

BULLETIN

News from *SubTerra, Inc.*[®]

Blast Monitoring for Utility Trenchless Lakemont Crest Condominiums, Bellevue, Washington

*Blasting can be an effective means of excavating infrastructure features such as utility trenches, particularly when appropriate pre-blast studies and blast monitoring are employed. Contractors for the Lakemont Crest Condominium project in Bellevue, Washington, believed that blasting would be an efficient approach to construction of large utility trenches at the complex, and contacted **SubTerra, Inc.***

SubTerra conducted a blast monitoring program for the planned utility trenches at the development site for the Lakemont Crest Condominiums. This program involved a pre-blast survey of existing structures adjacent to the blast area, along with monitoring and analysis of the actual blasts during trench construction.

At the time of the pre-blast survey, all



vegetation had been stripped from the development site and footing excavations had been completed for most of the planned structures. Four existing offsite structures were sufficiently close to the planned



blasting areas to warrant pre-blast inspections.

SubTerra monitored actual construction of the 5-ft. wide, 15-ft. deep utility trenches using two InstanTel blast monitoring seismographs. Blasting began at locations farthest from existing structures. This allowed early data to be used in designing the more critical blasting that would be done close to the offsite structures. Subsequent monitoring during these later blasts assured that the design objectives were satisfied, and that peak particle velocity thresholds of concern for structural damage were not exceeded.

The monitoring and analyses performed by **SubTerra** helped ensure that drilling and blasting for the utility trenches did not measurably affect offsite structures, even those located within 55-ft. of the blasting.