infiltration,** citing a number of important factors:

- | High storm water storage volume of 5,733 CF
- | Ability to pre-treat storm water twice for constituent removal
- | Field-proven efficiency
- | High quality standards

**Oldcastle was contracted to drill the MaxWell drywell to a depth of 57 feet,** which was completed in a highly permeable layer of sand and gravel to make for a successful LID project.

**The post construction percolation test yielded an in-situ flow rate of 0.46 CFS (206 gpm),** which was more than 3 times greater than the design percolation rate.

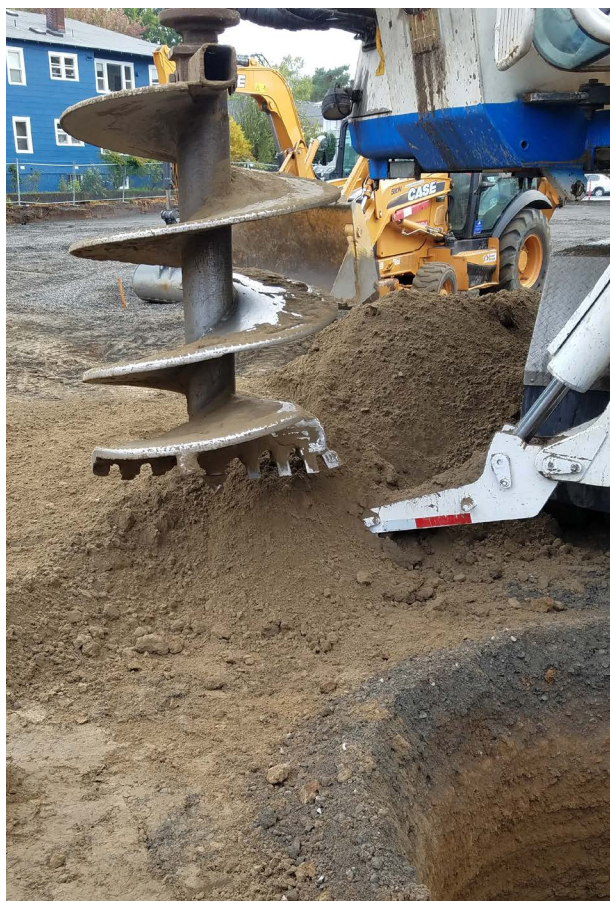
**SUPERIOR QUALITY**

The Westminster Presbyterian Church parking lot update was an excellent example of robust pre-treatment for influent storm water. As materials become permeable, a deep infiltration system from MaxWell drywell systems is key to a reliable solution.

The client received a customized solution that implements LID principles to all the design team to meet its LID goals.

**A RELIABLE SOLUTION ON A TIGHT TIMELINE**

Oldcastle exceeded performance expectations for the client and the job site. The MaxWell Plus system was installed and tested in less than one week so as not to impact the project schedule, making it the most feasible, constructible, and cost effective solution.



**CONTACT US TO LEARN MORE ABOUT OUR INNOVATIVE STORM WATER SOLUTIONS.**

**Oldcastle Infrastructure**  
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The product offers field-proven efficiency and is the overwhelming choice of specifying engineers in the private sector.”

**VLMK Consulting Engineers**

