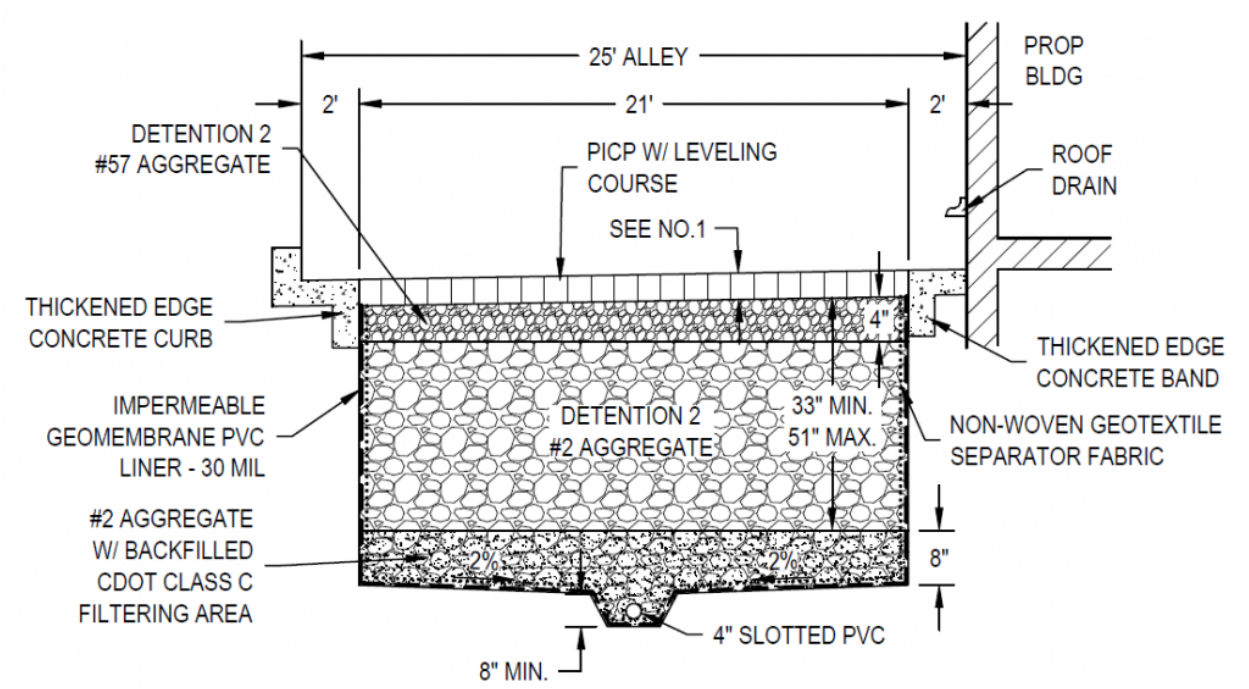
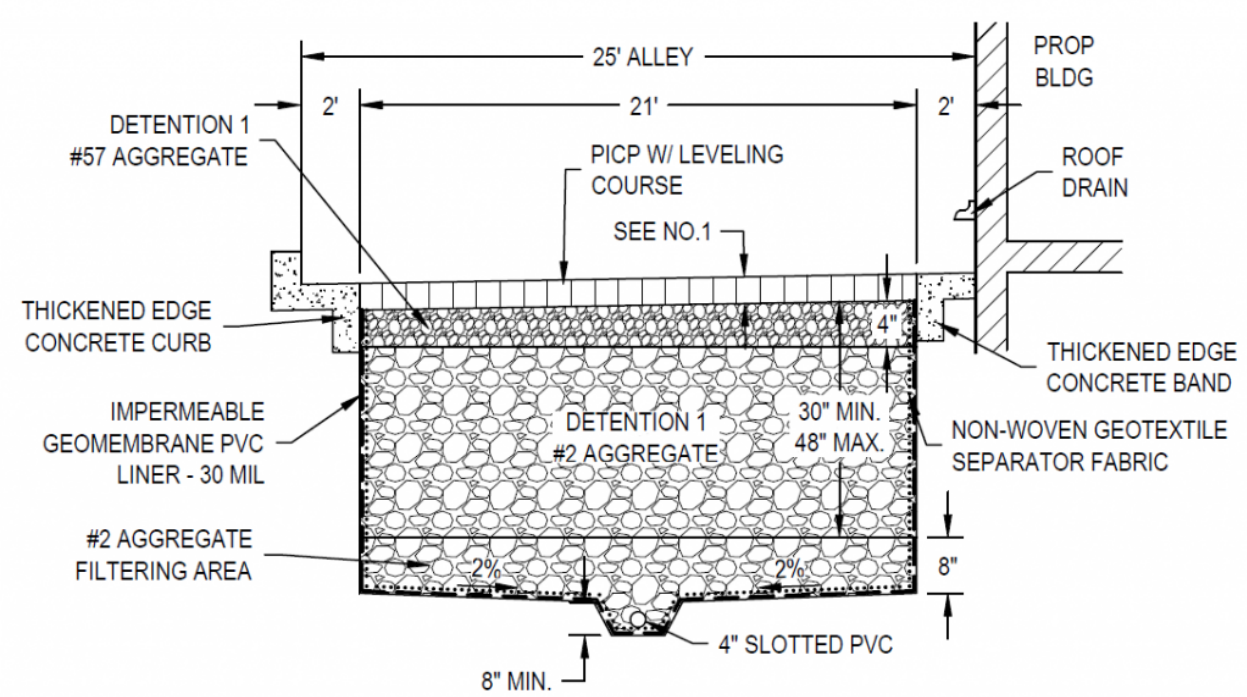
Permeable Interlocking Concrete Pavement (PICP) at Industry in Denver

UDFCD is monitoring two different permeable pavement sections in the green alley located at the Industry site on Brighton Blvd in Denver. Both of the sections provide water quality capture volume and detention storage for the 100-year storm below the surface of the pavement. With input from a group of stakeholders including local consultants, geotechnical engineers, and manufacturers as well as nationally recognized experts in the PICP industry, UDFCD developed a method for integrating a sand filter into the standard pavement section per the Interlocking Concrete Pavement Institute (ICPI). This involves placing the base aggregate course and then washing the filter media into the base course of the pavement. The second section for evaluation at this site does not include the filter media and represents the standard pavement section per ICPI specifications.

Section 1:



Section 2:



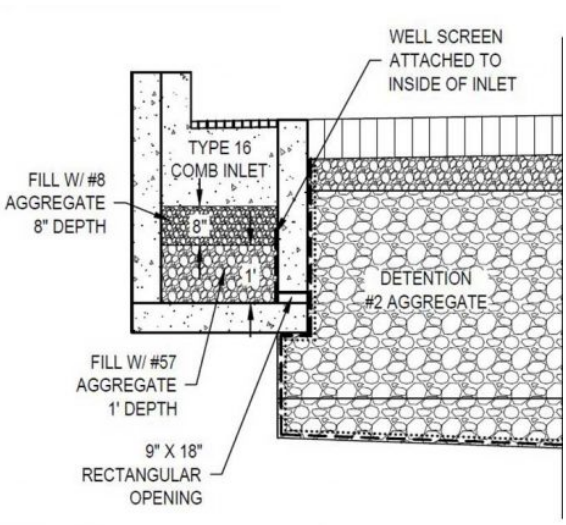
The two sections are separated by a concrete wall at the midpoint of the alley. Composite stormwater effluent samples are collected for both sections as well as for the untreated roof runoff. UDFCD will monitor stormwater quality performance of this system over a period of at least ten years. The District will also collect data regarding maintenance of the site. Maintenance recommendations for PICP are provided at the link below.

UDFCD Maintenance Recommendations

Maintenance recommendations for Permeable Interlocking Concrete Pavement (PICP)

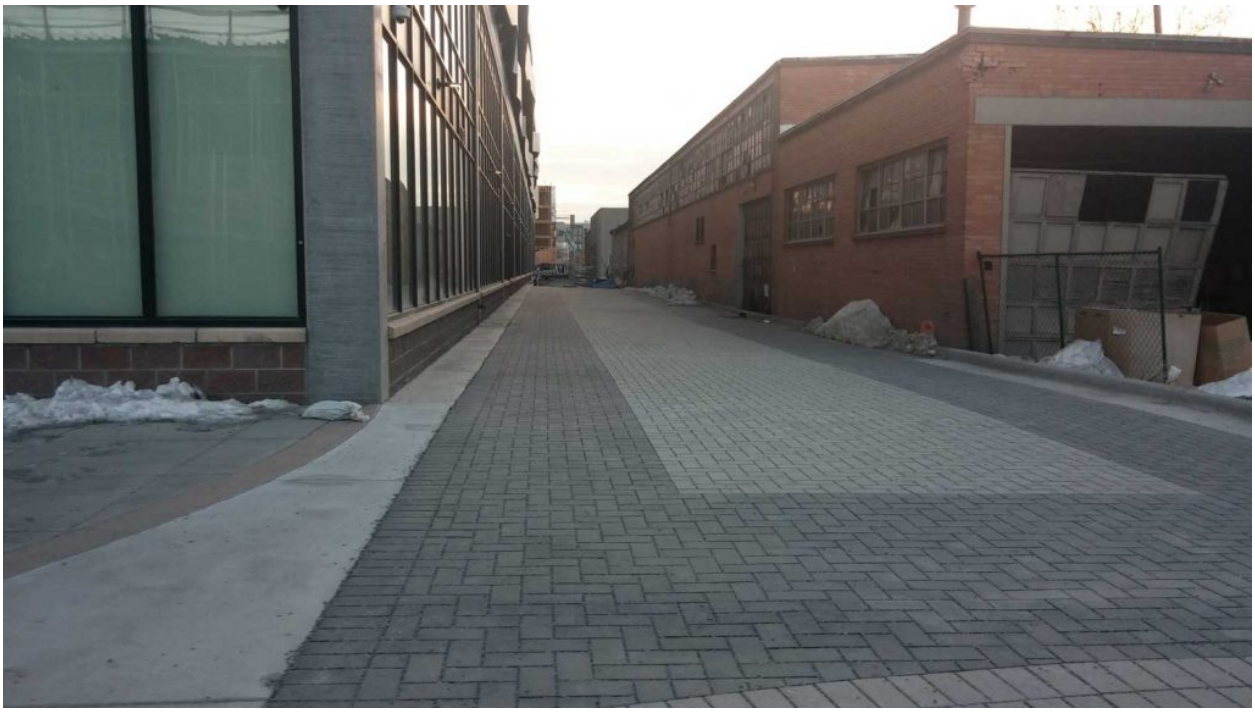
The filter layer in Section 2 was constructed by placing the No. 2 aggregate first and washing in CDOT Class C filter material

Sections 1 and 2 are separated by a concrete wall



Inlets provide a direct connection to the storage layer which is designed to store the 100-year detention volume. Inlets were designed for pretreatment and filled with an aggregate filter which can be removed and replaced.

Individual bricks were placed by hand. The bricks have ridges creating openings for stormwater to enter the aggregate section below.



Openings between the bricks are filled with small (No. 89) aggregate. This photo shows Section 1 complete.