

NOVEMBER 2014

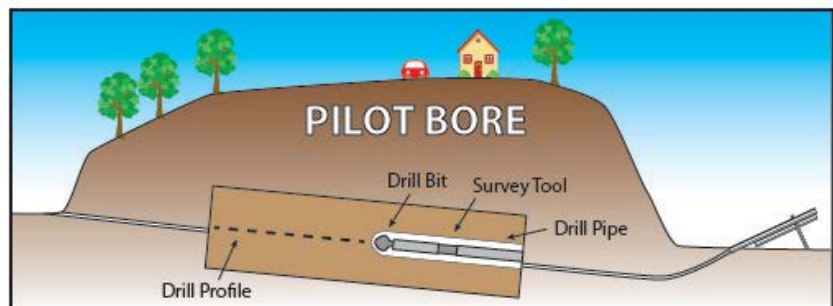
How the new gravity sewer pipeline will be installed in Magnolia

King County's contractor will install a new sewer pipeline in Magnolia. This pipeline will connect the sewer system on 32nd Avenue West with a new underground storage tank in the Smith Cove area. The storage tank will hold excess stormwater and sewage in large storms, reducing overflows to Puget Sound from the County's outfall off 32nd Avenue West.

To install this pipeline, the contractor will use a method called **Horizontal Directional Drilling (HDD)**. This method is typically used to install pipelines under busy roadways, creeks or streams, or other surface features. The contractor uses a machine on the surface to drill an underground pathway for the new pipe, and then to pull the pipe through the path. See below for an overview of how HDD works.

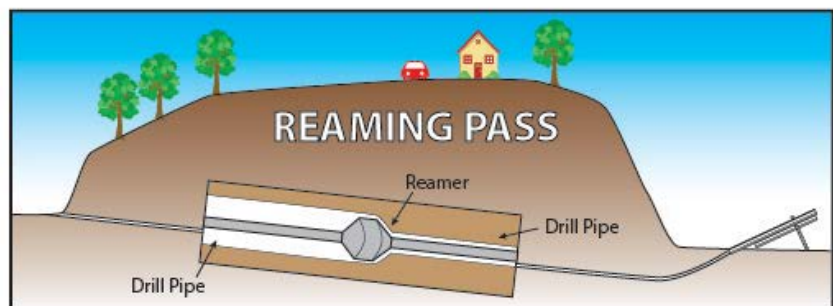
Pilot Bore

In Magnolia, steel pipes called *casings* will be installed where the drill enters and exits the bluff. Then the contractor will carry out the pilot bore, establishing the underground path.



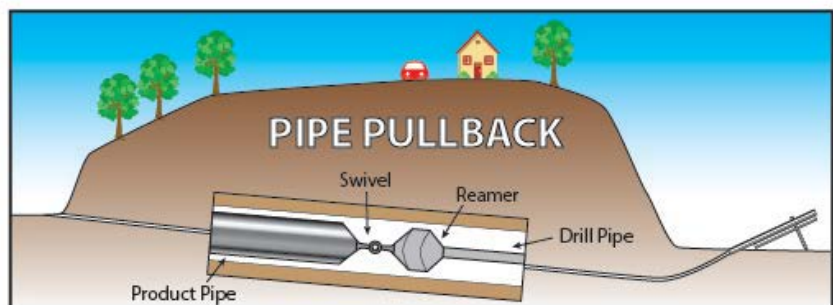
Reaming Pass

The contractor enlarges the hole to the final pipe size using a *reamer*. Mud from drilling in this step is collected and recycled.



Pipe Pullback

Once the bore hole is prepared, the pipeline is pulled through the hole. In Magnolia, the pipeline will be pulled from 32nd Avenue West toward the Smith Cove area.



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Horizontal Directional Drilling -- South Magnolia CSO Control Project

To protect the surface, crews will install steel conductor casings underground prior to drilling the pilot bore.



Specific drilling equipment is chosen depending on soil conditions. During project design, soil conditions are analyzed at the depth where the pipeline will be installed.

While the drilling crew is preparing the bore hole, a crew uses heat to fuse pipe sections together. The growing pipeline is laid out in long strings. On the day of pullback, the strings are fused together and pulled through the borehole.



For more information:

Visit www.kingcounty.gov and search "South Magnolia CSO." You can also contact Monica Van der Vieren at 206-477-5502 or Monica.Vandervieren@kingcounty.gov