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THE CITY OF VANCOUVER USES TRENCHLESS TECHNOLOGY TO INSTALL TWINNED SEWERS SIMUTANEOUSLY

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ABSTRACT: The City of Vancouver currently practices various methods of trenchless technology. It is often utilized for projects in an environmentally sensitive location, with limited access and/or in which minimal disruption of services to the area is a consideration.

West 2nd Avenue and Sasamat Street is an example of one such project in which Vancouver employed trenchless technologies. The location was a developed residential neighbourhood, landscaped and maturely treed. The existing infrastructure was a series of deteriorated 8 inch vitrified clay piping traversing through a 6 foot wide easement with limited access. The infrastructure needed to be both replaced and separated into sanitary and stormwater components.

The system had to be twinned to implement the separated piping; however, trenchless technologies traditionally only pull one pipe at a time. To address this issue, a double bursting head was fabricated with a cutting edge on the end to allow for easement of passage through any roots or irregular soil materials that may have been encountered. The tool itself housed a 6 inch high density polyethylene pipe on which a second 4 inch pipe was piggybacked.

The resulting project was a success, with two runs, one 400 feet and the other 200 feet in length being implemented along two city blocks. The duration of the project was just over two weeks, with the majority of time being required for hand excavation of entry and exit points. The installation of piping itself was only a few hours, with services remaining in place during that time.